

The Power of a Small Green Place – A case study of Ottawa’s Fletcher Wildlife Garden



Photo: Renate Sander-Regier

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Abstract

The Power of a Small Green Place is an ethnographic case study among the volunteers and urban wilds of Ottawa's Fletcher Wildlife Garden (FWG). Through the conceptual lens of the geographical concept of place – with its wide range of physical, relational and deeper meaningful considerations – this urban wildlife habitat project emerged as a place of profound significance. Volunteers working to create and maintain the FWG's diverse habitats benefit from opportunities to engage in physical outdoor activity, establish social connections, make contact with the natural world, find deep personal satisfaction and meaning, and experience healthier and mutually beneficial relations with nature. This case study fills a knowledge gap in geography regarding the significant relationships that can emerge between people and the land they work with, thereby contributing to geography's "latest turn earthward" examining practices and relationships of cultivation with the land. The case study also contributes to a growing interdisciplinary dialogue on human-nature relations and their implications in the context of future environmental and societal uncertainties.

The Power of a Small Green Place (Le pouvoir d'un petit coin de verdure) est une étude de cas ethnographique parmi les bénévoles et les espaces sauvages urbains du Fletcher Wildlife Garden (FWG) à Ottawa. Ce projet de création d'un habitat sauvage en milieu urbain constitue un lieu chargé de sens multiples et de significations profondes, comme permet de le révéler le recours au concept géographique de *lieu* (et sa gamme d'éléments physiques, de relations variées et de sens complexes). Les bénévoles qui oeuvrent à la création et au maintien des divers habitats du jardin profitent de cette expérience de nombreuses façons : participation à une activité physique en plein air, développement de liens sociaux, contact avec la nature, épanouissement personnel profond, et expérience d'une relation plus saine et mutuellement bénéfique avec la nature. Cette étude de cas contribue à la connaissance géographique de l'importante relation qui se développe entre les gens et le sol avec lequel ils travaillent et, chemin faisant, au plus récent « retour à la terre » de la discipline en examinant diverses pratiques et relations de culture avec la terre. Elle contribue aussi à l'épanouissement d'un dialogue interdisciplinaire au sujet des relations entre les humains et la nature et de leurs implications dans un contexte d'incertitude environnementale et sociétale.

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Volunteers involved in the Fletcher Wildlife Garden provided support and encouragement throughout the course of the project. Individuals who participated in the study gave their time and input freely and generously. This entire project hinges on their contributions, and I am deeply grateful to them.

I am also profoundly indebted to the natural world, at the Fletcher Wildlife Garden and elsewhere, and to my home garden and animal friends – felines Tim and Raggs, canine Fame. They all enrich my life and provide much-needed sources of diversion and restoration.

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Introduction

I was aware, going into this doctoral research project, that urban green spaces are positive and beneficial places. I also knew that Ottawa's Fletcher Wildlife Garden (FWG), an urban wildlife habitat creation project, was one such place. But just how positive and beneficial it was, I would not have been able to guess at the beginning. The significance of the FWG – its power to motivate, delight and inspire; its impact on wildlife, people involved in the project, and the greater community; its deep and compelling lessons – surprised me, fascinated me, and challenged me. This dissertation is the result of that challenge.

I was challenged initially to develop a research project which responds to a knowledge gap in geography regarding the significant relationships that can emerge between people and the land they work with in various ways (Brady 2006, 9). Motivated by personal gardening experiences, by knowledge gained through earlier research, and by previous ad-hoc involvement with the FWG project, I decided to develop a case study that sought insight into the human-nature relationships which develop between FWG volunteers and the natural world they work with on-site.

The next challenge involved conceptualizing a research approach which captured the spirit of the FWG and as broad a spectrum of meanings as possible associated with the habitat creation project. The geographical concept of place, with its wide range of physical, relational and deeper meaningful considerations, became the guiding concept for the case study. It helped, first, to develop a pertinent set of research questions: *“What kind of ‘place’ is the Fletcher Wildlife Garden? – what occurs there, and what is its significance? what sorts of relationships do volunteers develop with the place, and what is the significance of those relationships? what sorts of meanings do volunteers attribute to the place, and what are the implications of those meanings?”* Place provided a multi-layered perspective on the activities and relationships associated with volunteering at the FWG, and a strong foundation for my ethnographic methodology: participatory fieldwork, semi-structured interviews, and research among varied print and digital ancillary sources. The geographical concept of place also challenged me to negotiate the tangle of relationships between people, places and nature. The roles played by the natural world, and the human needs for nature in ordinary places became critical considerations in moving the research forward.

The final challenge emerged as I started to interpret the broad array of empirical material I had collected as a result of the fieldwork, interviews, and research among ancillary sources such as FWG-related media articles and academic literature; FWG files, publications, website, and photo-blog; and wildlife- and gardening-related educational material available on-site at the FWG. It was all so rich, so complex, so intense – how was I to make sense of it? I learned to be patient as I reviewed fieldwork notes and interview transcripts, as I pored over ancillary sources, watching intently for trends and patterns. I learned to engage my rational mind in scrutinizing, deliberating, and categorizing (sometimes agonizing), and to listen to and trust my intuitive sense. Working together, they disclosed findings which I found surprising, fascinating, satisfying, inspiring, and ultimately rewarding.

The trends, patterns and findings which emerged from the FWG case study have resulted in the chapters to follow, which reveal the FWG to be a richly layered and nuanced place with a synergy influenced by both human and nonhuman presence and activity. People actively involved in the project – the volunteers who are the main focus of the case study – experience benefits relating to physical activity, social relations, nature connections, and deeper personal meaning as a result of their work at the FWG. Their work also benefits the natural environment on-site in reconciliatory and reciprocal ways that expand the synergy and significance of the place.

This dissertation is structured along the following lines. Part I, Chapters 1 and 2, trace the evolution of the FWG case study – including my background coming into the project, the inception and conceptualisation of the case study, and the methodology for carrying out the research.

Part II explores the relationships at the core of the FWG case study – relationships between people, places and nature. Chapter 3 reviews geographical conceptions of place and investigates where and how nature fits into the picture, while Chapter 4 provides an overview of the nature concept in geography, along with a closer look at issues related to human-nature relations. Chapter 5 focuses on the need for nature in human places, according to both recent and longstanding knowledge.

Part III is the case study itself. The chapters paint an in-depth portrait of the FWG as a place in terms of both tangible elements (location, physical presence and activity), and less tangible characteristics such relational and affective-evocative qualities – a flow of content

which echoes contemporary geographical conceptualisations of place. The chapters also explore physical, relational and meaningful human-nature connections forged between volunteers who work at the FWG and the natural world on-site – connections which help to meet certain needs for nature in human places identified in Chapter 5.

The first chapter in Part IV seeks to understand these connections from two perspectives – reconciliation and reciprocity – which reach beyond personal benefit to include broader philosophical and ethical considerations. The final chapter offers closing reflections on the case study, including limitations, opportunities, implications and further challenges.

PART I THE RESEARCH STORY

This section of the dissertation traces the story of my doctoral research project – from its inception and conceptualisation, through the fieldwork to interpretation. The project has become part of my life story, linked to personal interests and passions, taking me in directions both intended and unexpected, as the following chapters reveal.

Chapter 1 Getting here – turning earthwards

Plants and cultivation, particularly in personal spaces, have long been an interest of mine, as both a personal practice and a topic of research. For over twenty years, they have woven through my life in ways both planned and unexpected.

1.1 Hands in the dirt

It started with the vegetable garden my husband and I established when we first moved to our home in rural West Quebec – more his project than mine. The garden was quickly followed by a diversity of trees planted at different times, on different parts of our land – some now grown into thick hedgerows and young forests. We now regularly harvest apples produced by trees we started from seed over 15 years ago, and the tree nursery not far from the house has filled with more seedlings.

My most recent home cultivation project involves replacing the non-native hay and pasture vegetation surrounding our current house – built on a hillside not far from the old farmhouse we first inhabited – with a diversity of native wildflowers, fruiting shrubs, and trees. The biodiversification initiative, I have come to see, is an ambitious, long-term undertaking – something I suspect will be a life-long project never quite reaching completion because there is so much pleasure and reward in the process. I am not alone, as I have come to realize through this case study. I am just one of many who derive enjoyment, satisfaction and deeper meaning from the process of planting and cultivation, and who need to have our hands in the dirt.

1.2 The intellectual turn

Since embarking on the biodiversification project, I also set out on another journey – a second round of university graduate studies, this time in geography, beginning with an M.A. which explored the geographical meanings in contemporary personal gardening literature. The topic made sense at the time. It connected my first round of academic studies in literature with my biodiversification project, an undertaking inspired by an ecologically oriented personal gardening book read one long, cold winter – the whole forming a great circle filled with questions about this activity, gardening, which ranks second, after walking, as the most

popular physical activity among adults in Canada (Cameron et al. 2007, 8). Why does gardening rank so high, I asked myself? What is this activity and the space that inspires such devotion? What is the appeal of gardens and gardening? What do gardens mean to people? What sort of geographical meaning can be gleaned from books written about this space?

The books I studied are an eclectic mix of creative non-fiction titles, authors and garden locations and meanings. Douglas Chambers, Professor Emeritus of English at the University of Toronto and author of *Stony Ground: The making of a Canadian garden*, is one example. He took over his family's working farm, established the mid 1800s in southern Ontario's Bruce County, and transformed it into a rambling network of storied gardens and walks. Sara Stein, author of *Noah's Garden: Restoring the ecology of our own backyards* (1993), was a prolific science writer and pioneer of North America's ecological gardening movement. She cultivated a large suburban garden-turned-wildlife-sanctuary in Pound Ridge, New York¹. Poet, gardener and naturalist Patrick Lane wrote *There is a Season: A memoir in a garden*, about the Victoria, British Columbia garden that helped him recover from over 40 years of alcohol addiction and cocaine dependency.

These books, along with the others I studied, are all highly personal, creative non-fiction accounts of how personal gardens originated, evolved, and forged unique relationships between the gardener-writers, the mini-landscapes they cultivate, and the world beyond the garden boundaries. As I have stressed in articles published since completing my MA thesis (Sander-Regier 2006), all these gardener-writers – gardening in diverse geographical locations, and in different social, cultural and environmental contexts; imagining, shaping, and maintaining the garden over time; pondering the evolution and meaning of the space and their relationship with it – provide a unique and rich perspective on the significance of personal gardens to individual gardeners, and to the greater environment and community (Sander-Regier 2009, 67; 2008, 2).

The personal garden, it turned out, was a much more complex and interesting space than I had anticipated, with a fundamental human-“natural”² quality at the core of its complexity. Neither totally natural, nor totally human, gardens are characterized by strong social, cultural and personal elements, and by complex webs of biological, ecological and environmental relations.

As spaces shared variously with family, friends and the greater community, essentially settings for contact and interaction, gardens have strong social elements. They are also undeniably cultural, in terms of the human vision and imagination involved in designing the structure of the space, and the varied physical work of digging and planting to shape the space, plus the weeding, pruning, mulching, fertilising, watering and raking to maintain the garden's desired characteristics. Gardens are also intensely personal and intimate, with each individual gardener developing a unique attachment to the space, and each space carrying particular meaning for the gardener.

Yet gardens are also typically populated and visited by biological entities such as plants, soil organisms, and insects, as well as birds, reptiles, amphibians and mammals. These biological entities engage in a wide variety of complex and necessary relationships with each other and with the garden environment. This environment, in turn, is dependent on and subject to greater ecological and environmental processes and systems which produce changes in the seasons and climate, bring sunlight and water to the space, and provide the soil with nutrients. It is important to note that the gardener is among the biological organisms active in the garden space, where she or he participates as an element of both the ecological community within the garden and the greater natural system beyond the garden's boundaries (Sander-Regier 2008, 2).

This human-nature complexity at the heart of the garden, the fascinating relationships between gardeners and the spaces they cultivate, the connections with wider social networks and the greater environment – all these things, and more, have continued to hold my fascination with gardens and cultivated spaces. As I have learned in the meantime, gardening, along with hunting and gathering, sometimes complementary to it, is one of the oldest relationships between people and their environments, one of humankind's first and most influential uses of the land. As landscape architects Mark Francis and Randolph T. Hester Jr. express it, gardening is “one of the oldest and most extensive forms of collective design on the land” (Francis and Hester 1990, 14). And gardens remain, in the words of geographer William Doolittle, “of fundamental importance to people in the twenty-first century”, with the human-plant relationship “as old as the human species itself” and as strong as it ever was (Doolittle 2004, 391).

The strength of the relationship between people, plants, and the land today is manifested through a diversity of urban and rural cultivation activities. In both Canada and the United States, for example, community gardening is increasing in popularity (Pinderhughes 2004, 207), while in the United States, the notion of community gardening has expanded to include school gardens, crime diversion gardens, work and training gardens, healing and therapy gardens, neighbourhood pocket parks, and ecological restoration gardens (Ferris et al. 2001). Overseas, in Poland, allotment gardening collectively comprises the country's major land use (Bellows 2004), while on a global scale, as many as 800 million individuals practicing urban agriculture are estimated to produce 15 percent of the world's food (Mougeot 2006, 6).

1.3 Turning back to the dirt

This global community – people gardening for the wide diversity of reasons just mentioned, and the scholars around the world who are studying the impacts and significance of gardening activities and relationships – has joined groups of local gardening enthusiasts, regional ecological gardeners, and a North American network of native plant gardeners and seed collectors in an ever-expanding community of gardeners I experience through my personal gardening activities and my graduate research. This extended garden community also includes the nonhuman communities active within and around my garden and other cultivated spaces.

This broader sense of garden community prompted my decision to put down the books, pick up a notebook and pen, and step out into the world to conduct fieldwork among people who have seed catalogues on their kitchen tables, dirt under their fingernails, and the hum of insects in their ears. I felt a strong desire to speak with people directly, and to work alongside them, participating in their cultivation experiences. In making the shift from studying books to studying gardeners working their land, I am joining what Hayden Lorimer calls geography's "latest turn earthward" examining practices and physical relationships of cultivation with the land – associations he describes as "passionate, intimate and material relationships with the soil, and the grass, plants and trees that take root there" (Lorimer 2005, 85-6).

This "turn earthward" includes, for example, studies by Paul Cloke and Owain Jones on cultivated spaces such as orchards, cemeteries, city squares and heritage trails. Cloke and

Jones appreciate places such as orchards because of the “active presence of trees” and the ways in which they are networked into complex social and material relations (Clope and Jones 2001, 649). Russell Hitchings studies personal gardens and the human-flora relationships that play out there, including shifting balances of power between people and plants (Hitchings 2003), and the varying agencies and materialisms at work in the garden space (Hitchings 2006). Emily Brady takes a close look at two elements of traditional cultivated spaces in England: hedges and stone walls, living barriers that cannot be created without an “intimate understanding” of the living materials and their environments, and the ability to work sensitively and effectively with branch shapes, leaf densities, and rock surfaces and irregularities (Brady 2006, 11-17).

Nevertheless, Brady points out, “little attention [is] being paid to the significant human-nature relationships that emerge when people work with the land in various ways” (Brady 2006, 9). Evidence for a correlation between plant presence and human well-being – from reductions in stress and surgery recovery time, to enhanced self-esteem and community cohesion – has been well established by researchers in various fields of inquiry (Brook 2003; Wolf 1998; Lewis 1996). Yet the relationship, the “power of interaction” that develops when people work with plants and other elements of the natural environment (Brook 2003, 232) has not been the focus of intensive research in geography.

I decided to develop a doctoral project that contributed to filling this research gap, that joined geography’s recent “turn earthward”, and that built on the work of people such as Clope and Jones, Hitchings, and Brady to explore the relationship that develops between people and the land they cultivate.

Chapter 2 The research process – seeking to fill a gap

My doctoral research project has grown out of a knowledge gap in geography regarding, in the words of Emily Brady, “the significant human-nature relationships that emerge when people work with the land in various ways” (Brady 2006, 9). Motivated by my own experiences of human-nature relationships while gardening, and of the “power of interaction” (Brook 2003, 232) between myself and the land I cultivate, I decided to develop a project that sought insight into those phenomena.

2.1 An exploratory case study

Revolving as it does around themes which have not been studied in-depth in geography, with a view to developing deeper understanding of an under-studied phenomenon, the project has been, from the beginning, highly exploratory. It has also been very personal, since it focuses on relationships. This combination of factors called for a qualitative methodology that was inductive and immersive, which in turn pointed to a case study approach – case studies typically offering opportunities for the researcher to become absorbed in a contemporary real-life situation, and characteristically well-suited to capturing complexity and meaning (Gauthier 2003, 132; Yin 2003, 13), to exploring new or neglected phenomena, and to filling gaps in understanding (Roy 2003, 168-172).

Early in the process of filling the knowledge gap regarding human-nature relationships related to working the land, a particular research focus emerged. It revolved around the act of cultivation and the following question:

- Considering the importance society grants to the activities and spaces of cultivation, what is the meaning of
 - the act of cultivation (the physical practice and activities) and
 - the relationships that cultivators develop with cultivated spaces in the process – particularly with the land and the natural environment?

The next step involved selecting a case study site. Since cultivated spaces cover a wide range of spaces – from commercial and hobby farms, to cemeteries and sidewalk planters – I knew it would not be possible, in one study, to determine the full meaning of the act and

relationships of cultivation. It would be most fruitful, I decided, to focus on a single space with characteristics that offered potential for a wide range of insight. For example:

1. cultivation by a group of people who had developed unique and diverse relationships with the land, and who could offer different personal perspectives on cultivation,
2. altruistic participation, from which the cultivators do not draw any tangible or practical benefits (e.g. food, income, or increased property value), for particularly deep insight into, and clear focus on, the act and relationships of cultivation.³

In my choice of case study site, I decided to exclude larger, industrial cultivated spaces where, as Brady points out, direct involvement with the land has been mediated by technology, and where humans tend to be somewhat removed from nature. Brady stresses that smaller-scale cultivation aims for more sustainable cultivation, encourages biodiversity, and brings humans closer to the land (Brady 2006, 8). Smaller-scale cultivation was also closer to the gardening activities that had led me to that point in my cultivation activities and research.

I also made the decision to select a case study site in an urban setting where the dominating concrete, asphalt and lawn monoculture tends to limit opportunities for cultivation, and where contact with the natural environment takes on particular meaning. As Steve Hinchliffe and Sarah Whatmore point out – in the context of the “Habitable cities” project, which looks at various manifestations of urban nature, including cultivated sites such as community gardens⁴ – the seemingly deep-seated bias against the idea of urban nature notwithstanding, green spaces and their component plants, animals, soils, and watercourses make important contributions towards the liveability of cities (Hinchliffe et al. 2003, 13-14).

The case study site I ended up selecting is the Fletcher Wildlife Garden (FWG), an 18-acre piece of land near Dow’s Lake in Ottawa, at the southern edge of the Central Experimental Farm’s Dominion Arboretum. The FWG is managed by a special committee of the Ottawa Field-Naturalists’ Club and maintained by volunteers as a long-term project to establish and cultivate urban wildlife habitat, and to demonstrate backyard habitat gardening approaches and techniques. Although multiple case designs are recommended for comparative potential, the nature of the FWG makes it, in fact, a composite case study consisting of several distinct components or sub-sites (e.g. Backyard Garden, Butterfly

Meadow, Hedgerow, New Woods, Ash Woodlot, Amphibian Pond) involving different cultivation necessities, approaches, activities, and challenges.

I chose the FWG case study site because of its urban location, as well as its complexity and richness in terms of

1. multiple habitats, or sub-sites, and the variety of approaches and activities of cultivation involved, as already described,
2. its status as a public space managed through collective participation and activity – managed by a committee of the Ottawa Field Naturalists Club, and maintained by groups of volunteers,
3. the number of people involved in cultivating the site, a critical mass which offers the potential to capture different perspectives on the act and relationship of cultivation,
4. the aforementioned altruistic volunteer participation in the project (volunteers become involved in the space for a wide variety of factors, which will be discussed in Part III),
5. textual, visual, digital and archival resources available for study.

An additional reason for selecting the FWG was my familiarity with the space as a member of the regional naturalist community, and my occasional involvement with the project over the years – for example, donating native plants and trees from my home to their efforts, and volunteering at the annual native plant sale.

2.2 Conceptual orientation

When people cultivate land, they become involved with it in diverse and often significant ways, in the process shaping it into a *place* filled with meaning. The geographical notion of place – considered central to geography (Johnston 1991, 253), as well as complex and difficult to define (Cresswell 2004, 15; Castree 2003, 167; Agnew and Duncan 1989, 1) – became the concept guiding my design of the FWG case study.

Despite the challenges posed by the place idea, two geographers, Tim Cresswell and John Agnew, have managed, at different points in time, to produce a relatively straightforward and parallel geographic conceptualisation of place. This conceptualisation is reflected in the smaller-scale space cultivated by volunteers at the FWG – a “meaningful location” to use Cresswell’s phrasing (Cresswell 2004, 7) of cultivation which encompasses the full range of characteristics identified by John Agnew in his time-tested (Castree 2003, 167)

conceptualisation of place, and characterised more recently by Tim Cresswell. Their parallel conceptualisation of place outlines characteristics – physical, active-relational, affective-evocative – which move from the relatively objective to the more subjective, as summarized briefly below and discussed in more detail in the following chapter.

The more objective **physical** place characteristics include a place's *material structure*, including the material things that constitute it or pass through it (Cresswell 2009, 169), as well as its *location*, “a specific point on the earth's surface” (Castree 2003, 167) in precise relation to other points in space (Cresswell 1999, 226), with its own distinct character and qualities (Cosgrove 1994, 548). A place's location is the outcome of various processes working at different spatial scales which influence its selection for certain practices and uses, essentially its **active-relational** role. Agnew puts this role in terms of *locale*, the arena for activity and social relations (Holt-Jensen 1999, 159; Agnew 1993, 262; Agnew and Duncan 1989, 2), and the mediator of social contact and interaction which influences the material and social shaping of places. Cresswell puts these actions in terms of *practice*: what people do in a space, the way they live, experience, and use it, all of which contribute to making a place meaningful (Cresswell 2009, 169-70). Meaning is at the heart of the subjective **affective-evocative** characteristics of place. Cresswell points out that meaning transforms a location into a place (Cresswell 2009, 169), a transformation Agnew puts in terms of *sense of place*, or the “local ‘structure of feeling’” (Agnew 1993, 263). These subjective aspects of place are characterized by the feelings and emotional attachments people have with a place (Cresswell 2004, 7; Cresswell 1999, 226), and the sentiments people experience and express in relation to specific places (Cosgrove 2000, 731).

2.2.1 Framework of inquiry

This conceptualisation of place provided a multi-layered perspective on the activities and relationships associated with the land at the FWG. It provided a strong foundation for (1) my conceptual and empirical engagement with the research question, (2) my ethnographic methodology, particularly my interview questions (see interview guide in Appendix A), and (3) the in-depth dialogues I conducted with the FWG volunteers I interviewed and the empirical material I collected in my efforts to understand the human-land relationship at the FWG. That dialogue is outlined in more detail below (see also Figure in Appendix B).

PHYSICAL place characteristics: **materiality** (Cresswell) & **location** (Agnew)

- **questions** which guided my discussions with research participants and my dialogue with the empirical material I gathered
 - where is the cultivated space located?
 - what sorts of sub-locations characterise the site?
 - what/who is found on site?
 - what are its physical components and appearance?
 - what makes it stand out from other locations?
 - who are the cultivators active there?
 - what sorts of physical activities are carried out on-site?
 - what are the physical products of these activities?
 - what are the tangible/visible impacts of these activities on the land?
 - how does the location affect the activities?
- **main methods** for collecting the data corresponding to physical place characteristics
 - observant participation / participant observation
 - site observation.

B) RELATIONAL-PRACTICAL place characteristics: **practice** (Cresswell) & **locale** (Agnew)

- **questions** guiding my discussions with research participants and my dialogue with the empirical material I gathered
 - how do the volunteers engage with the land?
 - how do they actively interact with the natural environment?
 - how do the volunteers interact with each other as they work at the cultivated site?
 - what motivates the activities and interactions?
 - what are the intentions behind the activities and interactions?
 - what is the overall purpose and vision for cultivating the Fletcher Wildlife Garden?
 - what long-term objectives and plans are being followed?
 - what are the goals for cultivating the various habitats?
 - what are the volunteers' personal reasons for working at the Fletcher Wildlife Garden?
 - what roles do the volunteers play as they participate physically with the land?
 - what roles does the land/the natural environment play?
 - to what extent are the intentions and objectives for cultivation fulfilled – or partially fulfilled, perhaps even thwarted or resisted?
 - what sorts of relationships develop between the volunteers and the land as a result of the cultivation intentions, activities, and interactions?
- **main methods** for collecting the data corresponding to relational/practical place characteristics
 - observant participation
 - dialogue / interviews
 - ancillary source research.

C) AFFECTIVE-EVOCATIVE place characteristics: **meaning** (Cresswell) & **sense of place** (Agnew)

- **questions** guiding my discussions with research participants and my dialogue with the empirical material I gathered
 - what sorts of experiences take place as the intentions of cultivation are acted upon, as the cultivation activities are carried out?
 - how do the volunteers feel about the plants and the land/natural environment they are cultivating?
 - what sorts of attachments do the volunteers develop with the land/the natural environment in the process?
 - how do the act and relationship of cultivation affect the volunteers?
 - what do the act and relationship of cultivation mean to the volunteers?
 - how important is the Fletcher Wildlife Garden to the volunteers who work there?
 - what role does the space play in their lives?
 - how do these meanings affect the ongoing process of cultivation?
 - what are the ethical implications of the cultivation process – at the Fletcher Wildlife Garden and beyond?
 - does the relationship of cultivation at the Fletcher Wildlife Garden have something to teach us about
 - nurturing other spaces
 - cultivating a healthier relationship with the planet
 - creating healthier communities
 - and more?
- **main methods** for collecting the data corresponding to affective-evocative place characteristics
 - dialogue / interviews
 - ancillary source research.

The methods are described in more detail in the following section.

2.3 *Ethnographic methodology*

Ethnographic fieldwork is considered the methodology best suited to case study research and to immersion in real-life situations. Typically associated with anthropology, ethnographic fieldwork is well-suited to human geographical studies of places and people, as expressed by Steve Herbert in his statement that ethnography explores the “complex connections that social groups establish with one another and with the places they inhabit, cultivate, promote, defend, dominate and love” (Herbert 2000, 564). I appreciate Herbert’s description for its emphasis on connections – among inhabitants of spaces, and between inhabitants and places – in all their intricacy. The final part of the Herbert passage strikes me in particular. Inhabiting (implying a certain commitment), cultivating, promoting, defending,

dominating, loving – all words which capture the intensity and complexity of relationships that typically develop between people and the land they cultivate.

For these reasons, and because I wished to not only speak with people, but also to work alongside them and participate in their cultivation experiences, I chose ethnographic fieldwork for my research approach. I felt ethnographic fieldwork – described by Martyn Hammersley and Paul Atkinson as typically involving participation “overtly or covertly, in peoples’ daily lives for an extended period of time, watching what happens, listening to what is said ... collecting documents and artefacts ... gathering whatever data are available” (Hammersley and Atkinson 2007, 3) – would be the best way to gain insight into the relationship between volunteers and the land at the FWG.

In keeping with the multi-method tradition in ethnography (Atkinson et al. 2007, Hammersley and Atkinson 2007, Crang and Cook 2007, Hoggart et al. 2002), which typically revolves around participant observation – also called “observant participation” by Nigel Thrift (2000, 556) – along with other sources of evidence, I engaged in observant participation, semi-structured interviews, and ancillary source research to gather my empirical material. Those methods are described in the following sections.

2.3.1 Working with the research participants – observant participation

I joined the FWG Friday morning volunteer group – which focuses mainly on the backyard demonstration garden – in the spring of 2008, at a time when I had not yet decided on my actual case study site. As already mentioned, I was acquainted with the FWG project, and I had volunteered now and again on an ad hoc basis for several years. But I did not work regularly on-site with a volunteer group responsible for a particular habitat. When I joined the Friday morning group in 2008, I was exploring the possibility of focusing my study on the FWG. My informal observant participation and site observation began at that point, although I was not taking field notes at the time. I started taking field notes during the 2009 season, when I had officially selected the site and obtained research ethics approval from the University of Ottawa.

During that first informal field season, I came to know the other volunteers, and I familiarized myself with an aspect of the FWG which was new to me: the work required to help it maintain its desired shape. As I worked alongside the other volunteers during that period, it sometimes came up in conversation that I had returned to university, and that I was

doing graduate work in geography. At times, volunteers asked about my PhD research topic, and when they did, I did not hide the fact that I was thinking of focusing my study on the FWG.

In 2009, my first official research season at the FWG, I also started to work with the Wednesday evening group which focuses its efforts on the Butterfly Meadow habitat. But Wednesday evenings ended up being problematic for me, and I was unable to work with that group on a regular basis. I have, however, gone back to help on occasion, and I have stayed in touch with the volunteer responsible for that habitat. I also donate plants from my home garden to the Butterfly Meadow.

In 2011, after I finished my fieldwork, another volunteer team was established to focus on removing invasive species – a growing issue and concern – throughout the FWG. This Tuesday Invasive Species Group (TISG), as it is called, meets and works on Tuesday mornings. The project also started to organize “work bees” in 2011. These events, lasting up to one day, are open to the public and revolve around tasks such as planting or invasive species removal.

Considering my history of prior involvement with the FWG project, and the on-site activities I engaged in with other volunteers, I view my research as being “observant participation” more than “participant observation.” When I worked alongside the volunteers at the FWG, I did not, in fact, carry my field book with me. It proved impractical to keep a notebook, pen or other devices handy while carrying and handling trowels, shovels, rakes, buckets, watering cans, potted plants, etc. Besides, the on-site volunteer tasks were so absorbing, that I kept forgetting to take notes! In the beginning I chastised myself for the neglect, then finally accepted that I would not be able to take notes while performing my volunteer work. I also came to realize that when I was working physically at the FWG, the tasks I was carrying out took priority. FWG work was more important than taking notes, than asking specific questions, than my research activities. When I was working at volunteer tasks on-site, I was a FWG volunteer.

When I left the site, I became a researcher, and I always made certain to write up my field notes as soon as possible after the work session, while the memory of observations, activities and conversations was still fresh in my mind. I also took photographs, although I am not much of a photographer. While I worked on-site, I had the opportunity to engage in

casual dialogue with FWG visitors as they passed through to walk their dogs, take photographs, look for birds, or just stroll along the trails. I captured those informal conversations in my field notes.

My field notes cover over 150 hours of site observation and observant participation alongside other FWG volunteers. Excerpts from those notes will be sprinkled throughout the pages and chapters to follow. I identify those passages as “([date] field notes).”

2.3.2 Recruiting the research participants

Considering the limited size of the pool of active FWG volunteers, I decided to include all individuals who wished to participate in my research project, for both breadth and depth of insight into the act and relationships of cultivation. It wasn't difficult to recruit participants for the project, yet it was something I was curiously shy to do. I am still not certain why I was so self-conscious, but I have thought about it, and I believe it was due to a combination of factors:

1. I had been working with the Friday morning volunteer team for one and a half seasons by the time I received ethics approval for my research project, and I had become fond of the other volunteers. A part of me was reluctant to jeopardize the rapport by suddenly becoming 'the researcher'.
2. Having worked alongside the other volunteers for so long, I considered myself, by that point, to be more of a fellow volunteer than a researcher.
3. I had planned to do my little recruitment speech as soon as possible after receiving ethics approval – during coffee break when all the volunteers were gathered in the same room – but the building where we typically meet ended up being renovated during that time, and people dispersed to different spaces for their coffee break. By the time we gathered in the same room again several weeks later, a peculiar tension had built inside me, which resulted in the following situation, recorded in my field notes:

When I got to coffee, everybody was there, a bigger crowd than last week. A was talking about some things, and then I jumped in to talk about my research project, which I did rather awkwardly and fumblingly. I handed out letters of information, but I didn't have enough copies ... stupid! B suggested I send it via e-mail, which I will do. C suggested sending the questions via e-mail, which the others seemed to think was a good idea too.

People seemed genuinely interested, willing and co-operative. D, a new volunteer, handed back the letter of information, saying that she was new, so she would not have much to contribute. But I handed it back saying, “No, no, I would love to hear from everyone.” E came up

and handed me a piece of paper with her telephone number and instructions for leaving messages, since she doesn't have e-mail (August 28, 2009 field notes).

Most of the volunteers present that day, and others I approached later, were interested in my project and enthusiastic about what I was doing. Many knew – from conversations working alongside different individuals, sometimes for hours at a time – that I had gone back to university, and they wished to be helpful. E., for example, who provided her telephone number on the day I started recruiting, arrived the following week with an envelope containing three beautifully typed pages of highly personal reflection in response to the letter of information I had distributed, which contained the following description of the project: “What I hope to do through the study is to explore and develop a deeper understanding of the activities involved in cultivating the land, the relationships that develop between people and the land they cultivate, and the meanings of those activities and relationships.” I was surprised and touched by the effort she had made in thinking through and typing out her text, and by her quick response. As she revealed later during our interview, she had also gone back to university as an adult and had conducted interviews with families for her graduate research project. She sympathised with my situation, and with the challenges of qualitative methodology.

It was also helpful that one of the volunteers present, at the time also the Chair of the FWG Management Committee, spoke up after I made my little self-conscious recruitment speech, and affirmed that the Management Committee supported my project. I had, in fact, received a letter of support from the Management Committee, which stated the following:

Your research will help us better understand and build on the strength of the active human–plant and human–land relationship in our educational outreach efforts, and in our internal volunteer recruitment and management activities.

We appreciate the efforts you have made over the years to the benefit of the Fletcher Wildlife Garden, and we look forward to working with you on your research project. We will be pleased to share in your research findings and to receive copies of other related published materials produced as a result of the proposed research.

With the interest and support of both the FWG Management Committee and individual volunteers, I was ready to proceed with the dialogue-based methods of the project. But within less than a month, two developments postponed the interviews. First, in the fall term of 2009, I started teaching my first-ever university course to a class of over 100 students – an intense experience. I also became sick with a strong and persistent flu – an illness I did not wish to

share with other volunteers – that lingered until shortly before Christmas. I was unable, therefore, to begin my interviews until the winter of 2010.

2.3.3 Speaking with the research participants – semi-structured interviews

The in-depth interviews I conducted with individual research participants were structured along the lines of the interview guide provided in Appendix A. The largely open-ended interview questions provided ample scope for reflection, room for discussion, and opportunity for individual expression.

In total, twenty-seven volunteers participated in the semi-structured interview part of the project, including nine men and eighteen women. The overwhelming majority of these individuals (22 in total) are over the age of fifty, most of them retired; only a handful of research participants are younger. These research participants were mainly Friday morning work group volunteers who focus almost exclusively on the Backyard Garden (with some individuals also working on tasks in other parts of the FWG), as well as two individuals responsible for other habitats. Seven of the participants were also members of the FWG Management Committee at the time, with three joining shortly after the interview process, and one resigning over the course of the project.

To make the interview procedure as easy and smooth as possible for the volunteers, I adapted the process to their interests, needs and schedules as much as possible. Some of the volunteers requested that I send them the interview questions ahead of time, via e-mail, so that they could think about their responses before we spoke. In response to those requests, I ended up dividing the original interview guide into two parts (see Appendix A), with Part 1 (Round 1) containing largely introductory, quick-response questions such as the length of time they have been volunteering at the FWG, how far they live from the site, what drew them to volunteer at the FWG, and the activities they perform on-site. Part 2 (Round 2) questions, primarily open-ended, led to lengthier conversation. The Part 2 questions revolved around more complex themes such as

1. the respondent's relationship with the land at the FWG, including the role they feel they play, and the role the natural environment plays,

2. what the FWG means to them, including what they look forward to most when they go to work on-site, how working at the FWG has affected them, and the role the FWG plays in their lives,
3. the impact of the FWG on the environment and community beyond its boundaries.

I sent the Round 1 questions, along with the project consent form, to all participants via e-mail for the sake of consistency, and offered the option of responding via e-mail, telephone, or person-to-person interview. Many participants chose to respond to Round 1 questions via e-mail, and to meet to discuss Round 2 questions in person.

Most of the Round 2 conversations were face-to-face interviews which took place at either the FWG, the participant's home, or the University of Ottawa campus. During those conversations, I also asked follow-up questions to Round 1 responses. The interviews typically lasted between one to two hours. Three participants – all of whom live a fair distance from the FWG – preferred to conduct the interview by telephone, thereby saving on travel time and lessening the carbon footprint of the study. One volunteer chose to continue responding in writing to the Round 2 questions, although we ended up meeting in person at the FWG so that I could ask follow-up questions. I tried to avoid interviewing participants during the Friday-morning volunteer working hours, so as not to deprive the FWG of much-needed attention. I did, however, end up meeting with two of the volunteers during coffee break, at their request, and with another individual on a Friday afternoon when everyone else had gone home.

An interesting and unexpected challenge arose as I started scheduling the meetings: interviewing couples who volunteer together at the FWG. The majority of volunteers are retired, and six of them come to the FWG with their spouses. The couples also appeared at the interviews together – either at their homes, or at the FWG. The interviews with the couples ended up being long, intense, and complicated by the fact that in two cases, one member of the couple had submitted written responses to the first round of questions, while the other (in one instance the man, the other the woman) hadn't. Interviewing the couples appeared daunting at first, but it ended up more manageable than I expected, and I was able to keep respondents untangled in my notes. In two cases the discussions became very long – in one instance interrupted by repeated wildlife sightings in the yard of the home where we were conducting the interview – and we made arrangements for a second meeting.

I ended up not audio-recording the interviews. I took hand-written notes instead, for the following principal reasons:

1. Hand-written note-taking was an intuitive response to a strong sense that audio-recording technology would not be appropriate – that it might get in the way and interfere in the interview process.
2. Hand-written notes felt more organic, more in the spirit of the FWG.

Hand-written note-taking did, as I came to realize, turn out to be advantageous for the following reasons:

1. *The rhythm of hand-written note-taking allowed time for reflection.* Occasional-to-frequent (depending on how quickly the individual spoke) pauses occurred when the research participant finished talking and I caught up on writing my notes. These pauses benefited the entire process. The interviewees used those brief periods of stillness to take mini-breaks, during which time they were able to gather their thoughts, reflect on what they had just said, and think of things they would like to add. Interviewees did, in fact, often take advantage of those pauses to elaborate on their responses, make additional points, or take us on a related tangent. I feel that without those mini-breaks, I would not have gathered as much in-depth content.
2. *Broken eye contact relieved pressure.* Related to the mini-breaks was the frequently broken eye contact with interviewees when I looked down at the paper where I was writing my notes. I feel the broken eye contact helped relieve pressure on the research participants. Although the interviews were positive experiences which took place at locations chosen by the participants and dealt with topics they found pleasant and meaningful – often also involving tea/coffee and treats – the interviewees were nevertheless on the spot, expected to understand complex questions, think up quick responses, and remain focused for long periods of time in the presence of a researcher. As much as we may try to make interviews relaxed and informal, interviewees are still under a certain pressure to perform, and the researcher's gaze reminds them of it. I feel that the occasionally broken eye contact relieved the strain of the gaze, providing yet another mini-break.

The realizations concerning note-taking pauses and broken eye contact did not strike me at the time of the interviews, and so I was unable to confirm the aforementioned points with

the participants. I have, however, in the meantime learned about fatigue related to human attentional capacity, and about the need to restore that capacity. I also found out about the benefits of what some researchers call “micro-restorative” activities and opportunities (Tennesen and Cimprich 1995, 78; Kaplan 1993, 200), all of which are discussed in Chapter 4. I do feel that the FWG volunteers I interviewed needed micro-restorative opportunities during the course of the interviews, and that the opportunities afforded by hand note-taking pauses and broken eye contact were beneficial.

I strove to make my hand-written interview notes as accurate as possible by clearly identifying passages I managed to capture word for word, passages that could serve as potential sources for direct quotes. I also offered to share the transcripts of my hand-written notes with each interviewee. Several individuals accepted my offer, and I sent the interview transcripts via e-mail, encouraging the recipients to read the files carefully and to contact me regarding any corrections or additions. Only two individuals followed up with me – one to say that my transcript was an accurate representation of our discussion, and the other to make minor changes and additions, mainly correcting or adding names.

I believe the interviews were a success, and that the interviewees enjoyed the experience. Some of the discussions lasted longer than expected, and we often went off on intriguing but related tangents. A few of the participants shared how they felt about the interviews in separate communications. Margaret, for example, wrote, “I ... enjoyed our interview as your questions led to interesting discussions and helped me think about what I was actually doing at FWG.” In a note sent prior to another meeting, Tracey shared the reaction of another volunteer to being interviewed: “[E.] remarked today that she enjoyed being interviewed because it really made her think about the FWG. I think she feels – as I do – that we spend so much time frantically trying to get things done that we don't really think about what we're doing. I guess can't see the forest for the trees applies.” And long-time volunteer Thomas stated in his hand-written response to the first round of questions, “Some of these questions are things which I have never thought about. Having considered the questions and my feelings – there is nothing about FWG that I want to change!”

Margaret, Tracey and Thomas are among the pseudonyms I attributed to the research participants to grant them as much anonymity as possible beyond the interview. I have taken the additional measure of making even vaguer reference to participant identity when

discussing an incident or subject that might enable a reader to make the connection between a pseudonym and a particular volunteer. On the other hand, I use the volunteer's real name if I refer to material they have written and published in the public domain.

2.3.4 Including all volunteers – autoethnography

As observers and interpreters of the world, we are inextricably part of it; we cannot step outside our own experience to obtain some observer-independent account of what we experience.

(Maxwell 2002, 41)

It has been pointed out that ethnography, with participatory fieldwork at its methodological core, is peculiar in that the researcher is the main tool for collecting data (Cloke et al. 2004, 169; Hoggart et al. 2002, 275). The point has also been made that this tool is very complex. The researcher behaves in customary ways in familiar circumstances, and must learn different ways to act in the unfamiliar and sometimes tense conditions of research settings (Cloke et al. 2004, 170). Different aspects of the researcher's unique identity – including taken-for-granted knowledge, worldviews, ways of life, skills, appearance, body language, ethics, politics, relationships, intentions, self-understandings, ideas and emotions – inevitably rub off and play off against one other during the research process (Cook 2005, 177; Cloke et al. 2004, 170).

This complex bundle of personal characteristics is bound to affect the ethnographic research process, or any research process for that matter, a realization that has led to calls for reflexivity on the part of researchers (Cloke et al. 2004, 191; Hoggart et al. 2002, 223-5). One possible reflexive approach to ethnographic research is autoethnography, a self-reflexive process through which researchers make explicit use of their experiences, involvements and positionalities as an essential part of the research project (Butz and Besio 2004, 353), showing how they are “situated in relation to the people and worlds they are studying” (Butz and Besio 2009, 1666).

Autoethnography was from the beginning intended as a dimension of my ethnographic fieldwork at the FWG. After three seasons of working alongside other volunteers at the site, I knew that it would be impossible to untangle myself from the project. Since 2008, I have been a composite of the following multiple, overlapping selves:

- a) a contributing member of the human volunteer groups cultivating the FWG (my volunteer self),

- b) an ecological element actively involved in shaping the space (my ecological self),
- c) a researcher focused on both studying the relationships with and within the FWG's project site (my researcher self), and
- d) a writer producing a written work based on all of the above (my writer self).

I did not seek to hide this position from the other volunteers. In the letter of information distributed to potential research participants, I wrote, "I would also like to point out that since I am a FWG volunteer myself, my experiences and observations are part of the information I am collecting through the notes I take in my field journal." I did include myself in the field notes I recorded, and I am integrating those experiences and my research self into this dissertation as the narrator, "I."

2.3.5 Examining additional sources – ancillary source research

The final method I used in my multi-method ethnographical study of the activities and relationships of cultivation at the FWG was an examination of ancillary sources of information regarding the project, including the following:

1. FWG website and photo-blog,
2. on-site documentation relating directly to the FWG, including newsletters, reports, meeting minutes, files, inventories, archived documents, and other printed material,
3. wildlife- and gardening-related educational information (leaflets, brochures, etc.) available on-site,
4. media articles,
5. photographs.

Research on-site and online

Over the course of the 2010-2011 winter season I spent days on-site in the FWG Interpretive Centre, where I poked through filing cabinets, leafed through publications, scrutinized landscape design drawings, squinted at photographs, and read through educational materials available to visitors and anyone else who walks into the building. The Interpretive Centre ended up offering a wealth of information, including files and binders containing material stretching from before the FWG was established to the present day. The material covers a wide range of FWG-related matter, including site planning and development, agreements and memoranda of understanding, strategic planning, wildlife inventories and

observations, interpretive programming, management committee meetings, awards and recognition, newsletters, and special events. Education and awareness-raising material, offered free of charge at the Interpretive Centre, includes brochures, fact sheets and posters produced by external organizations such as Natural Resources Canada, Environment Canada, Canadian Wildlife Service, Natural Heritage Information Centre, Canadian Wildlife Federation, National Capital Region Wildlife Festival, Ontario Nature, and the Regional Municipality of Ottawa-Carleton. Material developed for distribution by the FWG includes trail maps, bird and butterfly lists, fact sheets about invasive species, and information sheets on various aspects of natural and wildlife-friendly gardening, from backyard composting and bird feeding, to creating hedgerows and backyard ponds.

I also spent many hours combing through the FWG website which makes available progress reports, newsletters, policies, biodiversity inventories, a photo-blog, a virtual tour of the site, and information on volunteering, wildlife, native plants, and wildlife gardening. The website has been renovated since that time.⁵

Research in academic and other media

Through various databases accessible via the University of Ottawa library, as well as Google Scholar, I was able to locate a handful of academic articles relating to the FWG and research being conducted there; Google Scholar, interestingly, yielded the most helpful results. Other databases (Canadian Business and Current Affairs, Canadian Newsstand, Canadian Periodicals Index, Eureka.cc, Factiva) helped me track down FWG-related media articles through variations on the following keywords: “Fletcher Wildlife Garden” and “jardin écologique Fletcher”, as well as varying combinations of “wildlife garden”, “jardin écologique” and “Ottawa.” I did not limit my search to particular media or time periods, as I sought to learn as much as possible about the FWG through the articles, and wished to grasp the diversity of newsworthy subject matter relating to the place. Paper files and bulletin boards at the FWG Interpretive Centre yielded additional media material from local, environmental, and community newspapers.

The media articles retained for the project span 21 years, from 1990 to 2011, and number 55 in total. The majority of the articles (39) were published in *The Ottawa Citizen*, with others appearing in regional French-language newspapers such as *Le Droit* (1) and *Express Ottawa* (1), and in community and environmental publications such as the *Glebe Report* (1)

Peace and Environment News (2), *Newsweek* (1), *The News* (2), and *Vistas* (2). The articles and editorial pieces I retained meet the following criteria:

1. focus on the FWG, or on a FWG volunteer, as the main topic of discussion,
2. include significant FWG content, more than two paragraphs, relating to a broader article topic (e.g. pollinator decline),
3. were published in response to an article in the first two categories, and mentioning the FWG,
4. identify the FWG as a model or important source of information/support relating to the article topic (e.g. invasive species),
5. report on FWG recognition and support (e.g. award, funding),
6. recognize the FWG as a significant feature or site in the region,
7. identify the FWG as a stakeholder in a topic of controversy (e.g. proposed botanical garden threatening the Central Experimental Farm),
8. feature a FWG partner (individual or organisation), and mentioning the FWG.

I excluded material such as basic information about special events held at the FWG, brief mention of the FWG in the *Ottawa Citizen's* birding column, and recommendations for visiting the FWG which include little information besides site details. Nevertheless, among the excluded material, I noticed certain trends. Birds observed at the FWG appeared frequently in the weekly *Ottawa Citizen* birding column, suggesting that the FWG provides habitat that meets the needs of birds living in, and passing through, the city. Information about FWG events such as guided walks, open houses, and the annual native plant sale also appear regularly in regional media, indicating that the site offers activities and products that interest and meet the needs of the urban population.

Identifying ancillary source material

I have treated published ancillary sources in the same manner as other referenced material; I have incorporated them into the bibliography and provided in-text parenthetical references. Ancillary source materials located in files on-site at the FWG Interpretive Centre are identified according to their precise location in the filing cabinet where I discovered them. The referencing code I developed includes the following elements: FWG drawer number, file label, and a year and page number for the document if those details are available. A filed ancillary source item might, for example, be labelled as follows: (FWG D2, Project description, 1991: 1). See the list of FWG on-site files at the end of the bibliography.

The research lens

In all these ancillary source research activities I looked for content relating to the main themes outlined in my framework of inquiry. I kept an eye open for **physical** characteristics of the FWG, including the location of the project site and the different habitats within the garden; the physical features of the FWG and the physical activities involved in shaping it; physical presence, both human and nonhuman, on-site; and physical changes that have taken place at the FWG over time. I also looked for evidence of the project's **active-relational** qualities, including how the volunteers engage and interact with the land and each other; the roles played by the volunteers and the land/natural environment; the relationships that develop between people and the land at the FWG; the motivations and intentions behind FWG-related interactions, relationships, and physical activities; the overall purpose, vision, and goals for creating and maintaining the FWG and its various habitats; and fulfillment of, and/or resistance to, those goals. Signs of the FWG's **affective-evocative** impact were also important. I searched for experiences that take place at the FWG; attachments that develop with the land/natural environment on-site; the effect and meaning of the experiences and attachments; the importance and significance of the FWG to the lives of volunteers and to the greater community; ethical implications of the work carried out at the FWG; and lessons the FWG has to teach.

Information gathered from these ancillary sources has helped to establish a fuller context for my study, paint a broader picture of the FWG, deepen my understanding of the place, fill in knowledge gaps, and generally supplement and substantiate the story told through my field notes and interviews with research participants.

2.4 Interpretation

Researchers writing about case study and ethnographic research observe that interpretation and analysis is a little-addressed and especially challenging aspect of these research approaches, and that no formula or recipe exists for successfully processing the data involved (Crang and Cook 2007, Hammersley and Atkinson 2007, Yin 2003, Jackson 2001). The multiple sources and types of data typically collected in case study and ethnographic research, along with their unstructured forms are identified as adding to the difficulty of identifying a formula for interpretive success (Hammersley and Atkinson 2007, 161).

In lieu of a step-by-step formula, different writers make recommendations highlighting precision and diligence. The following resonated with me: (1) keeping systematic, extensive, detailed field notes (Laperrière 2003, 289; Roy 2003, 178); (2) triangulating different methods and participant accounts (Hammersley and Atkinson 2007, 183-4); (3) putting evidence into preliminary order (Roy 2003, Yin 2003); (4) coding, categorizing and linking in an iterative manner (Crang and Cook 2007, Jackson 2001); and (5) adopting a broad, general analytic strategy to set the project on a particular course from the beginning, thereby avoiding false starts and wasted time (Yin 2003, 111).

In the FWG case study, I made conscious attempts to be disciplined and rigorous. I consciously triangulated observant participation, interviews, and ancillary source research. I took field and interview notes systematically, transcribing them as regularly as I could, ideally soon after the volunteer session or interview while the experience was fresh in my mind. I also attempted to organize the notes on a regular basis, putting them into preliminary order according to the themes associated with the interview questions, and applying a general interpretive strategy based on the broad questions and themes outlined in my framework of inquiry: (1) who are the participants? (2) what are their activities and interactions? (3) what sorts of relationships develop in the process of volunteering at the FWG?, and (4) what are the implications of the activities and relationships? Subsequent rounds of categorization to discover other patterns revealed additional threads such as the social aspects of volunteering at the FWG, emotional-evocative aspects of volunteering at the FWG, volunteer satisfaction, love for nature, changes over time at the site, vandalism and other threats, learning and education, physical activity, biodiversity, native plants, invasive species, and more (see thematic categories listed in Appendix C).

It was during these initial interpretation stages that I discovered the importance of engaging in open and sincere dialogue with the empirical material, of providing participants and data the space to speak sincerely, and of engaging both my rational mind and my intuitive sense. The more I worked at the interpretation – listening, scrutinizing, deliberating, organizing, categorizing, sometimes agonizing – the more problematic the process became, leading, ultimately, to a shift in the research project.

2.4.1 A shift in focus

As I reviewed notes I took during interviews and time spent working in the field, as I repeatedly pored over ancillary sources, listening closely to what all this empirical material had to tell me, watching intently for trends and patterns, I came to realize that the project had outgrown its initial parameters and focus on cultivation. The empirical material I had gathered told a broader story when I engaged it in open, honest dialogue, and when I allowed my intuition to become involved. I later discovered the following insightful and reassuring passage written by research social scientist Herbert Schroeder with respect to studying the spiritual values of forests:

In the course of this exploration, the researcher would be engaged in an interplay between the rational and the intuitive functions of the psyche. At times it might be necessary to suspend the rational and analytical mode of thinking, to allow the intuitive process to function without interference. At other times the researcher would need to step back from the flow of intuition to clarify, organize, and evaluate the view that is emerging. The process would not proceed in a straight line. The intuitive process cannot be hurried, forced, or manipulated according to conscious plans. The researcher would need patience and a willingness to follow the process through many unexpected turns (Schroeder 1992, 28).

As I reflect on the research process, I realize that I was not, as Schroeder describes, able to hurry or force my FWG case study. When I tried to quicken the pace or push the process, I was unable to advance with satisfaction or integrity. I learned to balance and allow for interplay between the intuitive flow of the emerging interpretation and the sustained conscious effort of organizing and evaluating insights and discoveries.

The process, though long and winding with, in Schroeder's words, "unexpected turns" (Schroeder 1992, 28), was fruitful. The interviews and participatory fieldwork revealed that the scope of volunteer activities at the FWG reached beyond cultivation to include tasks such as monitoring, inventorying, and various levels of decision-making. The synergy at work at the FWG called for, actually insisted on, a shift in the project's focus and a broader research question. As I stepped back to re-evaluate my progress at that point, it became clear that the focus on cultivation – even if we understand it in broad terms as preparing and improving land for planting; as tending plants and crops, fostering growth and nurturing, and refining in a more general sense⁶ – was too one-directional and constraining.

As a consequence, I loosened my hold on the empirical material, and gradually a broader research focus materialized – one which cast a wider net to capture the spirit of the FWG and a broader spectrum of meanings involved in the place. The following research question emerged from the process:

“What kind of ‘place’ is the Fletcher Wildlife Garden?”

- *what occurs there, and what is its significance?*
- *what sorts of relationships do volunteers develop with the place, and what is the significance of those relationships?*
- *what sorts of meanings do volunteers attribute to the place, and what are the implications of those meanings?*

The guiding concept for the research project remains “place”, but my perspective on it changed over the course of the project, as the following chapter reveals. A parallel occurrence, the serendipitous discovery of another concept in the context of a course I taught to supplement my student income, helped to substantiate and fuel the research shift I was starting to experience. The discovery pointed in the direction of new perspectives described in the following chapters, and helped to chart the course for the remainder of the FWG case study.

PART II

PEOPLE, PLACES AND NATURE – EXPLORING THE RELATIONSHIP

The relationships at the core of the Fletcher Wildlife Garden (FWG) case study, combined with the objectives of the place to practice and teach urban wildlife habitat cultivation, issue a loud call for closer scrutiny of the project's guiding concept: the geographical notion of place, and the role played by the natural world. Considered separately, “place” and “nature” are highly complex and knotty concepts; together, they present particular challenges, as well as opportunities, to social science research as the following chapters reveal.

This part of the dissertation explores the relationship between places, people and nature, and extends an invitation to the social sciences to consider making more physical and conceptual space for the natural world in light of the need for nature in human places. Chapter 3 reviews geographical conceptions of place and investigates where and how nature fits into the picture. Chapter 4 provides an overview of the nature concept in geography, along with a closer look at contemporary human-nature relations. The final chapter focuses on the need for nature in human places, according to both recent and longstanding knowledge.

Chapter 3 “Place” – exploring the concept

“Place”, as already mentioned, is a challenging concept to discuss, considering its intricacy. John Agnew and James Duncan note, for example, that the *Oxford English Dictionary* devotes over three and one-half pages to ‘place’ (Agnew and Duncan 1989, 1), while Noel Castree remarks that the *Concise Oxford Dictionary* lists twenty meanings for the term (Castree 2003, 167). Tim Cresswell points out that place is a word which eludes easy definition, is frequently used in everyday life, and has been used in many different ways throughout the history of geography as an academic term (Cresswell 1999, 226); place, he concludes, is a word that “hides many differences” (Cresswell 2004, 15). George Henderson points out that the “potential interchangeability of place with other concepts is a sticking point” (Henderson 2009, 539), while Edward Relph adds that place covers “a range of significances and identities that is as wide as the range of human consciousness of place” (Relph 1976, 7).

No wonder geographers tend to portray place in terms of diversity (Johnston 1991, 253), complexity (Castree 2003), difficulty (Agnew and Duncan 1989a), and dispute (Agnew 1993). Yet despite these difficulties and intricacies, place remains, as some of these same authors point out, central to geography (Cresswell 2004, 15; Johnston 1991, 253), particularly human and cultural geography (Cresswell 1999, 226; Agnew 1993, 261). John Agnew further observes that place is one of geography’s defining elements and a “key idea for social science as a whole” (Agnew 1989, 9) – a point echoed by sociologist Per Gustafson, who describes meanings associated with place as an “important issue” in contemporary social science research (Gustafson 2001, 5).

Certain meanings associated with place are particularly significant to the Fletcher Wildlife Garden (FWG) case study, as revealed in the pages to follow. The first section of this chapter traces the concept through the history of geography, while the second discusses contemporary geographical conceptions and theorisations of place. The final section addresses the place of nature in these conceptualisations and theorisations.

3.1 *Geographical conceptions of “place” – a bit of history*

The centrality of “place” to geography is woven throughout the history of the discipline. Edward Relph traces the geographical idea of place all the way back to antiquity, to the common practice people had of identifying themselves by name and the place they came from (Relph 1997, 209-212). Tim Cresswell draws attention to Aristotle’s ideas about place as the “necessary starting point” for understanding space, movement, change, and other forms of existence. Everything that exists, Aristotle pointed out, is located somewhere; everything has a place (Cresswell 2009, 170).

Other influential contributions to the development of the place concept in geography are, interestingly, associated with the work of certain philosophers. Emmanuel Kant, for example, taught geography in the 18th century, and is acknowledged for focusing on the individuality of cultural communities, thereby reinforcing the role of place in geography (Entrikin 1991, 2). Martin Heidegger’s ideas of “being-in-the-world” and “dwelling” – essentially the way we exist in the world and make it meaningful or “place-like” – are also noted as influencing the work of humanistic geographers on place later in the 20th century (Cresswell 2009, 171).

The place-oriented work of Paul Vidal de la Blache in the late nineteenth and early twentieth centuries is highlighted by many geographers writing about place (Cresswell 2009 and 2004, Castree 2003, Relph 1997, Buttimer 1971). Both Anne Buttimer and Edward Relph point out that Vidal de la Blache defined the discipline of geography as “the scientific study of places” with his work on the diversity of places, the ways in which people have adapted to the natural resources of particular areas, and the resilience of local cultures (Relph 1997, 213-214; Buttimer 1971, 43-58). Around the same period, on the other side of the Atlantic, Carl Sauer, who is more often associated with the landscape concept, was championing geography as the study of the uniqueness and individuality of places (Crang 1998, 101).

The study of unique individual places lost ground after World War II, with the movement to remake the discipline of geography into a spatial science. The resulting spatially oriented geography sought to develop quantitative studies, discover patterns in spatial phenomena, design spatial models (Crang 1998, 101), and measure people and things numerically, ultimately seeking to develop generally applicable spatial laws and theories (Castree 2003, 169-70). Places, under these circumstances, were treated as abstractions rather than actualities (Light, Smith and Roberts 1998, 1). The focus of this “quantitative revolution”, as it is called,

was primarily on the more objective and abstract concept of space, to the exclusion of the more subjective and value-laden notion of place. “What we cannot say in an acceptable scientific language,” writes Yi-Fu Tuan of those subjective qualities, “we tend to deny or forget” (Tuan 1977, 200).

But in the 1970s, dissatisfaction with quantitative geography brought the notion of place back from obscurity within the discipline. The concept of place was revived, and it re-gained consideration and momentum from two different perspectives: humanism and Marxism.

Humanistic geographers valued the subjective qualities of place noted by Tuan. They objected to spatial geography’s denial of human complexity and underscored its incapacity to speak to real-world issues. They protested that spatial geography reduced people to “little more than dots on a map, statistics on a graph or numbers in an equation” (Cloke et al. 1991, 68-9), to “passive agents of social, psychological, and economic forces” (Smith 2009, 242), in what Anne Buttimer describes as a “*danse macabre* of materially motivated robots” (quoted in Jordan et al. 1997, 27, original emphasis). Humanistic geographers draw attention to people as, in Cresswell’s words, “knowing and feeling subjects rather than either objects or simply rational beings”, who inhabit, experience, and make meaning in places through their own actions. The most important contribution of humanistic geography, he stresses, is the distinction between the “abstract realm of space” and the “felt world of place” (Cresswell 2009, 172). Another significant contribution of humanistic geography has been identified as the insight it offers into the “richness of human encounter” with places (Ley 1996, 195), particularly the ways in which places are “made, lived in and thought about” (Relph 1981, preface).

Marxist, or radical, geographers also protested against spatial science. They pointed out that it was not in a position to address real-world problems such as famine, poverty, environmental degradation and social inequalities (Castree 2003, 171). They were deeply concerned that ‘laws’ coming out of spatial geography could be used as, or incidentally become, instruments of social control and domination (Crang 1998, 101). It was inevitable that the politically charged Marxist position would clash with the more personal humanistic stance, with radical geographers viewing humanistic concerns as worthy but problematic in their own right. Marxist geographers focused on social processes involved in the construct of places, pointing out that meaning was assigned to those places by people with the power to do

so (Cresswell 2009, 173). Those same geographers criticized humanistic geography for its tendency to focus on the micro-scale at the expense of more important structural connections (Sharp 2009, 357). The Marxist position also argued that humanistic geography – with its focus on people and places in isolation, and on specifics of local attachments and experiences – disregarded the increasing interconnection and interdependence of places. Specific places, Marxist geographers stressed, were interrelated in ways that could have serious consequences on other places far away (Castree 2003, 171).

Humanistic and Marxist concerns and tensions extended into the 1980s, with Marxism criticised for becoming as guilty as spatial science in its failure to pay attention to differences among places, and humanism continuing to be chastised for its idealistic over-estimation of human agency, and its blindness to worldwide connections between places through common processes. The result of the ongoing discussion and debate was the invigoration – also called ‘rediscovery’ (Castree 2003, 171), ‘revival’ (Agnew 1989, 9), or ‘resurrection’ (Castree 2003, 170) – of the place concept in geography during the same period. Recent and contemporary geographical ideas about place are building on the dynamics of the ‘place’ debate, presenting a more integrated perspective than the dualistic notions represented by the humanistic and Marxist standpoints.

3.2 Contemporary geographical conceptions of “place”

One integrating perspective moves away from the traditional perception of place as static, working instead with notions of place in terms of mobility and process. Cresswell references Edward Said’s comment that our time is marked by mobility and migration, adding that the postmodern world is characterized by not only mass migrations (voluntary or forced) of people, but also by unprecedented scales and speeds of communication and transportation, which call for “new mobile ways of thinking” (Cresswell 2002, 16-17). Cresswell also mentions the work of Allen Pred, who writes about place as a product of social processes saturated with power – particularly the power of ‘institutional projects’ that construct and direct the paths of individuals. These projects enable the mobility of some individuals, while obstructing others, as in the case of men being able to move through places more freely than women (Cresswell 2009, 176).

The impact of globalisation on place is another preoccupation of many human geographers today. This “global space”, as Crang calls it (1998, 113), increasingly stretches social relationships across space to the point that boundaries between the ‘inside’ and ‘outside’ of a particular place become porous (Castree 2003, 174) – for example:

Migrants arrive and settle, bringing with them different cultures and different connections around the world. The old, settled coherence of ‘the locals’ may seem to be disrupted. ... Regions see their old economic specializations go into decline: their jobs are increasingly in the branch-plants of multinationals whose head offices are perhaps on another continent, and whose activities are scattered over a dozen countries (Massey 1995, 46).

Robert Sack notes that on this increasingly globalised planet, individuals can initiate actions that have potential impacts on places throughout the world – something encouraged by mass communications and international financial markets (Sack 1997, 8). The growing prevalence and use of social media today increases the likelihood of these sorts of potential impacts.

The results of this porosity and these impacts are varied and complex, including an increasing uncertainty about what is meant by ‘places’ and about how we relate to them (Massey 1996, 237) – not surprising considering the rapid pace of change facing places throughout the world. This ongoing change, Castree points out, is both physical (e.g. businesses shutting down, new stores opening) and social (e.g. older generations dying out, immigrants moving in), with many local changes resulting from extra-local or global processes such as foreign companies establishing manufacturing complexes, and locally variable identities arising partially from external influences (Castree 2003, 176-178). Linda McDowell identifies a rather paradoxical outcome of this ongoing change and uncertainty: a reassertion of the importance of local or regional identities, such as a return to local languages in parts of Great Britain (McDowell 1997, 1). We could add the rise of local food systems as another example. The global system and world culture has at times, interestingly, been called a ‘global village,’ a term that suggests a yearning to shrink the global process to a “single shared local experience” (Sack 1997, 8) – a desire reflected in the increasing popularity of social media such as Facebook and Twitter.

Geographers are still struggling to make sense of it all. Castree asks, for example, (1) how can places be “unique and yet subject to similar global forces”; (2) how can people’s sense of place be “intensely local and yet (implicitly or explicitly) extroverted”; and (3) how can human actions be “place based, unpredictable and variable and yet considered constrained by extra-local forces hailing from far away”? He puts forward five main ideas which do not

constitute a satisfactory response to his questions, but which nevertheless make interesting points with respect to globalisation and place: (a) globalisation may bring places closer together with respect to the reduction in time taken to cross the distances between them, but the geographical distances are still there; (b) globalisation doesn't happen through homogenised space – it links places because they are different; (c) despite the fact that many places are subjected to the same global forces, they react to them differently, and shape them differently; (d) most, perhaps even all, social relationships today are not global in scope (e.g. family, local clubs) [the aforementioned social media were not yet as widespread when Castree made that point]; and (e) not all places in the world are equally 'plugged in' to the global network (e.g. sub-Saharan Africa) [this situation has also changed dramatically since the time of Castree's writing]. Castree adds that global interconnections have resulted in exciting and innovative redefinitions of place, with contemporary geographers arguing that a concept of place suitable to our times is one that considers place differences as both a cause and effect of place connections (Castree 2003, 166-176).

Massey, for her part, believes we should re-think our sense of place. She calls for a progressive sense of place which is outward-looking rather than self-enclosing and defensive, and which views places as processes linked to "places beyond." A progressive and global sense of place, she stresses, recognises these processes and linkages without being threatened by them (Massey 1996, 237 to 245). Gustafson points out that Massey views places as processes rather than essences, as "points of intersection, integrating the local and the global" (Gustafson 2001, 6), with Cresswell adding that Massey's progressive sense of place has no clear inside and outside, and consequently no insiders or outsiders (Cresswell 2009, 176). This "extroverted notion of place", he points out, is hybrid and open, a "product of interconnecting flows – of routes rather than roots" (Cresswell 2004, 53).

3.3 Contemporary geographical theorisations of place

Despite these more recent preoccupations and thought currents regarding place, a certain time-tested conceptualisation of the basic concept – first synthesized by John Agnew, later echoed by Tim Cresswell – endures. It includes the following elements:

- 1) **physical** attributes such as materiality and location,
- 2) **relational** and **active** characteristics such as practice and locale,

3) **affective-evocative** qualities such as meaning and sense of place.

Castree, stressing that these characteristics of place “arguably remain in force today” (2003, 167), makes use of this conceptualisation, as do other geographers, who either clearly reference Agnew (Castree 2003, Duncan 2000), or who indirectly echo Agnew, as in Arild Holt-Jensen’s statement that the identity of place contains three essential elements: “*physical setting, human activity and meaning*” (Holt-Jensen 1999, my emphasis). The most recent *Dictionary of Human Geography* “place” entry, interestingly, picks up on the relational and meaningful aspects of place, but replaces the location angle with a “de-centred, global sense of place” (Henderson 2009).

3.3.1 Physical – place in terms of materiality and location

When one has lost any clear sense of who one is, it is consoling to know precisely where one is.

(Light, Smith and Roberts 1998, 3)

Materiality is the physical place characteristic emphasized by Tim Cresswell, who writes about the “material structure” which often defines places – for example, the skyscrapers of New York or the Eiffel Tower of Paris. Cresswell also includes more mundane, everyday material forms of places in his notion of “material structure.” These mundane forms include streets, sidewalks, shops and libraries, as well as transient material things that come and go such as cars and commodities (Cresswell 2009, 169).

Location, essentially “a specific point on the earth’s surface” (Castree 2003, 167) is the physical attribute stressed by Agnew. Cresswell specifies that location is a “position within a framework of abstract space, often indicated by ‘objective’ markers such as degrees of longitude and latitude, or distance from another location,” as well as particular relationships to other points in space (Cresswell 1999, 226) – unique qualities which contribute to the distinct character of each individual location (Cosgrove 1994, 548) as well as its history. All these characteristics influence the selection of a location for certain practices and uses, and its role as a locale, described in the next section.

The locational aspect of place is, according to some geographical sources, the focus of architects and natural scientists who tend to regard place in terms of physical settings (Holt-Jensen 1999, 159), and of economists and economic geographers who emphasise the spatial distribution of economic and social activities caused by “between-place factor cost and market price differentials” (Agnew and Duncan 1989, 2). Castree picks up on relational

aspects of location in the context of globalisation and the associated porous boundaries between locations, along with interlinkages, interconnections and interdependencies (Castree 2003, 174-5), thereby reinforcing Agnew's assertion that specific locations are the result of historically contingent "social and economic processes operating at wider scales" (Agnew 1993, 263). Those processes are in constant evolution, with the transient material things mentioned by Cresswell – from cars and commodities, to people and waste – increasingly crossing the porous boundaries between locations.

3.3.2 Relational and active – place in terms of practice and locale

"Space becomes place when it is used and lived," writes Cresswell (2009, 170). With that brief statement he sums up his conviction that a place takes shape through *practice*, that a place is "never complete, finished or bounded" but "always becoming – in process" (Cresswell 2002, 20). People, he stresses, "do things in place", and what they do contributes to the meanings that develop there. Activities of everyday life such as working, shopping and socializing, he notes, all have a particular impact on meaning (Cresswell 2009, 169). What people do in a place – the way they live, experience, and use it – makes those places meaningful (Cresswell 2009, 169-70).

The stage for these everyday activities is the relational, as well as practical, aspect of place put forward by Agnew, who calls it *locale* and describes it as "a setting for activity and social interaction" where social relations are "constituted" (Agnew 1993, 262-3). The *Dictionary of Human Geography* entry defines locale as a term and notion proposed by sociologist Anthony Giddens in his development of structuration theory. The dictionary curiously make only slight reference to the use of the term by geographers and revolves mainly around Giddens' sociological formulations; the "locale" entry in the most recent edition of the dictionary is surprisingly brief (Painter 2009 and 2000).

In geographical literature, locale is portrayed as the focus of microsociologists and humanistic geographers concerned with place as "the settings for everyday routine social interaction" (Agnew and Duncan 1989, 2), and of other social scientists who consider places mainly as arenas for social relationships (Holt-Jensen 1999, 159). As Agnew puts it, "The reproduction and transformation of social relations must take *place* somewhere" (Agnew 1993, 262, original emphasis), with locales mediating social contact and interaction, thereby also influencing the material and social shaping of places. Castree takes the notion of locale

even further, casting it in terms of global forces and local responses, particularly with respect to local inequality and uneven development caused by global interlinkages (Castree 2003, 173 and 180).

3.3.3 Affective-evocative – place in terms of meaning and sense of place

Meanings are not just located or distributed in space, they define and create place.

(Williams 1995, 26)

Tuan writes that space is “transformed” into place as it takes on definition and meaning with time and experience (Tuan 1977, 33 and 136). The importance of meaning to the concept of place is reinforced by Cresswell who adds that the idea of meaning became central to the place concept in human geography in the 1970s. Meanings, he explains, can be intimate and personal, connected to individual biographies and life events such as marriage and death; or they can be shared and social, associated with things such as important, well-publicized international events – all contributing to turning a location into a place (Cresswell 2009, 169). Place can also be a way of understanding the world. When we consider the world in terms of places, Cresswell explains, we see “worlds of meaning and experience” (Cresswell 2004, 11).

Worlds of meaning and experience are invoked by the *sense of place* quality emphasized by Agnew. Essentially the subjective feelings associated with a place, this characteristic has been discussed in complex terms by other geographers. The first sentences in Denis

Cosgrove’s *The Dictionary of Human Geography* ‘sense of place’ entry, for example, reads

Originating in studies of the physical characteristics and qualities of geographical locations as appropriated in human experience and imagination, sense of place has increasingly been examined in human geography as an outcome of interconnected psychoanalytic, social and environmental processes, creating and manipulating quite flexible relations with physical space. Geographers have thus examined both the character intrinsic to a place as a localized, bounded and material geographical entity, and the sentiments of attachment and detachment that human beings experience, express and contest in relation to specific places (Cosgrove 2000, 731).

This passage is an echo of Cosgrove’s briefer ‘sense of place’ entry in the 1994 edition of *The Dictionary of Human Geography*, where he identifies two essential, “distinct and interlocking” characteristics of the sense of place concept: (1) the “character intrinsic to a place itself” and (2) the “attachments that people themselves have to a place” (1994, 548-9). The first characteristic revolves around the distinctive and memorable qualities of certain physical locations – qualities that evoke powerful responses from different people. The second regards “individual human and social processes producing deep emotional

connections with specific locations”, whether those locations are physically distinctive or not (Cosgrove 2000, 731-2). Agnew picks up on the deep, individual connections to place when he writes that sense of place “reinforces the social-spatial definition of place from *inside*, so to speak” (Agnew 1993, 263). Edward Relph offers another perspective on sense of place – a more active one – in his assertion that sense of place is an “innate faculty” that everybody possesses to some degree, and a skill that can be learned in order to develop a critical environmental awareness of what the world is like and the changes it is undergoing (Relph 1997, 207-8).

These three distinct, yet interrelated and interlocking perspectives on place are a testament to the breadth of the concept, as well as its depth and complexity – all those qualities which make it such a difficult and disputed concept. Some geographers feel it would be helpful to integrate the physical, active-relational, and affective-evocative perspectives on place.

3.3.4 Integrated perspectives on place

While Cresswell states that the three elements of place just discussed are all at work in any given place we may encounter (Cresswell 2009, 169), he does not necessarily stress their integration. Agnew and Duncan, on the other hand, point out that although these meanings have tended to be viewed as mutually incompatible or competing, they are related and complementary dimensions of the same concept. “If locale is the most central element of place sociologically”, they argue, “it must be grounded geographically. Local social worlds (locale) cannot be completely understood apart from the macro-order of location and the territorial identity of sense of place” (Agnew and Duncan 1989a, 2). Writing four years later, from an even stronger sociologically positioned viewpoint, Agnew makes the same point. He describes places as discrete yet elastic locations which contribute to constituting both social relations and individual identities. He notes that it is not possible to understand the socially oriented locale apart from “the *objective* macro-order of location and the *subjective* territorial identity of sense of place. They are all related ... locale is the core geo-sociological element in place, but it is structured by the pressures of location and gives rise to its own sense of place that may in certain circumstances extend beyond the locality” (Agnew 1993, 263, original emphasis).

Nicholas Entrikin, in his intriguingly titled *The Betweenness of Place*, concurs with the inclusive, objective-subjective perspective:

We live our lives in place and have a sense of being part of place, but we also view place as something separate, something external. Our neighbourhood is both an area centered on ourselves and our home, as well as an area containing houses, streets and people that we may view from a decentered or an outsider's perspective. Thus place is both a center of meaning and the external context of our actions (1991, 7).

He points out that this 'center of meaning' and the 'external context' correspond to subjective reality and objective reality respectively, and that we must consider both to understand a place in its totality and contextuality. From what he calls the "decentered vantage point of the theoretical scientist", place is reduced to location or to a set of generic relations, thereby losing much of its significance for human action, while from the subjective viewpoint, the meaning of place is restricted to an individual's or a group's goals and concerns. Entrikin adds that geographers have tended to focus on the objective end of the continuum, which "impoverishes" the idea of places as contexts and diverts geographical inquiry from understanding the important role of experience in the construction of identity. We must find a point in between, he concludes, from which we can get a sense of being both "at a location" and "in a place." We cannot afford to ignore both aspects of the dualism if we want to understand the modern experience of place (Entrikin 1991, 5-7 and 133-4).

3.4 An expanded conceptualisation of place

The modern experience of place evoked by Entrikin is changing with increasing rapidity. As mentioned earlier, geographers studying place and its significance have been highlighting certain changes – mainly global – the world is undergoing, and the effects of those changes on the nature and perception of places. The following list summarizes the contemporary developments, trends, and impacts on place identified earlier:

- mobility and migration, both voluntary and forced,
- unprecedented scales and speeds of communication and transportation, and a corresponding call for "new mobile ways of thinking" (Cresswell 2002, 16-17),
- the potential to initiate actions that can have impacts all over the world (Sack 1997, 8),
- social relations stretched across space to the point that boundaries between the 'inside' and 'outside' of a place become porous (Castree 2003, 174), with no clear inside and outside, and consequently no insiders or outsiders (Cresswell 2009, 176),

- hybrid and open places, the result of “interconnecting flows – of routes rather than roots” (Cresswell 2004, 53)
- places as processes, as “points of intersection” that integrate the local and the global” (Gustafson 2001, 6),
- increasing uncertainty about what is meant by ‘places’ and about how we relate to them (Massey 1996, 237).

The significance of these developments and trends is indisputable. Yet despite their contemporary salience, they do not help explain places such as the FWG – the synergy at work there, the relationships volunteers develop with and within such places, or the full significance of such a place and what occurs there. What appears to be overlooked in the above list, in contemporary discussion of place, and in most current conceptualisations of place in the social sciences, is the land or natural environment. As anthropologist Peggy Barlett points out, scholars of place, including geographers, tend to focus on class struggle, capitalism and other political and economic dimensions of place (Barlett 2005b, 11). She puts this tendency in the context of modernity, which praises what she describes as the “transcendence of older forms of boundedness to place, embracing technology, rationality, and control over nature as a means to development and personal success” (Barlett 2005b, 5). This applauded transcendence is reflected in Cresswell’s response to notions of boundedness and rootedness epitomized in Martin Heidegger’s Black Forest cabin, an image evoked by the philosopher to illustrate his notion of “being-in-the-world.” This cabin, Cresswell notes, sits “almost organically in the natural world, linking the cosmological to the everyday.” Cresswell observes that such a model of being-in-the-world seems limited, “a little regressive and romantic,” and somewhat senseless in today’s “urban, hyperconnected” world (Cresswell 2009, 171).

With that assertion, Cresswell suggests that a state of organic being-in-the-*natural*-world is no longer relevant in today’s society – or, by implied extension, in human geographical study and the study of place in the social sciences as a whole. Barlett elaborates on the situation as follows:

Recent scholarly work has drawn attention to *place*, often as a counter to the massive effects of globalization on population mobility and changing relationships to locale. Especially in reference to urban areas, however, studies of place usually emphasize human interactions within the built environment, perhaps with the natural landscape as a backdrop. *Place* generally refers to meaningful architectural features and geographical sites and the human social relations enacted

in them, with little or no attention to the natural systems supporting life. Relations with other species are rarely a focus of academic attention, and the impacts of health and well-being have often been missed (Barlett 2005b, 2).

She adds that when place is presented as a setting for interaction, it does not appear to involve “nonhuman species” (Barlett 2005b, 11).

Cresswell, one of human geography’s major “place” theorists is a good example of the situation Barlett describes. Aside from his response to Heidegger’s Black Forest cabin, some of Cresswell’s recent writings on “place” – specifically his “place” entry in the 2009 *International Encyclopedia of Human Geography*, and his 2004 book *Place: A short introduction* – do indeed focus on architectural and cultural features of geographical sites, on significant events that unfold in those spaces, and on the complex human social relations that play out there. He does, to his credit, mention the natural environment, both directly and indirectly, but he does not discuss it in significant detail. The natural systems supporting life do not enter Cresswell’s portrayal of place, with the exception of his reference to the regional geography of the early 20th century, which saw geographers studying various variables uniquely interlinked in space, including soil, climate and the natural landscape, along with the cultural landscape, and people’s habits, customs, and beliefs. Yet place, he adds, was less of a focus of their work than the concept of region (Cresswell 2009, 172).

Elsewhere in Cresswell’s writings, the natural environment is indeed a backdrop to human activity and interaction. His portrayal of New York’s Tomkins Square Park is a case in point. Cresswell describes the park as a “little piece of *nature* in the city built to provide a place of calm in the hurly burly of metropolitan life,” then goes on to portray it historically as a place of human action and interaction – a place for children, for temperance preachers, for union and anarchist demonstrators, for bohemian counter-cultures, for gentrification, for riots (Cresswell 2009, 3, my emphasis). Cresswell portrays the community gardens that sprang up in vacant lots around the park in the 1960s as a place for immigrants and other New Yorkers to “carve out a place from a little piece of Manhattan for their community to enjoy *nature*,” with some gardens created in the image of Hispanic “casitas” and decorated to symbolize home, others fashioned as English-style gardens, and still others designed as “wild *nature* reserves set aside for local school lessons on biology and ecology.” All these spaces, he stresses, are “sites of history and identity in the city,” examples of the constant and diverse creation of places (Cresswell 2009, 5, my emphasis). The natural environment, though

mentioned with relative frequency, does not serve as much more than a backdrop – a phenomenon that reflects, interestingly, perceptions of places as being mere decor, passive stages for social interaction.

Relations with other species, and impacts of the natural environment and natural features on human health and well-being are not discussed by Cresswell, although he does mention animals in the context of what he describes as a recent “explosion” of work on the role of place in producing outsiders, both human and non-human (Cresswell 2009, 103). It is true that Cresswell also refers, albeit briefly, to other areas of geography-related inquiry and practice where place and nature are integrated, including ecology (Cresswell 2009, 16 and 134), planning (Cresswell 2009, 134), and environmental history (Cresswell 2009, 40). Cresswell briefly describes the connections Vidal de la Blache made between the physical environment and cultural ways of life, and Robert Sack’s considerations of “the ways place as a center of human meaning ties together worlds that are normally held apart – the worlds of nature, meaning, and society” (Cresswell 2009, 172).

3.4.1 Reuniting nature and place in the social sciences

The worlds of nature, meaning and society, though strongly held apart in Western thought, are being brought back together by individuals working in certain social sciences and related disciplines and professions. A survey of contemporary work in these areas of study and endeavour reveals numerous invitations to consider the natural environment as an essential component in the study of place and the practice of shaping places – discussions relevant to geography as outlined in the following examples.

Anthropologist Peggy Barlett, writing mainly about nature in urban settings, states that the urban anthropology of place is inclined to stress relations among people, based on social principles, with the natural environment included mainly as a backdrop. At the same time, she adds, the depth and complexity of human relations with their surroundings, as revealed by urban anthropology, “opens the door for attention to relations with the more-than-human world” (Barlett 2005b, 10). Barlett points out that activities involved in environmental and sustainability movements such as community gardening and urban forest restoration (topics covered in sections of the book she edits, *Urban Place: Reconnecting with the natural world*) can help raise awareness of other species and their needs (thereby deepening the meaning of place), restore a natural sense of place, and renew meaningful relations with the earth.

Attachment to urban places, she points out, often include awareness and enjoyment of trees and shrubs, grass and flowers, birds and bees. She encourages “a conversation across the boundaries of traditional academic disciplines” to understand the power of place and of reconnection to the natural (Barlett 2005b, 21) – a dialogue which takes place, quite literally, in one of her research projects. She describes a scientist and theology professor conversing, with the scientist expressing appreciation for the opportunity to share religious language for expressing experiences in nature (Barlett 2005c, 48).

A religious perspective on place is offered by *theologian* Robert Hamma in his book *Landscapes of the Soul: A spirituality of place*. This book addresses various aspects of “place”, including the complexity of the place concept, the power of places to shape who we are, and contemporary cultural and environmental degradation of places. “When much of our surroundings are beyond our control,” Hamma writes, “we direct our energies to what we can control”, including places like gardens and yards. Some people, he notes, seek places that nourish the spirit – places such as natural areas (Hamma 1999, 23-4). Hamma also describes the important roles ‘natural’ places play in the lives of children. Even simple spots such as a corner of the yard, or local park or alley where children can dig, splash, and walk barefoot help, he observes, to “break down the artificial adult boundaries between themselves and the world in which they move” (Hamma 1999, 93). These places, he points out, stimulate the imagination, the spirit of discovery, and a sense of rootedness. Children make these places their own, and they explore unique individual connections with the natural world there. “Places of their own help children forge a link between themselves and the places where they live,” writes Hamma (1999, 93), a link which helps to reinforce a child’s sense of place.

The link between ourselves and the places we inhabit – essentially our sense of place – is very important, as *psychologist* Craig Chalquist discusses in his book *Terrapsychology: Reengaging the soul of place*. Chalquist explores what he describes as an “ecology of the heart” (Chalquist 2007, 9), pointing out that the environment of the places we inhabit has an “uncanny aliveness” and “impactful features” (Chalquist 2007, 9) that dwell in our psychological field and become a part of our selfhood. He cautions against repressing this “local, multifaceted sense of environmental presence” (Chalquist 2007, 7), stressing that human and ecological well-being (and wounding) is interdependent, reciprocal, interactive and meaningful. Chalquist writes from the standpoint of ecopsychology, which he defines as

the effort to understand, heal and develop the psychological dimensions of the human-nature relationship (psychological, bio-social-spiritual) through connecting and reconnecting with natural processes in the web of life. At its core, ecopsychology suggests that there is a synergistic relation between planetary and personal well being; that the needs of the one are relevant to the other (Chalquist 2007, 35).

Historian Theodore Roszak notes that ecopsychology proceeds from the basic assumption that at a deep level the human psyche “remains sympathetically bonded to the Earth that mothered us into existence” (Roszak 1995, 5). This sympathetic bonding is something agricultural economist Lester Brown puts in terms of collective sanity. “At its most ambitious,” he writes, “ecopsychology seeks to redefine sanity within an environmental context” (Brown 1995, xvi) – a context rooted in the places we inhabit.

Another psychologist, Catherine O’Brien, studies personal well-being and place from a different perspective: sustainable happiness (O’Brien 2005, 2006, 2008). Part of O’Brien’s research focuses on the somewhat more concrete characteristics of places that contribute to individual and public happiness, and to healthier, happier communities. Her “Delightful Places Survey,” which drew participation from around the world, reveals that nature is an important ingredient. According to survey results, the most delightful places are located along trails and paths, and in parks and other natural environments. The sounds of birds, wind, and water number among the top five sounds associated with delightful places; the top smells include soil, water and flowers. Nature watching was number three in the top ten activities associated with delightful places, with specific activities such as camping, gardening, and hiking also listed. The survey, O’Brien points out, was an initial step in integrating findings from happiness research into urban planning (O’Brien 2006) – a development journalist Joe Paraskevas reports is happening in Winnipeg (Paraskevas 2009).

Places of delight and well-being – places that are, in other words, effective – are also a focus of *health research*, though not as much as medical doctor and *environmental health* researcher Howard Frumkin feels they should be. Citing empirical studies of stated place preference, and empirical research demonstrating associations between certain aspects of place (e.g. trees, views of natural settings from a window, nature murals, access to nearby natural environments, recorded nature music) and behavioural and health outcomes, he declares, “There is every reason for those who care about public health to care about place” (Frumkin 2005, 254). He points out that the field of environmental health – which concentrates on safety and environmental hazards and dangers associated with certain places

– has failed to define what makes a successful place. What about efficacy, he asks, “How do we know what makes a good place?” (Frumkin 2005, 254). Frumkin stresses the need for research to establish careful operational definitions of nature contact and health end points, to understand what makes some places surpass others in fostering health and well-being, and to determine how to incorporate those qualities into the places we create. “If a sense of place has benefits for health and well-being,” he writes, “then understanding how to design for it may have real public health value” (Frumkin 2005, 258 and 264).

Designing places, and planning for them, is the work of *urban planners* and *landscape architects*. Robert Ryan, a scholar in both those fields, studies the relationship between environmental experience and place attachment to urban natural areas. His research reveals that people have strong and complex attachments to natural places, and that the attachments are related to the diverse ways in which individuals experience the spaces (e.g. volunteers who work actively to restore natural areas, individuals who respond more passively to the aesthetic appeal of the natural environment). These experiences affect not only place attachment, but also perspectives on how to manage the natural spaces – with the potential for conflict between differing views. Ryan recommends that managers of natural places consult with a wide range of users and stakeholders to understand their attachments and perspectives on management – with the ultimate goal of avoiding conflict (Ryan 2000).

Ryan also, together with landscape architect Robert Grese, studied the effect of ecological restoration work on volunteers in Chicago. The volunteers, it turns out, gain a greater appreciation for natural places when they work in them; they also feel more at home in those natural environments, and they develop emotional connections and attachments to the places they help restore. “The simple acts of tending nature and watching it grow”, write Ryan and Grese, “creates a powerful emotional bond (Ryan and Grese 2005) – the sort of bond Ryan suggests managers of urban natural places call upon to cultivate a positive force for natural area stewardship (Ryan 2000). Environmental scholar Foo Tuan Seik, writing about an urban community nature project in Singapore from the closely related perspective of real estate studies, further observes that community nature projects are as much about creating a spirit of community and sense of place, as they are about taking environmental responsibility (Seik 2000, 286 and 296).

Resource management scientists Kari Gunderson and Alan Watson also seek to understand individual and group place attachment and sense of place associated with natural areas. Their research project on the Bitterroot National Forest, Montana, revealed fifteen types of meanings associated with the place – ranging from functional and work-oriented, to social, cultural, and intrinsic – all of which they assert are relevant to forest management decision-making (Gunderson and Watson 2007). **Leisure scholar** Daniel Williams also writes about managing natural environments. In a report to the USDA Forest Service titled *Mapping Place Meanings for Ecosystem Management*, he identifies a different set of legitimate meanings relating to natural places – including local and national heritage, ancestral way of life, recreation opportunity, valued commodity, rare habitat, and sacred rite – and stresses that research to identify those meanings, some of which may conflict, must be sensitive to specific spatial, as well as temporal and group, contexts. He further urges natural and social sciences to find ways to transcend the fragmentary nature of scientific inquiry and disciplinary boundaries to work in meaningful collaboration on informing ecosystem management and on connecting biophysical and social systems. Williams also encourages ecosystem managers to recognize that they both facilitate and participate in the negotiation of meaning and use relating to specific places. He notes that it is important to be careful in mapping the full range of human meanings assigned to places, and to let a rich understanding of the natural and cultural history of places guide management decisions (Williams 1995).

The rich natural and cultural history of places is vital to the concept of “restorative environmental design”, or “biophilic design” championed by **social ecologist** and environmental scholar Stephen Kellert. This design approach is based on the notion of what he terms “spirit of place,” defined as a satisfying and secure connection to the places where people live and work, including social settings, cultural surroundings, and ecological environments. Places of enduring significance, Kellert observes, are characterized by the unique integration of nature and culture. These special places reflect, in his words, “human society in continuous, iterative interaction with the natural environment that over time produces a unique emergent outcome that cannot be explained as the consequence of either social or environmental forces alone” (Kellert 2005, 57-8). The spirit of a place is the “creative fusion” (Kellert 2005, 169), the “singular outgrowth” of nature and human culture coming together (Kellert 2005, 58), with a strong attachment to the culture and ecology of a

place motivating people to take responsibility for it (Kellert 2008, 6). Unfortunately, Kellert notes, most contemporary building and landscape design projects ignore the interdependent aspects of culture, nature, and place (Kellert 2005, 170).

Wildlife biologist and *natural resource ecologist* James Miller, working at the interface between the natural and social sciences, stresses that native plants and animals make a “tangible contribution” to the uniqueness of places, and that environmental and social health gain when design philosophies recognize that uniqueness. Miller also makes the converse point that environmental change, along with accompanying shifts or losses in the diversity of these plants and animals, can impact our physical health and psychological well-being, as well as our perception of place (Miller 2008, 115).

Perception and attachment associated with place is what *sociologist* Per Gustafson seeks to understand through his tentative analytical framework for mapping and understanding how meaning is attributed to places. His research reveals that place meanings are best understood not in terms of discrete categories, but as “mapped around and between” (Gustafson 2001, 12) three poles: self, others and environment. Gustafson’s conceptual discussion of the “others” pole fails to mention non-human species, but the “environment” pole does involve the natural environment and natural conditions such as weather and the seasons. He mentions relationships between the “self” and “environment” poles as encompassing both knowledge of the “lived-in physical environment” (including formal learning about geography) and activity such as construction or cultivation which shapes the physical environment. Opportunities for participation in these and other activities, he notes, enhance the meaningfulness of a place (Gustafson 2001, 11).

Meaningfulness through activity and participation – an important aspect of place put forward by Cresswell (2009, 169) – brings the discussion back full-circle to *geography* and place. Although Cresswell does not factor the natural environment into his conceptualisation of place beyond its role as a backdrop to human activity, some geographers do extend invitations to link the concept of place with the natural environment.

Ken Gregory is one such geographer – one who works, surprisingly, on the physical side of the discipline. Gregory acknowledges that place has not been a major focus for physical geographers, but he points out that it has been implicit in the development of *physical geography* for over a century. Historically the description of places accompanied the

exploration of environments, he points out, with the portrayals subsequently compared, classified, and categorised for eventual consideration in light of general models (Gregory 2003, 187-8). Place is also assuming a greater significance in physical geography today, he notes, particularly now that the physical sciences are feeding into environmental management scenarios, including the restoration of places that have felt the impacts of human activity – natural places such as wetlands, prairies, lakes, and wildlife habitat in general. Gregory finishes with an expression of hope that physical geographers will adopt attitudes with the flexibility to take a more holistic approach in their work (Gregory 2003, 189-208).

In his book *Homo Geographicus* – a wide-ranging and highly philosophical theory of geography – **human geographer** Robert Sack incorporates nature into the framework he offers for understanding how we relate to the world. His framework revolves around three main “issues” as he calls them – nature, social relations, and meaning – and the ways in which they are “interwoven, stretched and torn apart” and “dynamically interrelated” (Sack 1997, 1) in places we create. His framework maps the implications of those dynamic relationships.

While a comprehensive description of the framework is beyond the scope and purpose of this section, a brief outline of Sacks’ perspectives on the nature-place interrelationship is in order. “Nature, social relations, and meaning,” he writes, “form the structure of place” (Sack 1997, 84), with places containing shifting mixes of nature and culture, of natural and human events, and of meaning. “The very ground on which things take place,” he points out, “contains mixes of soil, insects, and vegetation, overlain with a variety of cultural practices. Each of these lends meaning to the place.” He adds that all places are further affected by global natural systems such as weather patterns, solar radiation, tectonic activity, and animal and plant migration (Sack 1997, 7-8).

Sack also stresses that the meaning of nature changes with each place. When natural elements such as trees or a forest become part of a garden, park, or wilderness area that is delimited and named, then nature becomes “infiltrated”, as he puts it, by additional mixes of social relations and meanings that can change the character of a ‘natural’ place – sometimes to the extent that it may no longer be considered natural (Sack 1997, 80 and 83). In the same way, he notes, natural forces such as earthquakes, volcanic eruptions and outbreaks of pests, can “override” human intentions and alter the mix (Sack 1997, 83). Sack also draws nature

into the moral sphere of human geographical awareness, stressing that as moral agents, we must understand the consequences of our actions on culture and nature, at both global and local scales (Sack 1997, 2), and take responsibility and action locally (Sack 1997, 23).

The invitations extended by Sack and Gregory indicate that nature is relevant to geography as a discipline – with its focus on the ways in which the world takes shape through both natural and human activities, systems and processes – and to the geographical study of places and place-shaping practises. Conversely, the geographical concept of place – with its resonant and multi-layered characteristics ranging from the physical and the active, to the relational and the affective-evocative – is equally relevant to the study of natural areas shaped and maintained by people. One such place is the FWG.

3.4.2 Place resonance at the Fletcher Wildlife Garden

The guiding concept for the FWG case study is the geographical concept of place in its physical, active, relational and affective-evocative breadth and depth, as outlined in Chapter 2. These interrelated characteristics offer a rich framework for (a) exploring the FWG project and associated human-nature relationships, and for (b) interpreting the meanings and implications of the relationships and the project, the results of which are discussed in Part III. Place is one of the key concepts informing this case study.

The other key concept is “nature”, which is at the heart of the FWG project. The following chapter takes a closer look at “nature”, arguably a concept as complex as “place”, and potentially more problematic. As Castree asserts, nature is one of the most “widely talked about and investigated things there is” (Castree 2005, xvii). How widely discussed, investigated, and debated is revealed in the following chapter.

Chapter 4 “Nature” – exploring the concept

Just as the concept of place is considered central to geography, “nature” is viewed as pivotal to geographical inquiry by many geographers (Whatmore 2005, 7 and 2003, 165; Hubbard et al. 2002, 13; Naylor 2000, 261; Olwig 1996, 64; Agnew, Livingstone and Rogers 1996, 234), with Neil Smith and Phil O’Keefe pointing out that nature is “one of the most commonly invoked concepts in science (natural or social)” (Smith and O’Keefe 1996, 282). Not surprisingly, such a broadly discussed concept is also difficult to define. Noel Castree states that nature is “both a concept and all those physical things to which the concept refers” (Castree 2001, 5), while Yi-Fu Tuan observes that nature has an “exasperatingly wide range of meaning” (Tuan 1971, 3). Trevor Barnes and Derek Gregory draw attention to the misunderstood, contested, and politicised character of the nature concept (Barnes and Gregory 1997, 175), while Robert Sack notes, “Nature has come to represent so many different things that the word has no single definitive meaning” (Sack 1997, 79).

Yet define it we must if we wish to discuss nature. And if we wish to discuss it in a geographical study of a contemporary place, then it would be helpful to follow some traces of the troubled concept of nature through the discipline and other relevant aspects of Western society. The definition proposed in the section below is followed by a brief overview of the nature concept in geography. The rest of the chapter concentrates on a growing dilemma in contemporary society: the estrangement of people from nature in human-dominated environments.

4.1 Defining nature

As presumptuous as it may appear to propose a definition for “nature” in light of the problematic and contested nature of the concept, I do so for two main reasons: (1) because the natural world emerged as a key factor and player in the Fletcher Wildlife Garden (FWG) case study, and (2) because the word is frequently uttered and the concept often invoked by the study participants. I do not propose the following definition as a “single definitive meaning” (Sack 1997, 79) of ‘nature’, but rather as a broad characterization encompassing various perspectives on the concept expressed by participants in the study, and by other social scientists who have made efforts to pare the difficult, and sometimes contradictory, meanings

of nature down to a comprehensible parcel. The following is my endeavour – for the purposes of this study, and in full recognition of the problematic aspects of the “nature” word and concept – to weave together and re-package elements from three such parcels (Watts 2005; Szerszynski, Heim and Waterton 2004; Castree 2000).

Nature, re-packaged in this manner, emerges as a combination of three essential perspectives:

1) a **materiality**

This is the physical world in its entirety. It includes, for example, biotic and abiotic elements of the biosphere such as animals, plants, soil, rocks, and waters, as well as the atmosphere. Humans are counted among the biological organisms present in this physical world.

2) a **process** (or series of interrelated processes)

These cover biogeochemical processes and systems that interact and maintain physical conditions on the planet. The systems and processes incorporate, for example, photosynthesis, pollination, decomposition, the hydrological cycle, seasonal rotations, and various climatological phenomena. This aspect of nature can also include ideas developed by humans – for example: natural laws, the concept of evolution, notions of nature as a force which directs the world, and theories of nature as a system involving a diversity of interacting and evolving processes, species, and individuals, including humans.

These aspects of nature can involve humans, but they are not exclusively human. The following aspect of nature is entirely human.

3) an **abstraction**

This perspective on nature involves ideas such as ‘Mother Nature,’ nature as Eden, nature as a metaphysical force to be feared and revered, nature as a destructive power (e.g. ‘natural disaster’), and nature as the essential quality or character of something (e.g. ‘it is not in my nature to do that’). These abstractions are expressed through philosophical discussions and through cultural representations such as poetry, visual art, music, and more.

It is interesting to note parallels between this three-part perspective on nature and the triadic conceptualisation of place discussed in the previous chapter. Both nature and place

have concrete qualities (the “physical” character of place, and the “material” character of nature); active and relational qualities (activities and interactions that occur in places, and processes and systems that maintain physical conditions on this planet); and abstract qualities (affective-evocative meanings and attachments associated with places, and various human concepts and ideas relating to nature). Threads of these three aspects of the nature concept weave throughout the history of the discipline of geography.

4.2 Nature and geography

While a comprehensive discussion tracking the idea of nature through geography’s past is beyond the scope of this chapter, it is worth noting, as Kenneth Olwig points out, that the word “nature” – ambiguous and meaning different things at different times in history – tended to disappear from academic geographical discourse in the late twentieth century, when it was replaced by allegedly value-neutral concepts such as “environment” or “ecology” (Olwig 1996, 63-4). Barnes and Gregory (1997, 174) note that nature was marginalised as a topic of discussion in human geography during this time, because spatial science took the stage (the same development which, interestingly, sidelined the “place” concept), while Michael Urban and Bruce Rhoads identify a general trend to eliminate usage of the term ‘nature’ because of its power and hegemony (Urban and Rhoads 2003, 214).

Until the late twentieth century, however, geography had been considered a discipline which bridged the natural and human sciences (Olwig 2009, 280). William Norton points out that certain founders of geography, Alexander von Humboldt and Carl Ritter, viewed the earth as “an organic whole”, with “all things on the earth’s surface ... related” (Norton 2000, 56-7). Von Humboldt, generally regarded as the father of geography, incorporated people into his study of nature (Claval 2001, 56; Livingstone 1992, 135; Unwin 1992, 76), while Ritter believed that the earth and its inhabitants, including humans, stand in a mutual and reciprocal relationship (Norton 2000, 57; Holt-Jensen 1999, 27) – a relationship which, according to his teleological vision of the earth, existed to enable human development and perfection (Castree 2000a, 538; Holt-Jensen 1999, 27).

This enabling role for nature also enters into the work of Paul Vidal de la Blache, the founder of modern French geography, who describes the discipline as offering new perspectives on the interrelationships of people and the natural world (Vidal de la Blache

1996/1926, 182) – relationships which unite cultural and natural phenomena (Holt-Jensen 1999, 46) and offer possibilities to humanity. These possibilities are the main tenet of environmental possibilism, a concept which suggests that nature makes a variety of opportunities available for individuals or cultures to use in varying measures or in different ways (Barnes and Gregory 1997, 174; Glacken 1956, 85), with choices made largely among possible responses to physical conditions (Livingstone 2000, 609). Widely associated with Vidal de la Blache (Claval 2001, 81; Livingstone 2000, 609-610; Norton 2000, 53; Holt-Jensen 1999, 45), possibilism is characterized as not necessarily denying natural limits to human activity, but rather emphasizing the choices available to people (Holt-Jensen 1999, 45). Vidal de la Blache, interestingly, writes about nature as a partner whose “allies”, ranging from cultivated plants to domesticated animals, are mobilized through human activities, allowing inherent natural energy to be liberated and free to find an outlet which can benefit humanity (Vidal de la Blache 1996/1926, 190). Vidal de la Blache holds these natural “allies” in great esteem. As Anne Buttimer points out,

Vidal objected vehemently to the way some sociologists and historians tended to treat nature as merely the passive stage for the drama of human life. Nature, he asserted, should be considered as the dynamic interplay of living elements, a partner not a slave of human activity. The geographer's task, then, was to understand the dynamics of the natural environment and show its varying manifestations in different world milieux (Buttimer 1971, 45).

German geographer Friedrich Ratzel, working in the late nineteenth century and widely associated with the birth of human geography (Claval 2001, 64), felt similarly about the marginalisation of the natural world, complaining that many sociologists treat society “as though it lived suspended in air, as if it had no connections with the earth” (paraphrased in Buttimer 1971, 30). Ratzel considered people and the land to exist in close and mutual interdependence; the function of what he termed “Anthropogeographie” was, in Buttimer's words, “to study the forces which maintain this interdependence” (Buttimer 1971, 30-31). Ratzel's student Ellen Churchill Semple reflected her teacher's views in the statement that “Man has been so noisy about the way he has ‘conquered Nature’ and Nature has been so silent in her persistent influence over man [sic], that the geographic factor in the equation of human development has been overlooked” (Semple 1996/1911, 254).

4.2.1 Nature discredited

Semple is renowned, and a little notorious, for drawing somewhat distorted attention to the influence of nature on humans. Both she and Ratzel are associated with one of the most

powerful and infamous nature-related concepts in geography's history: environmental determinism, described as a belief that "different environments determined, to varying degrees, what humans could and could not do, with more extreme environments (like the tropics and the poles) imposing severe constraints on human activity" (Castree 2003b, 84). Ratzel is portrayed as positioning human life under the laws of nature (Holt-Jensen 1999, 42), a viewpoint which established human geography as a natural history of societies in their relationships with the environment (Claval 2001, 66) and which sowed the seeds for environmental determinism. Yet some geographers trace the roots of the concept all the way back to classical Greek thought (Livingstone 2000a, 213; Norton 2000, 47-8; Glacken 1996, 247), early Christian and Islamic thinking (Norton 2000, 47-8), and early medical theory (Glacken 1996, 247). Norton actually gives Ratzel the benefit of the doubt by pointing out that the German geographer regarded environmental determinism as a generalisation more than a scientific law (Norton 2000, 49).

It was Semple who, in an effort to render anthropogeography more scientific, cast environmental determinism in terms of cause and effect. She brought Ratzel's ideas to North America, re-organized and clarified them with new examples from different parts of the world (Martin and James 1993, 329), and disseminated them through her book *Influences of Geographic Environment* (1911). This book is described as instrumental in establishing environmental determinism as a dominant thought current in American geography early in the twentieth century (Livingstone 2000a, 213), an essential component of the new university discipline of geography (Norton 2000, 49), and a major influence on the selection of topics in school textbooks (Holt-Jensen 1999, 44).

The reach of the book is troublesome and the concept it promoted problematic because it was based on the assumption that the approach was correct, with ideas and causality expressed through supporting examples rather than facts obtained through objective and open-minded study (Norton 2000, 50). Semple is described as falling into a trap not uncommon to deductive reasoning: failing to seek out examples that contradicted her principles (Martin and James 1993, 330-331). In her book Semple writes, for example:

The slow historical development of the Russian folk has been due to many geographic causes – to excess cold and deficiency of rain, an outskirts location on the Asiatic border of Europe exposed to the attacks of nomadic hordes, a meagre and, for the most part, ice-bound coast which was slowly acquired, an undiversified surface, a lack of segregated regions where an intact civilization

might be cradled, and a vast area of unfenced plains wherein the national energies spread out thin and dissipated themselves (Semple 1996/1911, 259).

Mountain regions discourage the budding of genius because they are areas of isolation, confinement, remote from the great currents of men and ideas that move along the river valleys (Semple 1996/1911, 261).

Such passages support Norton's statement that environmental determinism turned out to be "embarrassingly simplistic" (Norton 2000, 50), with many of its pronouncements providing, as Barnes and Gregory indicate, intellectual justification for colonisation. If the natural environment prevented people from developing, they write, it was up to more developed peoples to "intervene and show them how" (Barnes and Gregory 1997, 175). Environmental determinism was also used by Germans, among others, in the period leading up to World War II to justify the annexation of neighbouring territories based on the "natural organic bond between the blood of a people and their soil" (Olwig 1996, 85) – all of which made environmental determinism blatantly imperialist and racist at times (Castree 2005, 55). It is no wonder that the concept became largely discredited by the mid twentieth century (Castree 2003b, 84), simultaneously marginalising the natural world as a topic of discussion.

Interestingly, efforts to render human geography even more scientific later in the twentieth century contributed to further marginalising nature, and to introducing different determinisms. The movement in question is the post-war "quantitative revolution" briefly described in the previous chapter, which brought to geography the systematic application of inferential statistical techniques, abstract models, and scientific forms of theorizing "begged, borrowed, and stolen" (Barnes 2009a, 34) from other disciplines. The objective was to explain and scientifically prove and theorize spatial phenomena and relations (Barnes 2009a, 33; 2009b, 611) – a development cast in terms of "geometric determinism" whose spatial forms leave little room for people to think and act in ways other than those "determined for them by external compulsions", and which appear to control human behaviour as much as the natural environments of environmental determinism (Ernst and Philo 2009, 108). Geographers may have been happy to see the discredited natural environment further sidelined and displaced by methods and procedures under human control.

4.2.2 Nature disarmed

Nevertheless, nature resurged as a focus of geographical debate toward the end of the twentieth century, alongside the "cultural turn" in human geography. Nature made what could be viewed as its most notable reappearance in the context of the "science wars" of the mid-

1990s, which raged, and continue to seethe, within and across related disciplines. Castree explains the greater science wars as follows:

Here a group of practising scientists fought back against what they saw as the irresponsible arguments of several sociologists and cultural critics. The latter had argued that scientists construct their knowledge of nature, rather than that knowledge being an accurate reflection of nature's truths. The scientists, understandably dismayed, insisted that science still offers the most secure route to objective understandings of the world (Castree 2005, xx).

Whatmore adds, writing at the turn of the millennium, that recent debates have “congealed into a standoff between versions of ‘social constructionism’, in which Nature is treated as an inescapably mediated artefact of the social imagination, and versions of ‘natural realism’, in which ‘nature’ is the bedrock of a ‘real’ world of substantive entities and objective forces” (Whatmore 2000, 265). As Lesley Head points out, many scientists find challenges to the possibility of objective truth unnerving (Head 2000, 51), and they become understandably defensive of their beliefs and work in light of contemporary critical human geographical approaches such as social constructionism (or constructivism), which is sometimes broken into the following sub-perspectives identified by Castree.

1) **Representation of nature** (also called cultural representation)

One way the natural world becomes a mediated artefact is through representation, or, as Whatmore puts it, shaping by the human imagination (Whatmore 2005, 12) into forms that range from the verbal (e.g. everyday dialogue, telephone conversations), to the written (e.g. newspaper articles, scientific publications), to the broadly visual (e.g. wildlife documentaries, landscape paintings) (Castree 2005, 90). The focus on representations of nature, associated with the cultural tradition of human geography, forces us to acknowledge that our relationship with the natural world inevitably passes through a filter of categories, conventions and technologies particular to certain places and times (Whatmore 2005, 12). Many cultural geographers assert, in essence, that what is called nature is “nothing more than a set of ideas or representations” (Castree 2005, 123), predominantly “a category of the human imagination, and therefore best treated as a part of culture” (Whatmore 2005, 12).

2) **Production of nature** (also known as social production or material construction)

Castree describes the production, or material construction, of nature as “the process whereby societies physically reconstitute nature so that it is no longer natural” (Castree

2005, 153). This process includes the material transformation and qualitative alteration of nature by humans for a variety of uses under different conditions of production, along with the notion of capitalism as the force which has replaced God as the creative power in fashioning the natural world (Whatmore 2005, 10, paraphrasing Neil Smith).

Associated with geography conducted in the Marxist tradition, production of nature arguments suggest that nature is converted to social commodities through human labour (Smith 2000, 488), and that conceptions and representations of nature are shaped in accordance with its economic and political use and exploitation (Hubbard et al. 2002, 19). At their most extreme, social production of nature proponents claim that nature is “a physical construction through and through so that it makes little sense to call it ‘natural’ any more” (Castree 2005, 153). The notion of nature as socially produced alerts us to the constant drive of capitalist production, which seems to stop at nothing in its pursuit of profitability, “turning landscapes, bodies and, these days, even the molecular structure of cells into marketable commodities” (Whatmore 2005, 10, paraphrasing Castree) through processes such as genetic engineering.

3) **Simulation of nature**

The idea of nature as an artefact of genetic engineering reflects an aspect of the production of nature which is distinct enough, along with certain of its ideological nuances, for Castree to address it separately as the “simulation” of nature. It is different from the production of nature, he points out, in that it attempts to re-create “‘the real thing’: that is, nature in the raw.” To illustrate, he takes the example of the ‘Eden Project,’ a series of giant geodesic greenhouses in England which reconstruct biomes from around the world with transplanted nature. The goal is to educate visitors, and to ensure the continued existence of threatened spaces and species. But, Castree cautions, the environments are not real and the nature experiences visitors have there are anything but real. “Although there is no doubt that the soils, plants and trees in the geodesic dome are real,” he writes, “they are arranged in such a way that they are supposed to ‘stand for’ their wild relatives in the wider world.” He points out that the project tends to write human presence out of the picture, representing nature as if humans have played no part in it over the centuries – despite the fact that indigenous tribes have inhabited and

participated in the transformation of even the most iconically ‘natural’ of the project’s biomes: the tropical forest (Castree 2003b, 86).

Whatmore, who has engaged with questions of “nature” from various perspectives, writes of the social constructionist approach in general, whether it emphasizes material transformation or cultural representation, that

[H]uman geographers have treated the natural world primarily as an object fashioned by the imperatives of human societies in particular times and places. Each perspective illuminates different aspects of the convoluted relationship between the things of human making (culture) and those that are not of our making (nature). But in different ways the creative energies of the earth itself, in rivers, soils, weather and oceans, and of the living plants and creatures assigned to ‘nature’, are eclipsed in both accounts. In their eagerness to stress the capitalist capacity for producing nature, the Marxist tradition, for example, too readily overlooks the active role of these natural entities and processes in making the geographies we inhabit. Likewise, the argument that our relationship to the natural world is always culturally mediated has tended to fix attention on the powers of the human imagination, ignoring the multitude of other lives and capacities bound up in the fashioning of landscapes.

In these marvellous worlds of exclusively human achievement nature appears destined to be relentlessly and comprehensively colonized by culture (Whatmore 2005, 15).

Barnes and Gregory agree, adding the observation that orthodox Western Marxist thinking represents nature as “infinitely malleable” (Barnes and Gregory 1997, 177), something Castree describes as “mere putty in the hands of modern societies” (Castree 2005, 155) – descriptions which evoke notions of “social determinism”, a term used by Sally Eden in a cautionary context (Eden 2005, 58), and a variant on the “cultural determinism” mentioned by Steve Hinchliffe regarding the reduction of nature to determinisms of any type (Hinchliffe 2003, 207).

While social determinism of nature as “infinitely malleable” tends to be associated with North American and European Society, it is not without counterparts in other parts of the world. Anthropologist and global environmental politics scholar Judith Shapiro, in her book *Mao’s War Against Nature* (2001), discusses the literal war – fuelled by official discourse filled with military imagery and metaphors encouraging the conquest of nature – that China waged against the natural environment during the Maoist era. Mao Zedong’s values and philosophy, Shapiro notes, are based on the Confucian tradition that actively seeks to utilize and control nature, with Mao going further in promoting the idea of nature being conquerable through military mobilization of human energy and attack (Shapiro 2001).

The human conceit which underlies beliefs such as Mao’s and broader ideas relating to extreme social constructionism or “hyper-constructionism” (Castree 2000, 539; 2001, 16)

risks underplaying the material capacities of the supposedly constructed natural world, and ignoring the power of nature at the peril of humans and human places during periods of environmental crisis (Castree 2005, 155; Castree 2000, 539). The anthropocentric focus of social determinism has also been criticised for its inability to address the contribution of nonhuman life to human places and society (Braun 2004, 169), and its failure to acknowledge the aesthetic, spiritual or moral value nature might hold for humans (Castree 2000, 539). While some social constructionist positions, on both the representation and construction of nature sides, have been softening in response to these criticisms (Castree 2005; Braun 2004; Castree and Braun 2001; Castree 2001), the concept has nevertheless left a strong mark on views of nature in the social sciences. As Castree observes, “the topic of nature remains a problem for geographers just as it has done throughout the discipline’s history” (Castree 2005, 220).

The idea of nature being entirely fashioned and controlled by human beings is an illusion.

(Loreau 2007, 66)

4.3 Nature estranged – a growing dilemma

The philosophical distance at which social constructionism holds nature and the natural world’s contributions to human life and places – in unintentional or deliberate response, perhaps, to the long-standing taboo of environmental determinism in geography and in general thinking – reflects a broader and deeply entrenched human-nature estrangement in North American society. This estrangement leaves us with what has been described as “an impoverished understanding of the ‘integrated networks’ in which humans and nonhumans are entangled” (Braun 2004, 168), plus other consequences discussed in the pages to come. One such consequence is nature-deficit disorder, a contemporary manifestation of human-nature estrangement in environments dominated by people; this phenomenon is attracting increasing attention and growing concern.

4.3.1 Human-nature estrangement in science

One arena where the human-nature estrangement is pronounced, yet accepted almost without question as the norm, is in the sciences. Zoologist Marston Bates describes the separation as

one of the basic lines of division in the way we have organized knowledge, in our pattern of specialization. The natural sciences and the social sciences exist in practically complete isolation from one another. Man's body, curiously, has been left with the natural sciences while the social sciences have taken over his mind – at a time when we are most aware of the artificiality of the body-mind separation (Bates 1960, 251).

The separation described by Bates has also been put in terms of the breadth of the natural sciences which take in the whole earth as well as the universe, while the human sciences – from anthropology and sociology, to political science and economics – focus on one species, *Homo sapiens*. “It may seem strange,” writes environmental philosopher Holmes Rolston, “to devote several sciences to just one species” (Rolston 1994, 2). Contemporary geographical study, divided into human and physical geography, follows this pattern of human-nature estrangement.

Tuan attributes this separation within the sciences to the fact that, as he writes, “Man [sic] has few instincts to guide him. To live comfortably among the welter of sense impressions he must know how to organize them” (Tuan 1971, 17). This organisation was originally left to supernatural powers, embodied in the idea of nature as “the All or Everything” (Tuan 1974, 132), the “force créatrice de l’univers” (da Costa Gomes 1997, 240, quoting von Humboldt), the “universal directing power” (Williams 1983, 221), or God, who is posited as the creator of nature, a phenomenon which can be considered as an expression of “the divine will of God” (Urban and Rhoads 2003, 215). God, as cultural critic Raymond Williams writes, was long considered as the primary absolute, and nature was God’s minister or deputy (Williams 1983, 221). But as people sought to know more – despite the fact that questioning a minister of God seemed wrong – they arrived at a formula: that seeking to understand creation was a way of praising the creator, of seeing supreme power through contingent works (Williams 1983, 222). Based on the assumptions that nature has a coherent and intelligible organisation, and that active investigation was needed to reveal this organisation and structure (Urban and Rhoads 2003, 215), the formula sowed the seeds for scientific inquiry and the beginning of the “Scientific Revolution” (Norton 2000, 39).

Francis Bacon has been identified as initiating the scientific revolution with his emphasis on the need to study nature scientifically and his conviction that the purpose of the study was to reinforce human dominion over nature, while Isaac Newton is recognized for vindicating a certain faith in science by demonstrating the power of human reasoning as a vehicle to understanding the world (Norton 2000, 40). The scientific revolution has also been put in

terms of a search for intellectual freedom, which necessitated a growing belief in the power of the mind to perceive and identify truth (Raine 2003, 73). Nature, as a result, became an object of study which was known through reason, the quantifiable laws of natural science (Olwig 1996, 71), and systematic sets of practices (Simmons 1993, 4) to eventually become “an accumulation and classification of cases” – a significant demotion from earlier veneration as an “inherent and shaping force” (Williams 1983, 222). It has been pointed out that scientific methods in general allow for nature to be controlled, squeezed and molded it in ways that meet human needs (Barnes and Gregory 1997, 176), with scientific ‘objects’ compelled to “present themselves in conformity to a pre-planned and pre-conceived framework within which they are calculable and predictable” (Raine 2003, 76). This framework renders nature passive and inert (Merchant 2004, 225).

4.3.2 Human-nature estrangement in Western thought and belief

Geographers, along with other environmental scholars, have written widely about the origins of human-nature estrangement in broader western thought and belief. Norton traces the estrangement back to the Garden of Eden and Adam’s act of eating from the forbidden fruit – a move which emancipated the human soul from nature and resulted in humans being granted dominion over the natural environment (Norton 2000, 39). Environmental scholar Peter Raine points to the ancient Greeks, whose worldview allowed a certain anthropocentrism to emerge, plus a hierarchical structuring of reality which positioned humans at the top because of their capacity to reason, and to change and control the environment (Raine 2003, 59-65). The Enlightenment, also known as the Age of Reason, established the separation (Whatmore 2005, Urban and Rhoads 2003, Norton 2000) by entrenching a mechanistic worldview and belief that humans could control nature (Norton 2000, 40). Significant to this new worldview was the philosophical contribution of René Descartes, whose arguments emphasized that while humans are essentially biological organisms through their material bodies, their capacity for thinking and speaking, for emotion and creativity, makes them fundamentally different from the rest of the natural world and helps them transcend physical limits (Urban and Rhoads 2003, 216), including the nature of their own bodies. During this period, networks of commerce, empire and knowledge were spreading throughout the world, and the geographical exploration tradition helped extend and

map the networks, giving rise to the sense that nature was lying beyond reach in places remote from humans (Whatmore 2005, 8-9) – another layer of separation.

The geographical exploration tradition was fuelled, in part, by the conviction that the earth was as a purposeful creation designed specifically for humans as the life forms positioned at the top of creation's hierarchy (Glacken 1996/1967, 246-7) – a teleological vision shared, as already mentioned, by one of geography's founding fathers, Carl Ritter (Claval 2001, 58; Norton 2000, 57; Holt-Jensen 1999, 27; da Costa Gomes 1997, 245), who based his science on the belief in God as the master planner of the universe, and in the earth as "an educational model" for human improvement (Castree 2000, 538; Holt-Jensen 1999, 27). This teleological view, which has been traced back to early Greek and Christian thought (Norton 2000, 39, 51-2; Glacken 1967), believes in a God who has a plan for everything, and who created the natural world for human beings to use – essentially granting humans the right to use nature for their purposes, a license for domination (Raine 2003, 66-70). At the root of this human authority and dominion over the earth, to change and use as people see fit, is the belief in human superiority and capacity for reason. "As Europeans became aware of environments outside of the European area," Norton writes, "they viewed such new lands as simply awaiting their finishing touch" (Norton 2000, 51) – more shades of exploration, imperialism, colonialism, and of exploitation. For many people today, civilization and progress continue to be directly linked to subduing, converting, and conquering nature, along with accompanying, and inevitable, distance from it (Kellert 2005, 1).

Historian Lynn White Jr., in a still much-referenced 1967 article regarding the historical roots of today's ecological crisis, adds another perspective to the teleology, colonialism and exploitation discussion. He writes:

In Antiquity every tree, every spring, every stream, every hill had its own genius loci, its guardian spirit. These spirits were accessible to men [sic], but were very unlike men [sic]; centaurs, fauns, and mermaids show their ambivalence. Before one cut a tree, mined a mountain, or dammed a brook, it was important to placate the spirit in charge of that particular situation, and to keep it placated. By destroying pagan animism, Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects.... The spirits in natural objects, which formerly had protected nature from man, evaporated. Man's [sic] effective monopoly on spirit in this world was confirmed, and the old inhibitions to the exploitation of nature crumbled (White 1967, 1205).

Nature, at this point, did not leave the picture completely, but its value and sacredness were gradually undermined, and harmony with nature was no longer considered a virtue (Raine 2003, 69 and 79). On the other hand, as environmental historian and philosopher Carolyn

Merchant points out, a certain longing for a lost harmony with the rest of the world, manifested in the Garden of Eden narrative, remains strong in western society. “The Garden of Eden story has shaped Western culture since earliest times and the American world since the 1600s,” she writes. “For many Americans, humanity’s loss of the perfect Garden of Eden is among the most powerful of all stories. Consciously at times, unconsciously at others, we search for ways to reclaim our loss.... But ‘mastering’ nature to reclaim Eden has nearly destroyed the very nature people have tried to reclaim” (Merchant 2004, 2-3).

Psychologist Ralph Metzner puts the “mastering nature” ideal in terms of the mind-body dualism fostered by Cartesian thinking. He points out that when we feel mentally and spiritually separate from our own natural state, including bodily and physical sensations, we project this separation outwards to consider ourselves as separate from the greater natural world around us, with potentially broad consequences:

If we believe that in order to advance spiritually we have to go against, to inhibit and control, the natural feelings and impulses of our own body, then this same kind of antagonism and control will also be projected outward, supporting the well-known Western ‘conquest of nature’ ideology. For most people in the West, their highest values, their noblest ideals, their image of themselves as spiritual beings striving to be good and come closer to God, have been deeply associated with a sense of having to overcome and separate from nature.... It does not take much imagination to see how the consequences of this distorted perception have been played out in the spread of European civilization around the globe (Metzner 1995, 66).

It is worthy of note that a similarly large-scale societal ideal of separating from nature, and associated conquest of the natural environment, played out in Maoist China. “The Maoist adversarial stance toward the natural world,” writes Shapiro, “is an extreme case of the modernist conception of humans as fundamentally distinct and separate from nature” (Shapiro 2001, 3).

4.3.3 Human-nature estrangement in other aspects of western society

Human-nature estrangement also emerges in other aspects of western society – technology, agriculture, industrialisation, urbanisation, economics, consumerism, architecture and design, psychology – influenced, enabled, and shaped by western thought and belief.

The aforementioned evolution of scientific thinking, according to scholars with a historical view, was accompanied by a rise in technology and modern economic philosophies. Raine writes that the “full power of the intensely focused scientific mind began to reveal all kinds of increasingly useful things which were used to overcome the natural limitations previously imposed by ‘ignorance’ of nature’s laws” (Raine 2003, 77). It was, interestingly, the

technological superiority of Europe – its power machinery, labour-saving devices, and automation – that made it possible for “small, mutually hostile nations to spill out over all the rest of the world, conquering, looting, and colonizing” (White 1967, 1204).

The rise in technology has, for its part, been associated with the beginnings of economic philosophies such as utilitarianism, the greatest good for the greatest number, and unrestrained competition as a vehicle for the common good – the sort of thinking which justified colonialism and the exploitation, subjugation or outright destruction of the natural environment, along with non-technological, nature-based cultures. “Humankind was now on the road to glory”, Raine writes, “science, technology, utilitarianism and economics provided the way with which European people would wrest control of the entire Earth to their own purposes” (Raine 2003, 79).

Controlling and manipulating the Earth for human purpose fuels consumerism in Western society, problematic because the vast range of manufactured products available today has depended on the mass extraction, fabrication and disposal of enormous quantities of natural resources (Kellert 2005, 1-2). Psychologist Sarah Conn draws attention to the notion of “‘materialistic disorder,’ essentially a need to consume, which she describes as evolving out of a need to carry out hunting and gathering impulses in a world where we are disconnected from the Earth and our hunter-gatherer roots. “Our only current way of hunting and gathering,” she writes, “seems to be shopping and accumulating” things like merchandise, substances, activities, and celebrities. Much of what we consume in our daily lives, she adds, is far removed from its natural roots (Conn 1995, 161-2). Those natural roots, and the consequences of estrangement from them, are described by horticulturalist and human-plant relations researcher Charles Lewis as follows:

I believe that part of the reason for these increasing symptoms of dysfunction is due to the fact that we have severed connections with our evolutionary roots. They represent a mismatch between innate physiological and neurological needs and the results of technical prowess. As a species that lived most of its life surrounded by elements of nature, within recent history we have transformed our habitat into high-density cities of brick, stone, glass, concrete, and asphalt. Our ancient selves are out of sync with what has recently been created. The drastic changes in how we live have not had time to be absorbed into the systems that slowly evolved within us (Lewis 1996, 130).

Even agriculture, which could be said to similarly fulfill certain impulses and needs to harvest the fruits of the Earth, has contributed to human-nature estrangement because of its modern industrialized system which converts natural habitats into extensive monocultures

which produce huge food surpluses that meet distant nutritional needs at relatively low cost. The consumption and conversion, furthermore, of natural areas into the “largely homogenous landscapes of impervious surface” that constitute urban environments consumes massive amounts of resources and materials, generates enormous quantities of pollutants and waste (Kellert 2005, 1-2), and distances people physically from nature. In cities, essential and sustaining ecological processes are usually not visible to urban residents, and any remaining native wildlife tends to be segregated from most residential neighbourhoods; nature is, in fact, considered to be expendable too often by those who design and govern urban environments (Miller 2005, 431). As a result, contemporary society has become confused about the role the natural environment plays in the physical and mental lives of humans (Kellert 2005, 1).

4.3.4 Human-nature estrangement in more personal terms

Confusion over the human-nature relationship has been put into stronger terms by other scholars. Environmental scientists Joanne Vining, Melinda Merrick and Emily Price found that participants in their study displayed “cognitive dissonance”, a state involving contradictory thoughts or feelings about a concept. Although most of the study participants considered themselves to be a part of nature, they generally viewed natural environments as excluding humans or human involvement, and unnatural environments as mainly human-constructed. Another perspective on dissonance relating to nature points out that

“[W]e fear and are fascinated, celebrate and desecrate, commune and consume, deify and defile. We are of biological process, yet not of Nature. We exalt and even worship Nature, yet in such diverse activities as medicine and aerospace we seek relentlessly and fanatically to escape the surly bonds of our own nature. These kinds of mixed feelings about both Nature and the quality of wildness are deeply embedded in human cultures, and perhaps especially in our own” (Livingstone 1994, 7).

Metzner calls the confusion in the human-nature relationship a “pathological alienation ... between human consciousness and the rest of the biosphere” (Metzner 1995, 55). His survey of clinical psychology metaphors used by others to explain the alienation between humans and the natural world reveals descriptions of arrested development, autism, addiction, amnesia, and trauma (Metzner 1995).

The metaphor of autism in the human-nature relationship is associated with cultural historian and “ecoth theologian” Thomas Berry, who describes the situation as our species’ incapacity to be intimately present to the Earth and its non-human components, along with a lack of sensitivity to, or awe for, the powers inherent in natural phenomena. “We no longer

listen to what the earth, its landscape, its atmospheric phenomena and all its living forms ... are telling us,” he writes. “Since the Seventeenth Century we have not heard, we have not understood the inner world about us. We have experienced the external phenomena. We have had no entry into the world of interior meaning. We have not heard the voices” (Berry nd, 1). This lack of sensitivity and intimacy with nature is related to another notion: arrested development or “ontogenetic crippling” put forward by environmental scholar Paul Shepard. His ideas are too complex to describe succinctly for the present purposes. Let us focus here on the outcome of this arrested development: a general insecurity and tendency to lash out at a natural world we somehow feel has failed to meet our basic needs, together with a worldview that demands a “relentless struggle for competitive advantage” (Metzner 1995, 58).

Insecurity and lashing out can also be indications of addiction, in this context an addiction to behaviour that continues to destroy and alienate people from the natural environment upon which they depend. Metzner describes this phenomenon as an inability to cease our “suicidal and ecocidal behavior” which, he stresses, matches the clinical definition for compulsion or addiction: “behavior that continues in spite of the individual knowing that it is destructive to self, family, work, and social relationships” (Metzner 1995, 60). In the context of human-nature relations, the behaviour is destructive to the natural environment we need in order to survive. Metzner lists some of the substances and behaviours to which industrial society has become addicted – gold, sugar, narcotics, fossil fuels, consumerism, and industrial-economic growth (Metzner 1995, 60) – but traces the roots of the addictive tendency to the original “trauma” separating the human species from the “rest of life.” He portrays this trauma as domestication, a development which gradually changed humanity’s relationship to the natural world from holistic respect and participation, to one of detachment, management, control, and finally domination (Metzner 1995, 62, referencing Glendinning).

Environmental scholar John Livingstone argues that humanity’s domestication is associated with technology in its broadest sense – as a body of knowledge regarding how to do things, or technique. “It matters not,” he writes:

whether it is how to kill a chicken or how to change a tire or how to deal with a conundrum in logic or how to find human purpose and meaning in the cosmos. Or indeed how to predict, organize, and control a human society. Technique refers to any complex of standardized means for attaining a pre-determined result.... The human animal has become a committed and confirmed specialist (and a uniquely gifted one) in learning, teaching, and applying techniques. ... The

human speciality is *storable, retrievable, transmissible technique*. We are bound to technique, indentured to technique, and we grew naturally into that serfdom along our evolutionary way. The dependence into which we have grown has made us not merely the servants of how-to-do-it, but one of its very artifacts. The problem animal is its own creation, its own domesticate (Livingstone 1994, 11-12).

If, as Livingstone points out, we have domesticated ourselves through the storable, retrievable, transmissible knowledge of how to do things, then it is not surprising that we have become addicted to technology, and that the addiction has profoundly affected us.

The addiction has been associated with the struggle of the human psyche, which evolved in response to natural environments and rhythms, to configure itself for survival in a society increasingly structured by mechanisation (Glendinning 1995, 53). “The technological construct,” writes psychologist Chellis Glendinning, “erodes primary sources of satisfaction once found routinely in life in the wilds, such as physical nourishment, vital community, fresh food ... unhindered participation in life experiences ... and spiritual connection with the natural world.” She points out that we were born to have these needs satisfied, and that in their absence, we will not be healthy. The psyche will be bereft and shocked, and will seek relief and temporary satisfaction through alternative sources such as the pursuit of material possessions. But those substitutes are not permanent solutions. “While these stimulants might satisfy in the moment,” she points out, “they can never truly fulfill primary needs. And so the addictive process is born. We become obsessed with secondary sources as if our lives depended on them” (Glendinning 1995, 53).

The pursuit of the technological secondary source of satisfaction has increasingly alienated humanity from the natural environment – so much so that we have established, in the words of Berry, a sphere of influence comparable to natural systems and processes. Shapiro puts the influence into the following terms: “we human beings are far more effective than other species in altering our environments in an effort to satisfy our needs, and our very success often makes us a danger to others and to ourselves” (Shapiro 2001). Berry calls this sphere of influence the “technosphere” and describes it as “a way of controlling the functioning of the planet for the benefit of the human at the expense of the other modes of being” (Berry 1991, 2). In today’s contemporary global technosphere, the human-nature alienation has had an impact not only on the natural environment and greater society, but also on people’s individual lives. New “disorders” related to technology in general, and to the internet and social media in particular, are causing widespread concern (Karaikos 2010, Caretti and

Craparo 2009, Young 2004). The growing obsession with technological devices in contemporary society is creating increasing distance between people and their environments – both social and natural.

4.3.5 A contemporary manifestation of human-nature estrangement

The influence of technology, along with homogenous and often lacking opportunity for nature experience, count among the issues contributing to a growing contemporary phenomenon called “nature-deficit disorder” (NDD) – a term coined by journalist and writer Richard Louv, author of *Last Child in the Woods: Saving our children from nature-deficit disorder* (2008). Louv is quick to stress that he is not proposing nature-deficit disorder as a medical diagnosis, but rather as a description of the “human costs of alienation from nature” (Louv 2008, 36). Health scholar Martha Driessnack confirms that nature-deficit disorder is not an official diagnosis according to international disease classification standards, but rather a label that addresses the increasing costs to children who are deprived of direct contact with nature, and of opportunities for unstructured, free play in the outdoors (Driessnack 2009, 73). Nature-deficit disorder is not, however, restricted to children. It has been described as a global phenomenon occurring in human-dominated urban, suburban and rural settings in industrialized nations around the world; it also touches all income levels and ethnic groups (Charles 2009, 468) – as such an issue potentially relevant to geographical inquiry.

Although nature-deficit disorder affects people of all ages, it has been discussed mainly in relation to children, whose alienation from the natural environment in daily life is a relatively recent phenomenon that started approximately thirty years ago and escalated within the past decade (Charles 2009, 468). Life that once offered children what has been described as “thousands of delights of free play” – in places like the streets, sidewalks, parks and vacant lots of the inner city, or the yards, fields, woods and streams of suburbia and the countryside – where they could play, explore, and interact with and within the natural environment with few restrictions and minimal supervision (White and Stoecklin 1997, 2), has changed. Whereas children often chose to “flee to the nearest wild place” when they had the opportunity to play – to a big tree or overgrown corner in the yard, to a stream or woodland nearby (White 2004, 2) – their contemporary range of activity has shrunk considerably.

The reduced range of activity, and the accompanying loss of direct experience in children’s lives – a loss experienced by people of all ages – has been associated with to the

increasing mediation of contemporary society. When children are not being escorted to and from planned activities, they tend to be left alone for long periods, plugged into what has been called the “electronic umbilica of today’s contemporary lifestyles” (Charles 2009, 467-8). Mediated experience is part of contemporary Western culture’s immersion in data provided by “omnipresent technology.” Louv notes that it is ironic, in this age of readily available information, that other “vital information” which comes from direct experience, is lacking (Louv 2008, 58). The primary experience of nature is increasingly being replaced by what has been described as the “secondary, vicarious, often distorted, dual sensory (vision and sound only), one-way experience of television and other electronic media” (Moore 1997, 209) – experience which is not improving the lives of children or adults. Louv points out that nature-deficit disorder manifests itself as an “atrophied awareness, a diminished ability to find meaning in the life that surrounds us, whatever form it takes ... [a] shrinkage of our lives.” This disorder can have a direct impact on physical and mental health in individuals and societies (Louv 2011, 11).

One realm where the shrinkage of life becomes particularly evident is in time. “As the pace of life accelerates and time becomes commoditized,” writes biologist and natural resource ecologist James Miller, “the rhythms of the human enterprise grow more and more distinct from those of the natural world” (Miller 2005, 431). As the lives of both adults and children become increasingly scheduled and filled with human enterprise, less and less time is available for meaningful experiences in nature. Ecologist and evolutionary biologist Michael Rosenzweig provides the following graphic and candid description of nature-deficit disorder in the personal lives of adults:

The environments we have gotten used to over the past few centuries have deeply eroded our horizons. We have adapted to concrete and we expect noxious fumes. We are comforted by sterility, and we anticipate *not* seeing much around us except for sparrows and a few house plants. When sometimes we do ‘get away from it all,’ by taking a trip to a national park or reserve, most of us depend on its wild things being in predictable places at predictable times. In our monster four-wheel-drive sport-utility vehicles, we carry our luxuries with us – our synthetic-fiber camping gear, our thousand-dollar mountain bikes, our boom boxes, our cell phones. We do not seek truly to immerse ourselves in the world of Nature, but rather to use it as an exotic backdrop for artificial diversions. We disport ourselves in high-speed pleasure boats with deafening motors. We race around aimlessly in all-terrain vehicles. And when, thoroughly exhausted, we do allow the din to settle down, we fill the silence with the sounds of our own trivial chatter. We have disconnected ourselves from the world of Nature and have learned to prefer it that way. Nature makes us uneasy, even fearful (Rosenzweig 2003b, 177, original emphasis).

The resulting impression is that nature is exotic and far away from everyday experience.

Leisure and learning facilities expert Randy White points out that we are losing the

understanding that nature exists in their own backyards and neighborhoods. He adds that this loss compounds the disconnection from direct knowledge and appreciation of the natural environment (White 2004, 4).

The loss of direct knowledge and appreciation has an impact not only on human wellbeing, but also on the natural environment. As Louv points out, “The health of the earth is at stake as well. How the young respond to nature, and how they raise their own children, will shape the configurations and conditions of our cities, homes – our daily lives” (Louv 2008, 3). Studies have, in fact, demonstrated a positive correlation linking environmental ethics, nature appreciation and conservation-mindedness in adulthood with direct, transcendent childhood experiences in the natural world, and playing in ‘wild’ places (Miller 2008, 116; Louv 2007; Hair and Pomerantz 1987, 201),

An intriguingly multidisciplinary team of authors – zoologist Robert Dunn, geographer Michael Gavin, anthropologist Monica Sanchez, and wildlife ecologist Jennifer Solomon – support the idea that direct experience with the natural environment, particularly early in life, is a critical source of environmental sensitivity and inspiration for later environmental conservation action. “People with more exposure to nature,” they write, “are more interested in conserving it.” The team of authors also stresses the importance of helping urban dwellers – who contribute votes, donations, and future environmental leadership – connect with their natural surroundings so that they will be encouraged to protect nature. The “urban jungle ... may well be the breeding ground for future environmental action”, they observe, pointing out that conservationists cannot afford to write off urban ecosystems and species, and that more attention should be paid to what the urban environment looks like and how people interact with it (Dunn et al. 2006, 1815-16). Miller concurs, highlighting human relations with other species, and the importance of that relationship in determining the values and attitudes of city residents. “As more and more of the world’s people have most of their direct experiences with nature in urban settings,” he writes, “the native species occurring there and the habitats and ecosystems that support them will assume ever greater importance” (Miller 2008, 114).

An important consideration is also the distribution of urban natural environments, which tend to be concentrated in wealthier neighbourhoods. As Dunn et al. point out, city dwellers living in less advantaged parts of the city – who hold voting power and add up to potentially half the world’s population – also need to connect with the natural environment and to

develop positive relationships with nature. The authors recommend carrying out more urban ecological restoration work, and establishing more parks and community gardens in cities to bring ecological and social benefits to a broader spectrum of the urban population. “If more than half of the people on earth find no reason to care about nature,” they state “we are in trouble” (Dunn et al. 2006, 1815-16).

Nature detachment in areas of place-related inquiry and practice

We may also be in trouble if people in certain professions and areas of practice, inquiry and research are estranged from the natural world. In an editorial published in *Landscape Architecture*, William Thompson draws attention to nature-deficit disorder in his profession. He starts by asking “why is the fuss just about kids? Don’t plenty of adults suffer from nature deficit disorder?” then provides the example of today’s landscape architects spending most of their working day shut in an office, staring at paper plans or a computer screen.

“Is their separation from the green, growing world – the canvas on which they are supposed to be working – good for landscape architects?” he wonders. “Could nature deficit disorder be the reason so few landscape architects have a passion for plants or why the elements of their designs are mostly products picked out of a catalog rather than the soil, water, and other elements of the site and region?” He finishes by asking readers to communicate their opinions, to send him examples of how they get back in touch with the natural environment, of how the reconnection affects their design work (Thompson 2007, 11), and receives impassioned and concerned responses in further issues of journal.

We could ask some of the same questions of geography. Over twenty years ago, in fact, as remote sensing technologies began their rapid development, Douglas Porteous expressed his concerns. Noting that remote sensing at the time was “all the rage”, he observes that its “necessary counterpart, intimate sensing”, appears to be declining. Porteous describes intimate sensing as ground-level consideration of land and life involving all the senses – vision, sound, smell, taste, touch, “body ... and soul ... as well as mind” – and yielding understanding along with knowledge. He expresses incredulity at the tendency of geographers to sit in front of computers instead of heading out into the world to experience its “infinite variety”, and he encourages fellow geographers to live dangerously, to head outdoors and get their boots muddy (Porteous 1986, 250-252).

It is interesting to note that technology also played a role in the rise of the mathematical, statistical and computerized procedures which characterize the quantitative revolution, developments which contributed to sidelining the natural world as a topic of discussion in geography. Edward Relph puts the quantitative revolution into the context of Europe's early twentieth century modernist movement which saw writers, poets and architects "struggling to cast off the baggage of tradition and to reinvent society and art along lines that reflected the new technologies of electricity, automobiles and mass production" (Relph 1997, 215). One modernist architectural and design development was the Bauhaus school which created streamlined, unadorned, geometric designs for everything from city plans and factories, to kitchen appliances and typefaces. These architects and their modernist disciples were the ones whose services were called upon in the 1950s and 1960s when European and North American cities were swiftly expanding or radically renewing – with the resulting standardised buildings, products, and spaces "celebrated" in the abstract models and theories of uniform space and central places by the geographers who subscribed to the quantitative movement (Relph 1997, 216).

The uniformity and homogeneity of these spaces – from large highways and international airports, to large-scale hotels and amusements parks, to commercial strips and industrial developments – also contributed to the "placeless" phenomenon Relph describes in his 1976 book as a characteristic of environments without meaningful places and lacking attitudes which acknowledge meaning in places (Relph 1976, 143). The result of these "placeless" places, he notes, is a weakening of place identity to the point that those places not only look and feel alike, but offer the same "bland" possibility for place experience (Relph 1976, 90). We can only imagine that those homogenized places would include few, if any, untamed natural areas, and that any green space offered would likely be shaped under the powerful influence of North America's dominant landscaping tradition. Science writer Sara Stein describes this tradition as "[Y]ards and gardens patched with grass and stitched with hedges all across America ... a vast, nearly continuous, and terribly impoverished ecosystem" (Stein 1993, 18) likely offering equally impoverished, and probably discouraging, connections to and experiences of the natural world – and interesting opportunities for a little "wilding."

4.4 Re-connecting

Through a little “wilding” in human spaces, through simple human re-connection with the natural environment, beginning with the senses, the lives of children and adults can, in the words of Louv, be “vastly enriched” (Louv 2011, 11). Geographer Douglas Pocock agrees. He writes about (re)engaging with our senses and endeavouring to rediscover childhood’s “sensory-rich world of wonder and enchantment,” of “hidden, unexpected or lost richness” (Pocock 1993, 11 and 15). This is the other side of the nature-deficit coin. “By weighing the consequences of the disorder,” Louv states, “we can also become more aware of how blessed our children can be – biologically, cognitively, and spiritually – through positive physical connection to nature.” New research is, in fact, focusing more on what is gained through contact with the natural world than on what is lost through disconnection (Louv 2008, 36). A trend focusing on the benefits of nature has been building for some time, and is gaining momentum. An example is Louv’s recent book, *The Nature Principle: Human restoration and the end of nature-deficit disorder* (2011), which focuses on the benefits – for people of all ages – of the type of rediscovery and reconnection encouraged by Porteous and Pocock:

Young, old, or in between, we can reap extraordinary benefits by connecting – or reconnecting – to nature. For the jaded and weary among us, the outdoor world can expand our senses and reignite a sense of awe and wonder not felt since we were children; it can support better health, enhanced creativity, new careers and business opportunities, and act as a bonding agent for families and communities. Nature can help us feel fully alive (Louv 2011, 5-6).

In that passage, Louv captures the wide range of potential benefits – physical, relational, affective-evocative – reaped when people seek to overcome what this chapter reveals as deep-seated societal and individual estrangement from nature.

Participation in outdoor projects such as the Fletcher Wildlife Garden (FWG) offers opportunities to overcome estrangement from the natural world, to experience the benefits described by Louv, and to fill the need to connect with the nature, as revealed in Part III of this dissertation. The following chapter discusses the need to connect with the natural environment in place-related terms.

Chapter 5 Nature in human places – needs and benefits

The impacts of human separation from the natural environment discussed in the previous chapter, along with the need to overcome nature-deficit disorder expressed by many thinkers and writers – all substantiate the argument that humans need regular contact with the natural world for health and well-being. But what are the origins of that need? What are the benefits? What type of contact is called for, in what sorts of places? Scholars and researchers from various fields are asking those questions and providing responses that can help to shed light on the significance of green places in human-dominated environments, and to understand the intensity of human-nature relationships which can develop when people seek contact with the natural world. Their insights are organized along the following lines in this chapter: (1) an evolutionary need for the natural environment, (2) the need for human-nature in ordinary places, and (3) needs for nature that, interestingly, correspond to the three essential place characteristics described in Chapter 2.

5.1 *A long-standing need for nature in human environments*

The human need for contact with nature is increasingly revealed by research, but that knowledge is not new. “It would be a surprise to anyone living 150 years ago that people should now question whether nature is good for our health,” notes medical doctor William Bird. “Despite the race for technology in past eras, urban parks were enthusiastically being built specifically for the health of the people who lived nearby.” He goes on to quote historical figures such as St. Bernard, who 1000 years earlier described the benefits experienced by a sick individual sitting in an enclosure with trees, shaded from the heat, and bathed in the fragrance of vegetation: “The lovely green of herb and tree nourishes his eyes ... the choir of painted birds caresses his ears ... the earth breathes with fruitfulness’.” Bird also quotes Florence Nightingale, who noted in the mid-1800s that patients with a view of “the bright colours of flowers” from their windows recovered perceptibly faster than those who looked out onto what she described as “a dead wall” (Bird 2008, 21) – observations in keeping with the pythogenic and miasma theories of the time which, according to other researchers, stressed that greenery, fresh air, and sunlight were important to human health. Those particular theories were influential throughout the 19th century in fostering the

building of places of recovery – hospitals and sanatoria – in attractive natural settings, with gardens where patients could relax and recuperate. But in the 1930s, another theory became dominant – one which advanced the construction of hospitals and therapeutic institutions without considering patient access to the outdoors (Otto and Grahm 2005, 25). American landscape architect Frederick Law Olmsted, well-known for designing large public parks in urban environments, is also acknowledged for his belief that urban dwellers needed access to nature to relieve stress – something now supported by empirical research (Miller 2008, 116).

All these benefits of the natural world are pointed out as something we once knew collectively, but have forgotten in light of the contemporary focus of health practitioners on disease and medication (Bird 2008, 21-22). Yet the memory is not lost, and confidence is expressed in the human capacity to rediscover a relationship with the natural environment as “one of the main pillars of our happiness and wellbeing and ... a foundation of our health” (Bird 2008, 26). Some people trace this relationship far back in evolutionary time to the long hunting and gathering history of our species – a history that comprises over 99 percent of human existence on this planet and involves hunter-gatherer bands closely caught up with other organisms and the natural environment as a whole (Heerwagen 2010, 2; Gullone 2000, 296). The original evolutionary genetic coding and instincts which guided our species through its history are recognized as rooted in nature and still an elemental part of us today, still shaping our behaviours and responses to our environment (White and Stoecklin 1997, 2-3).

As psychologist Eleonora Gullone points out, our brains evolved not in a “machine-regulated world,” but in a biocentric world which shaped our cognitive and emotional apparatus. “Our tendency to affiliate with nature in all likelihood enhanced the fitness of our ancestors,” she writes. “The brain which modern members of our species have inherited must be a product of this evolutionary process – a brain attuned to extracting, processing, and evaluating information from the natural environment” (Gullone 2000, 295-6). Health and environment researchers in Japan note that according to physiological anthropology, human physiological functions are made for natural settings – the reason why we are able to relax so well in natural environments (Park et al. 2009, 292). The point has also been made that in urban settings, the natural environmental stimuli of our ancestors have been replaced by

concrete, high-rise housing, cars, pollution and noise – conditions which reduce the “protective factors of nature for health improvement and sustainability” (St Leger 2003, 173).

The importance of natural stimuli is critical to the concept of “biophilia”, a word coined in 1964 by Erich Fromm, who described it as meaning the “love of life or living systems” (Simaika and Samways 2010, 903, quoting Fromm). Biophilia is nowadays described as a psychological tendency in humans to be drawn to “all that is alive and vital” (Simaika and Samways 2010, 903). Not all researchers are of the same mind regarding the exact nature of this innate affinity for the natural world, but most would agree that, in Louv’s words, “genetically, we are essentially the same creatures as we were at the beginning” (Louv 2008, 43). Social scientists, Gullone points out, should be interested in this deep-seated affinity for nature and concerned about it. She wonders about the impact on the human psyche when nature, a “deep defining part of human evolutionary experience” – is no longer accessible, when it is diminished or erased. “What is the potential loss to human ... well-being?” she asks (Gullone 2000, 294).

5.2 A need for nature in ordinary places

The loss of contact with nature – of this “deep defining part of human evolutionary experience” as Gullone describes it – can be viewed as a loss of the many benefits the natural environment offers. These benefits can, she points out, be maintained by integrating elements of nature into our daily lives and everyday places (Gullone 2000, 294 and 315). A body of research described as “mounting and impressive” (Beatley 2009, 211) indicates how much people of all ages can gain from simply going outside on a regular basis: reduction in stress, anxiety, depression, and attention-deficit disorders; generally enhanced health, peacefulness, and overall well-being (Charles 2009, 468); superior cognitive functioning, better psychological well-being, speedier recovery from illness, and fewer physical ailments (White 2004, 10).

The Faculty of Public Health, the leading professional body for public health specialists in England, recently published a notable overview of experimental, epidemiological, observational, evaluative and descriptive research revealing the wide-ranging health benefits associated with access to nearby green space. The authors point out that access to green spaces close to home can raise levels of physical activity for all ages and encourage active

transportation. Access to safe green spaces in a neighbourhood can also increase levels of communal activity across different social groups, enhance residents' satisfaction with the area, and contribute to reduced health inequalities (Faculty of Public Health 2010b, 1).

According to the evidence, time spent in a natural outdoor setting provides highly effective “antidotes to stressful lifestyles” (Charles 2009, 468). Less active nature experience – simply looking out a window at natural scenery, or bringing the outdoors inside – can be equally effective as environmental psychologist Judith Heerwagen indicates in the following statement:

Over the past several decades, research in a variety of fields shows that contact with nature generates emotional, physiological, and social benefits. Research on this topic has been conducted in workplaces, hospitals, urban environments, and experimental laboratories. Further, the findings point consistently to the value of particular nature features such as large trees, flowers, and water. Studies also show that benefits of nature occur in many ways – through direct contact (sitting in an outdoor garden), indirect contact (through a window view), and from simulations using nature decor (such as posters or paintings) (Heerwagen 2010, 3).

Studies have, indeed, demonstrated the significance of connecting with nature in a variety of ordinary places – ‘ordinary’ meant in the “dictionary sense of ‘routine, usual, or commonly encountered’” (Kellert 2005, 9-10) – through direct or indirect contact with real or simulated nature.

5.2.1 Places of learning

Children experience significant benefits – including enhanced self-discipline, lower levels of psychological distress, and higher levels of self-worth – when they have direct and indirect access to natural environments close to their homes in inner city and rural settings (Wells and Evans 2003, Faber Taylor, Kuo and Sullivan 2002). When children grow up and leave their childhood homes, they may go on to pursue studies in postsecondary institutions, where access to natural environments remains important. In two experiments comparing the restorative effects on cognitive functioning of university students active in natural versus built environments, psychologists Marc Berman, John Jonides and Stephen Kaplan (2008) discovered that simple and brief contact with nature – either direct contact by walking in a natural environment or indirect contact by viewing pictures of nature – can produce marked increases in cognitive control. “To consider the availability of nature as merely an amenity,” write the researchers, “fails to recognize the vital importance of nature in effective cognitive functioning” (Berman, Jonides and Kaplan 2008, 1211).

An earlier study, by cognitive psychologists Carolyn Tennesen and Bernadine Cimprich, was based on the theoretical notion that increased demands for attention can fatigue an individual's capacity to direct attention. Their study sought to link the degree of naturalness in the view from a college dormitory window with student capacity to direct attention. The results show that students with natural views (e.g. trees, lakes) from their dormitory windows were better able to direct attention than students with less natural views (e.g. buildings, brick walls) – suggesting that people able to look out on a more natural scene have access to an additional means of restoring directed attention, and therefore an advantage over people with a less natural view.

The researchers state that if these findings are further corroborated, we should not ignore implications for the placement and design of dormitories and other places. “[W]ould the capacity to attention in older adults be affected by access to natural views?” they ask. “If so, access to a natural view would be an important consideration in the design of living environments for the older person. Also, would windows with a natural view have a similar effect on employees in office environments? It would seem important to learn whether employees with views or with natural interior landscaping were more productive” (Tennesen and Cimprich 1995, 84-5).

Gazing at a natural view from a window in one's living environment may be an easily accessible 'micro-restorative' activity.

(Tennesen and Cimprich 1995, 78)

5.2.2 Places of work

Researchers have, in fact, pursued these questions, and more. Psychologist Rachel Kaplan discovered that employees with views of nature from their office space reported better overall health, higher life satisfaction, and greater enthusiasm for their jobs. These individuals also felt less frustrated and more patient than employees with no view of nature through their windows. Kaplan is quick to point out that the quality of the view is not that significant; it can include buildings or parking lots, as long as there is also some greenery (e.g. vegetation or trees) in the “viewshed” (Kaplan 1993, 198). Acknowledging that outdoor natural areas for walking or taking a break would be beneficial too, she nevertheless stresses the importance of “microrestorative opportunities” such as glancing out the window at greenery to help maintain and refresh the capacity to maintain a train of thought, and to remain “composed and civilized” despite interruptions and irritations (Kaplan 1993, 200) – in essence to reduce

attentional fatigue and restore concentration. While Kaplan mentions studies describing the benefits of office decorations depicting nature, she reveals a curious result of her research: that indoor plants do not play a significant role (Kaplan 1993, 199).

More recent research has, however, found that indoor plants can have a considerable impact on employees. Plants can help increase attentiveness and productivity (Lohr et al. 1996), relieve various negative physiological symptoms (Lohr and Pearson-Mims 2000, Fjeld et al. 1998), and generally inspire a more positive outlook (Lohr and Pearson-Mims 2000). A recent critical review of experimental evidence on the psychological benefits of passive interaction with indoor plants in diverse places (e.g. hospitals, private offices, classrooms, university computer labs) reveals a wide variety of benefits – from faster stress recovery among students, to more interaction among individuals with mental illness, to lower pain distress among hospital patients. The review also indicates a lack of focus on indoor plants from researchers more interested in the benefits of outdoor nature experiences. The authors encourage further research to fill this gap (Bringslimark, Hartig, and Patil 2009).

5.2.3 Places of dwelling

Attentional restoration, along with the capacity to recover from stress and maintain a positive outlook, are needs people continue to have after the age of employment to enable them to cope with the ongoing demands and activities of daily living. Swedish landscape planners and researchers Johan Ottosson and Patrik Grahn note that Western societies need to rethink the health and health care of aging populations, and to consider engaging “new or under-utilized resources” such as the natural environment. The researchers report on a study they conducted to compare the effects of favourite outdoor and indoor environments among elderly residents living in a facility providing long-term assistance and care. Interviews, not surprisingly, revealed that all participants would like to spend more time outside; one individual, who needed assistance to move around, told the researchers that he hadn’t been outdoors in the previous six months.

Participants in the Swedish study expressed the need to go outside for the following reasons, listed in order of significance: fresh air, physical exercise, and contact with elements of nature (e.g. flowers, trees, butterflies, birds). The most important benefits of time spent outdoors were reported to be a better frame of mind, feelings of happiness, and more energy. Tests were also conducted to measure the powers of concentration, blood pressure and heart

rate of research participants before and after rest periods in (1) the institution's garden, and (2) a favourite indoor place. Results indicate that the capacity for concentration increased more significantly after spending time in the garden than in the indoor place. The positive impact of spending one hour resting in an outdoor place such as a garden, the authors point out, has potential impacts on the capacity of elderly people to perform activities of daily living (Ottosson and Grahn 2005).

The challenges of daily living are particularly significant for people with Alzheimer's disease, described by landscape architect Jack Carman as a "progressive decline in mental function", and "challenging journey into the loss of selfhood ... taken by both the victim and their family caregivers" (Carman 2002, 111). Carman reports on eight "Alzheimer's Garden" projects undertaken by the American Society of Landscape Architects as part of their 100-year anniversary commemoration, in collaboration with the National Alzheimer's Association. The projects, located in various US cities and sites – from public spaces to special care facilities – sought to create accessible, pleasant, safe, and secure outdoor places for the "cognitively impaired individual" (Carman 2002, 111) to enjoy the benefits of the natural environment.

Features of the Alzheimer's Gardens include varying combinations of walking paths, bird feeders and bird baths, non-toxic plants to attract birds and butterflies, water features to provide soothing sounds, raised garden beds for horticultural activities, and benches for sitting and relaxing. These features together provide what Carman describes as safe, comforting places where visits with friends and family can be enjoyed, and where individuals with Alzheimer's disease can spend time being social, and also be "alone safely, in perceived solitude" (Carman 2002, 112). Carman points out that elements of nature (sunshine, water, plants, trees) have proven soothing to older adults with Alzheimer's disease, and that exposure to the natural environment offers positive distractions and blocks worrisome thoughts that can lead to agitated and emotional outbursts in individuals with the disease (Carman 2002).

The need for, and benefits of contact with nature in these various ordinary places have, as indicated in the previous sections, implications for designing and offering access to nature in places of learning, work and dwelling (and other places, of healing, recreation, worship, and more), as well as interesting opportunities for geographical study.

5.3 “Placeful” needs for nature

The diverse human needs for, and benefits of contact with the natural world discussed in the preceding pages also, interestingly, parallel contemporary geographical theorizations of place in terms of the physical, relational-active, and affective-evocative characteristics described in Chapter 2.

5.3.1 Physical and active needs for nature

The most basic human need for nature relates to the physical ecosystem services provided by the natural environment – services which maintain conditions for all life on this planet. These services include, among others, climate and gas regulation, water supply and regulation, soil formation, erosion control, nutrient cycling, waste treatment, pollination, and food production (Costanza et al. 1997). Such physical (and other) needs for nature can be easily overlooked amid the traffic, buildings and other hard surfaces that characterise urban settings. Yet these same hard, impermeable surfaces causing stormwater drainage problems, along with traffic density producing noise and air pollution, bring certain ecosystem services to the forefront. Swedish ecologists Per Bolund and Sven Hunhammar (1999) draw attention to certain services offered in urban areas – air filtering, noise reduction, rainwater drainage – that contribute to the quality of life of urban residents. In the context of rapidly expanding urbanization, they stress, it is important for municipal planners and decision-makers to understand and value local ecosystems and the services they provide (Bolund and Hunhammar 1999, 300).

Stephen Kellert puts physical needs for nature in terms of utilitarian value, which he describes as essentially the physical, material and commodity benefits derived from the natural world. In this context, nature is a source of medicinal, agricultural, commodity and industrial gain, as well as a source for more basic human sustenance and security. He notes that in contemporary industrialized societies, many people are inclined to view this dependence as “more historic ... a characteristic of primitive cultures and less economically developed nations”, while tending also to consider contemporary life to be characterized by a supposed independence from this ancient reliance on the natural environment (Kellert 2005, 51) – echoes of the philosophical human-nature estrangements discussed in the previous chapter.

Nevertheless, people in contemporary society continue to seek out natural spaces for an ecosystem service also mentioned by Bolund and Hunhammar, and by Costanza et al.: the opportunity for recreation and physical activity. Recreational aspects of urban ecosystems have, in fact, been identified as possibly the most highly valued ecosystem service in cities (Bolund and Hunhammar 1999, 298), with the benefits of physical activity practiced in natural settings found to be particularly strong. Research in Sweden and England, for example, found that people jogging in a natural setting with vegetation, trees, and landscape views felt less anxious, depressed and angry, as well as more restored than individuals who burned the same number of calories in built environments such as gyms (Louv 2008, 49).

Positive associations have also been reported between access to natural spaces and increased rates of physical activity for all age groups, particularly in densely populated urban areas where green spaces within walking distance tend to encourage physical activity outside the home (Faculty of Public Health 2010b, 3). When green spaces are abundant, urban residents experience generally better health, and people who use parks and open spaces are three times more likely to attain recommended levels of physical activity than non-users (Green Cities: Good Health, 2011). Among elderly people, in particular, higher survival rates have been positively associated with access to nearby tree-lined streets and parks for walking, regardless of socio-economic status. According to a recent large-scale study of patient records in the UK, neighbourhoods offering more green space show significantly smaller health inequalities between advantaged and disadvantaged groups than neighbourhoods with less green space (Faculty of Public Health 2010a, 4). Natural areas have, in fact, been identified as “one of the few remaining spaces that are available to all” (Scottish Natural Heritage 2009, 4).

5.3.2 Relational needs for nature

People who step out into green spaces can draw benefits well beyond the physical. Research described as “fascinating, if skimpy” (Louv 2008, 79) suggests that children who spend more time outdoors have more friends. “Certainly the deepest friendships evolve out of shared experience, particularly in environments in which all the senses are enlivened,” writes Louv, in specific reference to the outdoors. In the context of a study of rural children, environmental psychologists Nancy Wells and Gary Evans indicate that green spaces draw children together and provide a context for developing friendships that provide social support

which helps buffer the impact of life stresses. They also point to research revealing that children and parents living with access to the outdoors have over twice as many friends as people whose outdoor access is limited by traffic (Wells and Evans 2003, 324-5).

The University of Illinois, Urbana-Champaign's Human-Environment Research Laboratory, later to become the Landscape and Human Health Laboratory (LHHL), has found, through decades of research, that nature plays an important role in encouraging the development and maintenance of strong social ties, and in creating cohesive, vital neighborhoods – basically in reinforcing social capital, a complex concept defined neatly by the OECD's Brian Keeley as the "links, shared values and understandings in society that enable individuals and groups to trust each other and so work together" (Keeley 2007, 102). LHHL research has revealed, in fact, that the greener the common space in the inner city – the more trees and grass it offers – the more it is used by residents. And the more it is used, the greater the opportunities for informal social interaction. An average of 83% more people, in fact, were discovered to be involved in social activities in green common spaces than in bare common spaces. People living closer to a green space enjoyed more social activities, had more visitors, knew more about their neighbours, had stronger feelings of belonging, and reported heightened senses of adjustment and safety (Sullivan, Kuo and DePooter 2004; Kuo et al. 1998). Green space can actually have an impact on community resilience (Faculty of Public Health 2010a, 5).

Safety is an important factor in community cohesion and vitality. The Human Dimensions of Urban Forestry and Urban Greening research program – acknowledging that urban vegetation can be considered as offering screens for criminal activity, and that the relationship between crime prevention and greenery needs further study – nevertheless reports on compelling related research. Urban greenery has, for example, been linked to lower levels of incivilities and crime (including graffiti, vandalism, domestic aggression, and violent crimes) in residential neighbourhoods, particularly in the disadvantaged inner city. One study revealed that urban residents fear and dislike common spaces that are empty and treeless, and that the addition of trees and grass can dramatically change perceptions of the space. "The presence of trees and well-maintained lower understory vegetation," writes projects director Kathleen Wolf, "can transform barren spaces ... into pleasant, welcoming, well-used places. Such common spaces serve to strengthen ties among residents, increase

informal surveillance, and deter crime, thereby creating healthier, safer urban communities” (Green Cities: Good Health 2011b and 2011c).

For individuals who live in poor inner-city neighborhoods and who face an array of difficult circumstances, greener outdoor common spaces may make the world a more supportive place.
(Kuo et al. 1998, 848)

Private green spaces can also foster community cohesion and health, as Maria Elisa Christie’s case study of house-lot gardens in Mexico reveals. Those outdoor places play important roles as sites for visiting with guests, integrating new migrants into the community, staging celebrations and festivities, performing meaningful women’s roles in community affairs, and for generally strengthening social networks that provide safety nets and material support. House-lot gardens are also places where children are educated regarding plant names, agricultural work, animal husbandry, appreciation of nature and living things, and social obligations and moral values (Christie 2004).

Communal garden spaces offer more obvious relational benefits. Research focusing on a group of seniors involved in a community garden in England reveals that elderly gardeners are able to combat social isolation by interacting with the other gardeners and members of the local community, and by developing social networks operating within and outside the communal garden. Engaging with nature while gardening also provides a sense of satisfaction, pleasure and connectedness, as does the opportunity to nurture both plants and less capable members of the group (Milligen, Gatrell and Bingley 2004).

Fieldwork conducted among community gardens in the inner-city Philadelphia neighbourhood of Mantua puts similar relational benefits in the context of urban poverty. Pointing out that economic development is not a viable option in cities where businesses continue to move to the suburbs and further away overseas, the researchers suggest that urban poverty and urban renewal be addressed through non-economic means such as community gardening, which builds social capital. Gardening, they point out through compelling examples, is offering vital links for establishing and strengthening social networks, and helping Mantua residents and communities see hope in difficult situations. Community gardens in the neighbourhood provide a nearby haven of safety, a place for daily serenity and sociability, a means of reconnecting with nature through accessible garden ecosystems, and a basis for developing community. “When people begin to know their neighbors,” write the

authors, “they believe they can create a strong community and overcome urban blight” (Hanna and Oh 2000, 211). Green spaces such as community gardens are facilitating those processes.

Far too many poor, inner-city neighborhoods remain urban deserts.

(Sullivan, Kuo and DePooter 2004, 697)

5.3.3 Affective-evocative needs for nature

Community gardens providing a safe haven, daily serenity and hope – those are qualities that respond to a broad range of less tangible human needs, needs we could describe as generally affective and evocative. Bolund and Hunhammar (1999) and Costanza et al. (1997) group these intangible needs under the label “cultural ecosystem services”, which the latter define as the provision of opportunities for non-commercial uses such as educational, spiritual, artistic, aesthetic and scientific (Costanza et al. 1997, 254). This section outlines ways in which the natural environment helps to meet some of these, as well as and other more abstract needs.

Aesthetic needs for nature

The symbolic need for nature is often discussed in association with the aesthetic need, which may be perceived as superficial at first glance, but which has nevertheless been shown to have considerable depth. The aesthetic need for nature is grounded in the physical attractiveness and symbolic characteristics of natural elements, revealing the natural world to be a source of attraction and beauty (Kellert 2005, 54; Kellert and Clark 1991, 23). Certain scholars focus on wild species as meeting this need, illustrated through the contribution of wildlife to arts such as music, poetry, literature, and painting (Conover and Conover 2003, 845). People admire the spontaneity, motion and unpredictability of wildlife, as well as its beauty and grace, and its struggles and endurance. People are also attracted to what they have in common with wildlife, and to what makes wildlife different, and therefore mysterious (Rolston 1987).

Kellert points out that the mysterious and physical splendour of the natural world evokes powerful, primarily emotional responses in people (Kellert 1996, 15) and that it exerts particularly consistent, strong, and universal impacts on the human psyche – ones that could be considered in the spirit of biophilia as genetically encoded and adaptively related to human security and fitness. “People are aesthetically drawn to environmental features that have

proven instrumental in human survival,” Kellert writes, “for example, clean flowing water, promontories that foster sight and mobility, areas that offer refuge and shelter, and bright flowering colors that frequently signify the presence of food.” When we cultivate the aesthetic attraction and value of nature, we derive additional functional advantage by enhancing our capacity for curiosity, imagination, and creativity, along with the aptitude for recognizing order, symmetry, balance and harmony. This attraction can be nurtured to lead deeper, into more complex levels of curiosity, fascination, and exploration, with time producing heightened capacities for observing, discovering, and creating – all highly adaptive as we struggle to survive and thrive (Kellert 2005, 54-5).

Educational and scientific needs for nature

Observation, discovery and creation are all involved in the human need for nature as a source of empirical and intellectual knowledge and understanding, in fulfillment of a need to know and understand the world with authority (Kellert 2005, 53). Some scholars have written, in relation again to wildlife, that wild species provide warning of environmental changes as ‘sentinel species’ (Conover and Conover 2003, 844), inspire interest in learning more about the natural environment in general, and motivate people to act on broader environmental concerns (Hair and Pomerantz 1987, 204). The potential intellectual and educational value of nature projects for children – observing nature in action, learning to identify plants and animals, and developing skills such as gardening – have also been highlighted (Seik 2000, 285).

Kellert, noting that natural diversity remains an unsurpassed source of intellectual stimulation, stresses that careful observation and comprehension of even a small part of the natural world provides an infinite variety of ways to kindle interest and nurture learning. He describes the natural environment as offering “endless, challenging variety and wonder, a place where people free from the constraints of excessive formality can indulge their need to observe, understand, and learn ... in the process, cultivating various cognitive abilities, including enhanced critical thinking, problem solving, and analytical skills.” Kellert also points out that although our society considers empirical observation and systematic study of the natural environment as contemporary activities requiring “rigorous training and membership in an elite profession”, the inclination [we could add need] to study nature has occurred throughout human history among peoples in all cultures (Kellert 2005, 53).

Cognitive needs for nature

The closely related cognitive need for nature was mentioned earlier, but not explained in any detail. Ottosen and Grahm, in their article on residents in the elder care facility, provide excellent background to human cognition and nature. They draw attention first to the fact that humans are endowed with two types of attention: involuntary and directed. “Involuntary attention”, also called “soft fascination”, is triggered in response to things such as brightly coloured flowers or the sudden movements of a squirrel in a tree. Soft fascination requires little effort, and is associated with older parts of the brain: the limbic system and the brain stem.

The other type of attention, “directed attention,” requires sustained and intense concentration to perform the many tasks contemporary society demands of us, such as theoretical learning, mathematical problems, and challenges in our private lives. The effort required to stay focused on the task at hand and to filter out irrelevant information such as noise draws on our capacity for directed attention – or CDA, to use the authors’ abbreviation – associated with the more ‘modern’ part of the brain, the cerebrum.

Contemporary society, with its unending demands and artificiality, Ottosen and Grahm note, often taxes our CDA to the limit. If our CDA is exceeded, it causes us to lose the capacity to focus attention, leading to what is known as an “information collapse.” We can renew the capacity to concentrate by spending time in settings which do not draw on CDA, meaning that the setting is free from annoyances that require active effort to filter out. These restorative settings must, on the other hand, provide a certain level of stimulus, or ‘soft fascination’, which arouses awareness and curiosity, without commanding our full attentional capacity, thereby restoring and refreshing our attentional faculties (Ottosson and Grahm 2005, 26). Immersion in natural outdoor settings meets these criteria, while visual contact with nature also provides opportunities for replenishing attentional capacity (Heerwagen 2010, 5).

Psychological needs for nature

The restorative effects of immersion in the natural world are also associated with the human psychological need for nature. In contemporary society, one important benefit is the capacity of nature to reduce stress, which we are faced with almost constantly in daily life, from continual alertness to traffic on the street, to challenges in the workplace, to threatening images on the television screen in our homes (Louv 2011, 55), and to growing demands

connected with rapidly developing technology and social media. These stresses can be understood in terms of the fight or flight reflex, a normal response to stress resulting in higher blood pressure, faster pulse rate, muscle tension, sweating, and the diversion of blood away from the skin to muscle – all of which help the body to cope with danger. If this stress response is not followed by rapid recovery, it can cause exhaustion, physiological damage, and a restricted capacity to respond to future perils (Louv 2011, 54, referencing Bird).

Health and environment researchers in Japan note that acute and chronic stress, as well as insufficient recovery from stress responses, can lead to long-term health impacts including mental disorders and cardiovascular disease. Stress control is considered a critical issue, particularly in urban settings which can elicit substantial stress in people's lives (Park et al. 2010, 18), and in industrialized societies in general (Lee et al. 2009, 227) where many people, even if they are not affected by a particular disease, do not consider themselves to be healthy (Tsunetsugu, Park and Miyazaki 2010, 27). Since 2004, these researchers have been studying "Shinrin-yoku" – defined as "taking in the forest atmosphere or forest bathing", essentially immersion in a forested setting – a phenomenon which has been receiving increasing attention for its relaxing and stress-reducing capacities (Tsunetsugu, Park and Miyazaki 2010, 27). A series of physiological experiments – conducted in laboratories and forests to determine the effects of forest scenery, forests sounds, and forest smells – have revealed that direct or indirect contact with a forest, as opposed to a built environment, can reduce pulse rate, concentrations of cortisol, diastolic blood pressure, and sympathetic nerve activity, while increasing parasympathetic nerve activity, and feelings of calm, comfort, and refreshment (Park et al. 2010; Tsunetsugu, Park and Miyazaki 2010; Park et al. 2009; Lee et al. 2009). Forest environments, the researchers conclude, help to relieve human psychological tension, confusion, fatigue, depression, and anger, while at the same time boosting human psychological vigour (Park et al. 2010, 24).

Other research has uncovered intriguing connections between depression, psychological vigour and a much smaller piece of the natural environment: a micro-organism, *Mycobacterium vaccae* (*M. vaccae*) normally found in the soil. Neuroscientist Christopher Lowry, intrigued by results of oncology research reporting that lung cancer patients injected with killed *M. vaccae* reported less nausea and pain, better emotional and cognitive function, and overall better quality of life, decided to explore a little further (Valentine 2008, Glausiusz

2007, University of Bristol 2007). He and a team of researchers at Bristol University and University College, London (Lowry et al. 2007) reasoned that the positive effects of *M. vaccae* might be produced when neurons in the brain containing serotonin (a brain chemical believed to be lacking in people who suffer from depression) were activated (University of Bristol 2007);. These are the same nerves targeted by Prozac (Glausiusz 2007).

When the researchers injected mice with *M. vaccae*, they found that the animals exhibited less anxiety, and that the bacteria did indeed activate a group of neurons that produce serotonin. The overall impact on mouse behaviour was similar to the effect produced by antidepressant drugs. The results of the neuroscience study are described as suggesting that “a jolly state of mind” can be elicited by simply inhaling *M. vaccae* during a walk in the park, or while rooting around in the garden. It can also be ingested, according to Lowry, through eating plants picked from the garden (Glausiusz 2007). “These studies,” Lowry says, “leave us wondering if we shouldn’t all be spending more time playing in the dirt” (University of Bristol 2007, quoting Lowry). *M. vaccae* may, in fact, be an overlooked and significant factor contributing to the popularity of gardening.

Microbiologists Dorothy Matthews and Susan Jenks took the study in a different direction, revealing that the same *M. vaccae* can have an impact on learning by decreasing anxiety and improving the ability to learn new tasks (American Society for Microbiology 2010). These bacteria are among a set portrayed as “a wide range of harmless germs” present in parks and playgrounds – germs that become part of the body’s natural microbial system, a suite of essential microorganisms which constitute “crucial components of our health, intimate companions on an evolutionary journey that began millions of years ago” (Adler and Interlandi 2007) – another perspective on biophilia, and another indication of our complex need for nature.

Spiritual need for nature

... just beyond the veil of rain, we feel a presence for which we have no name.

(Louv 2011, 241)

Another aspect of our complex need for nature involves spirituality – a part of human life that has been described as “so mysterious it is often disregarded or denied” (Suzuki and McConnell 1997, 184). The mystery comes from the fact that the notion of spirituality is broad, complex and nuanced, with any attempt at definition necessarily being provisional and

incomplete (Schroeder 1992, 25). Nevertheless, some people have managed to put spirituality into relatively simple terms. Louv, for example, shares the following description of spirituality, offered by a rabbi he once interviewed. To be spiritual, the rabbi asserted, “is to be constantly amazed.” The rabbi based this description of spirituality on the teachings of a certain professor who encouraged his students to approach each day in a way that took nothing for granted, to “live life in radical amazement” (Louv 2008, 291-2) – a perspective reflected in descriptions of spirituality as “a sense of reverence before the deep mystery of things” (Berry 1991, 6), and a “sense of wonder” rooted in and nourished by the natural environment (Louv 2011, 243).

When the word “spiritual” is used with respect to the natural environment, it usually refers to the experience of contact with an ‘other’ that transcends our individual sense of self and imparts meaning to life that goes beyond the intellectual (Schroeder 1992, 25). The ‘other’, the something larger or greater than one’s individual self, can take a diversity of forms according to research social scientist Herbert Schroeder, including supernatural deities such as God, natural entities such as the planet Earth, and other concepts or phenomena. Whatever form it may take, the experience of the ‘other’ is more than an abstract concept or thought. It is felt at a deep level, where it can stir powerful emotions, helping define who one is in relation to the world, and granting meaning to life. Although spiritual experiences can take place in various settings, the primary context appears to be the natural environment (Schroeder 1992, 25).

Many cultures have, in fact, believed in a surrounding natural world that is animated, inhabited, and sacred, with corresponding rules and rituals intended to restore and maintain harmony; many human myths portray a world “permeated by spirit, where matter and spirit are simply different aspects of the totality” (Suzuki and McConnell 1997, 188). Harmony and oneness, it is believed, can be mediated by particular elements of nature such as trees, natural entities which have been used by cultures throughout the world to symbolically link the human and the divine (Dwyer, Schroeder and Gobster 1991, 280). The ‘World Tree’ which many mythological traditions believe stands at the center of the universe, connecting the divine realms above with the earth below, is one example, as are the sacred groves of the Celts which link the sacred and mundane worlds (Schroeder 1992, 26). Another, more recent

example from, interestingly, a 1950s forestry textbook, describes a grove of giant sequoia trees in spiritual terms:

In their presence, all sense of proportion is lost, and smaller trees which may be 4 to 10 ft. in diameter appear dwarfed by comparison. It is small wonder, therefore, that a feeling of reverence comes over one upon entering a grove ... whose gigantic red trunks are like the supports of some vast outdoor cathedral. The emotions aroused by the silent ageless majesty of these great trees are akin to those of primitive man [sic] for whom they would have been objects of worship, and it is unlikely that many centuries of scientific training will ever completely efface this elemental feeling (referenced in Schroeder 1992, 26).

A quote from a contemporary research participant at Chicago's Morton Arboretum reflects this sentiment: "Being deep in the woods is a place where your spirit can fly free, without interruption, bringing you closer to God" (Dwyer et al. 1991, 280).

These sorts of experiences are recognized as important to our psychological health because they pull us toward connection and relationship (Schroeder 1992, 26) – connection which, Louv notes, confirms that we are not alone in the world, that other realities and dimensions exist together with our own (Louv 2008, 296). This comprehension can be understood in terms of "ecological spirituality", which theological Robert Hamma describes as offering a perspective on the world that helps to perceive the "complex interaction between the various spheres of creation" in places. "We see in each place the differentiation of creation," he writes, "the intelligence of each organism, and the fundamental energy of the universe at work" (Hamma 1999, 132). This fundamental energy can be considered as coming from the earth we partake of each day, breathing it in, eating and drinking from the shared "spark that animates the whole planet" (Suzuki and McConnell 1997, 184-5), or as emanating from the "[S]ource of ... existence" that we feel a subconscious need to touch, feel, hold, and relate to (Forrest McDowell 2007, 4). Schroeder stresses, for his scientifically minded audience, the importance of recognizing that "humans and nature are not separate, and that spiritual phenomena are therefore an inherent aspect of the natural world ... just as much a part of the real world as are ecological processes like competition and predation" (Schroeder 1992, 29).

5.4 *The need to reconnect with nature*

The consequences of human-nature estrangement experienced in industrialized societies, in addition to the many and complex human needs for nature just discussed, point to an urgency to reconnect with our natural surroundings, to re-think our relationship with nature, to reconcile with the natural world. As Pocock writes, "a growing awareness of (Western)

humankind's abuse of its terrestrial home at a global scale, plus dehumanising environments and social alienation at the everyday level, has brought realisation of a need to rediscover a harmonious relationship, or oneness, with the world" (Pocock 1993, 11). The idea of a harmonious relationship has been echoed by scholars and thinkers in diverse disciplines and fields of endeavour. Biologist Michel Loreau, for example, calls for a new relationship and ethic that accepts, celebrates, and learns to live with the diversity of life (Loreau 2007, 66), while philosopher Souleymane Bachir Diagne describes a holistic approach that moves toward an increase in planetary life through "interdependent development" (Bachir Diagne 2007, 125-6). Environmental historian and philosopher Carolyn Merchant writes of developing a dynamic partnership between humans and the natural environment (Merchant 2004, 6), while former UN secretary-general Javier Pérez de Cuéllar stresses that we must become "symbiotes" of the planet. "If we live in symbiosis with the Earth," he asserts, "we shall survive" (Pérez de Cuéllar 2007, xiii). Cultural historian and ecotheologian Thomas Berry highlights a particular aspect of symbiosis: intimacy, which we must achieve for mutual benefit. "In an earlier period we have been profoundly concerned with divine-human relations," he points out. "In more recent centuries we have been concerned with interhuman relations. Our future destiny rests even more decisively on our capacity for intimacy in our human-Earth relations" (Berry 1999, x).

Harmonious and intimate human-earth relations call for everyday experiences of the natural world, experiences that are increasingly missing in contemporary industrialized society, yet something we urgently need in ordinary places – of dwelling, learning, work, and more – for physical, relational and affective-evocative well-being. The chapters in Part III of this dissertation will focus on a place that provides opportunities for people to reconnect with the natural environment, to develop an intimate relationship with nature, and to reap multiple meaningful benefits from involvement with the natural world on-site: Ottawa's Fletcher Wildlife Garden.

PART III

OTTAWA'S FLETCHER WILDLIFE GARDEN – RECONNECTING HUMANS AND NATURE

A 1995 *Ottawa Citizen* “Ottawa’s Hidden Treasures / Home Tourist” column observes that “[T]he national capital region is full of hidden treasures. Some are natural. Some are man-made. And some are a combination of the two. All enhance the quality of life in our area” (Prentice 1995). The Fletcher Wildlife Garden (FWG) is one of the hidden, life-enhancing treasures featured in the column, a place described as a “delightful ... garden and wilderness area” (Prentice 1995) combining both human and natural elements. This rich combination has earned the FWG additional portrayal as “graceful” (Jenkins 2011), “beautiful .. interesting ... peaceful” (Presley Seward 1999), “special ... surprising” (Bryant 2003) – “beaucoup plus qu’un simple parc floral” (Lamontagne 2009), “sorte de centre de la nature avec sentiers de randonnées” (Champagne 2008), and “a wild oasis in a sea of cement, trimmed lawns and pruned trees” (Dickenson and Harrison 1995a).

A letter from the Canadian Society of Landscape Architects (CLSA) congratulates the FWG on its role as client to the recipient of two of the society’s 1992 annual awards – in both the Regional Honour and National Merit categories. The recipient, David Tomlinson & Associates, created the original design for the FWG, a design which was praised by CLSA jurors looking for the following qualities: excellence in design, response to context, and communication of the meaning of the place. The CLSA made the following statement regarding the Fletcher Wildlife Garden:

This project is a landmark initiative. It shows that by harnessing the volunteer labour of professionals and laypeople a “different” place can be created. The project provides an example of a different direction for rural and urban gardens. It goes beyond just ‘garden’ to create a series of distinctive gardens which provide a variety of wildlife habitats (FWG D2, Awards, 1992).

Recognition for the FWG has been ongoing since those initial compliments, with the CLSA honouring the FWG yet again with an award for service to the environment in 2006. Christine Hanrahan⁷, a volunteer who has been involved with the FWG project since the early stages and who publishes regular reports about the site, concluded her announcement of the award with the following statement: “We must be doing something right!” (Hanrahan 2006b, 4).

What is the FWG doing right, and what has earned this urban garden-wilderness such accolades? In a recent update on birds of the FWG and vicinity, Christine offers the following evocative “outline” as she calls it, of the FWG and its environmental significance:

The garden is approximately six hectares in size, therefore, as greenspaces go, not overly large. It is heavily vegetated with thickets, woodlots, and hedges, but also has a small, marsh-bordered pond, and open, grassy areas full of wildflowers and grasses. Most importantly, it provides a real oasis for birds (and other wildlife), and the more the site comes to resemble a chunk of countryside set down in the city, the more we find increasing numbers of birds and animals appearing. Most of the birds we see are passing through during migration and it is clear that the garden is an important stopover point for resting and feeding before they continue their great northward and southbound journeys. We also see good numbers of overwintering birds (Hanrahan 2009b, 121).

The habitat variety and richness she describes, and the wildlife attracted to it, is indeed surprising for an urban space as small as the FWG.

The FWG also, not as surprisingly, attracts people. As the FWG general brochure points out, “In Ottawa, we treasure our green spaces: they make us feel more alive and connected with nature”, adding that the FWG is a place to experience and appreciate nature in the heart of the city. The brochure entices readers with the following evocation: “Along the trail, quiet and observant visitors are likely to spot all sorts of creatures: we’ve counted 127 species of birds and 40 species of butterflies. Behind the Interpretive Centre, the city-sized backyard garden offers a continuous display of beautiful flowers to catch your eye” (FWG Br1, 2005). Besides delights for the eye, the FWG offers interpretive programs, information on wildlife gardening and regional natural history, and special events and outreach activities – all of which makes the FWG in the words of Christine, “a well-known destination for nature lovers, birders, photographers, and people who just like to take a stroll around a little bit of countryside tucked inside the city” (Hanrahan 2010e, 161-2).

The FWG is also a regular destination for people who wish to connect with nature and to make a contribution to the natural world. Many of the volunteers working to maintain the FWG’s habitats are amazed and delighted by the richness of the natural environment on-site and by the diversity of wildlife found there. Long-time volunteer Sheila expresses astonishment that such biodiversity can exist in an urban environment. “I’m surprised that we can maintain this sort of wilderness,” she exclaims. Her statement underscores the fact that the FWG wasn’t always a wild and biodiverse area. A great deal of human vision, planning, coordination and hard physical work transformed what was essentially an expanse of mowed grass with scattered trees of varying sizes into “a wildlife oasis of natural habitats”

(Bryant 2003). Other volunteers point out that the FWG has taken shape thanks to the vitality of nature and the ongoing hard work of a dedicated team of volunteers who monitor and maintain the site. The hard work of these volunteers has created opportunities for FWG visitors to re-connect with nature in this unique and surprising place, with the volunteers themselves drawing a wide range of benefits from their activities and associations.

The chapters in Part III focus mainly on the volunteer experience. They paint an in-depth portrait of the FWG as a place in terms of both tangible elements (location, physical presence and activity), and less tangible characteristics such relational and affective-evocative qualities – a flow of content which echoes contemporary geographical conceptualisations of place. The chapters also explore the synergy of human-nature connections forged at the FWG – connections which fulfill certain “placeful” needs for nature described in the previous chapter, including opportunities to engage in physical activity, to cultivate interesting and rewarding relationships, and to derive potentially deep personal meaning. See the Appendix D photo gallery for FWG images illustrating content in the chapters to come.

Chapter 6 Locating the Fletcher Wildlife Garden

To understand the complexity and significance of the Fletcher Wildlife Garden (FWG), it is important to locate the project in time and space, to identify the decisions and processes behind its establishment, and to be aware of certain dynamics which influence its continued existence. Why was the FWG located in the middle of the city? What processes and actors contributed to the site selection? What is the historical context surrounding the project? How has the FWG come to take shape? What are the physical features, or internal locations, that define it? How does it fit into its surroundings, and how do its surroundings affect the FWG? This chapter explores those questions and broader location dynamics.

6.1 Imagining the Fletcher Wildlife Garden

The significance of the FWG is entwined with its location, and its location entangled with its roots, which can be traced back to 1987, specifically to “Wildlife ‘87”, Canada’s nationally designated “Year of Wildlife” (Hanrahan 2010c, 162). According to FWG archival material and Ottawa Field-Naturalists’ Club publications, “Wildlife 87” grew out of what is referred to as “The Filion Report” published by the Canadian Wildlife Service. This report established that wildlife, particularly “the day to day vicarious viewing of wildlife species”, is important to Canadians (FWG D2, Project description, 1989, 1991, 1995: 1). The year 1987 was chosen as the year for wildlife because it commemorated the 100th anniversary of North America’s first migratory bird sanctuary in Saskatchewan. The associated “Wildlife ‘87” campaign encouraged individuals, groups, the business sector, and governments to protect wildlife and habitat (Wildlife ‘87, 1987).

Members of the Ottawa Field-Naturalists’ Club (OFNC) felt the group should do something to celebrate Wildlife ‘87, and they set about exploring possibilities. One idea, according to a 1989 FWG project proposal, focused on the fact that little in the way of wildlife habitat is retained in human-dominated environments such as urban subdivisions and modern agricultural lands. The proposal identifies the newly developing “wildlife gardening” movement as a potential approach for meeting wildlife habitat needs, and observes that unlike cities such as Guelph and Toronto, the National Capital region has not established a public wildlife garden (FWG D2, Project description 1989). On that basis, the project

proponents conceived a project to create a garden for wildlife in an urban Ottawa setting, specifically a model wildlife garden that would encourage people to garden in harmony with nature, using indigenous plant species and avoiding harmful chemicals (Hanrahan 2010c, 162; Hanrahan 2003, 1) – essentially to “countrify” their backyards (FWG 1987, 180). The idea was officially proposed to the OFNC’s conservation committee as a project to promote the creation of wildlife habitat in human-dominated environments (Hanrahan 2003, 1). The committee accepted, and the FWG was launched.

6.2 Selecting a site for the Fletcher Wildlife Garden

The next step in the project involved selecting a site for the FWG. The OFNC first initiated dialogue with large public landowners to explore the possibility of establishing a model wildlife garden on public land (FWG 1987, 180). The following two years involved selecting and evaluating a dozen potential sites, including Bates Island, Lynda Lane, National Research Council land at Blair and Ogilvie, a piece of land west of the pier at Britannia, the old allotment garden site near the Bronson Bridge at Carleton University, and the current site adjacent to the Arboretum at the Central Experimental Farm (FWG D2, Wildlife Garden – Other Sites; FWG D3, Presentations 1991). The three latter sites – all of which offered diverse habitats, nearby water, a size of roughly five acres, and good enhancement possibilities (FWG 1988, 3) – were short-listed for final consideration.

Final evaluation criteria covering six main areas of consideration – location, physical characteristics, existing condition of site, community/municipal considerations, site enhancement considerations, and conditions on use of land – were stringent. According to evaluation sheets completed for the various sites, the *location* should, for example, be central, provide year-round access by road and public transit, offer existing or potential parking and washroom facilities, and be compatible with adjacent attractions or natural areas. *Physical characteristics* criteria included a size of 1 to 5 acres with expansion potential, diverse soils, varied topography, open water or shores, and both dry and wet areas. As for *existing conditions*, the site should be a sort of ‘wasteland’, not heavily shaded or forested, offering good potential for habitat creation. Conditions for *enhancing the site* included security, maintenance, interpretability, access for people with disabilities, footpath linkages,

and the potential for creating a pond and parking area if none already existed (FWG D2, Wildlife Garden – Other Sites).

The Central Experimental Farm site, portrayed as an “unused portion of the Central Experimental Farm” (FWG D2, Project description, 1991: 1), received the highest score (FWG D2, Project description, 1995: 1). The *Ottawa Citizen* depicted the site as “a small wooded valley with a stream that swells and dwindles depending on the season and the rainfall. There's a stand of maples, some evergreens and lots of green grass.... It's readily accessible by foot, private vehicle or public transport” (Dickenson and Harrison 1990).

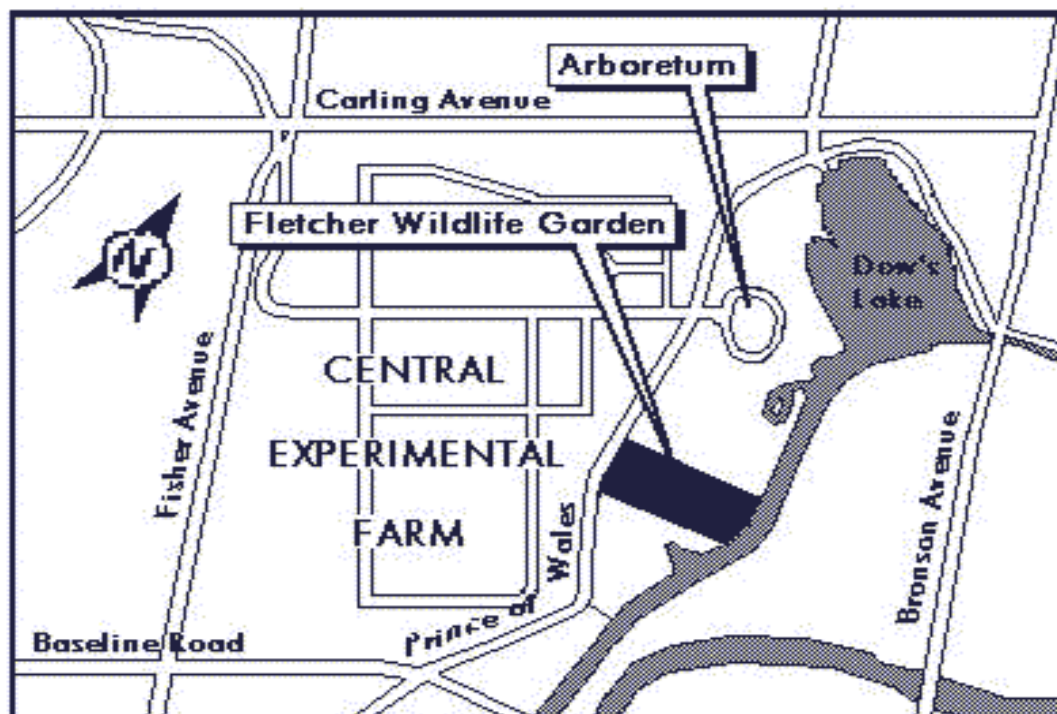
Various characteristics contributed to the suitability of the Central Experimental Farm location. Accessibility, for example, was an important attribute – one the FWG continues to value highly through statements describing the site as “readily accessible to naturalists, gardeners, schoolchildren, and other residents of the city and its suburbs” (FWG SP, 2011). Another important consideration was the potential for a smooth approval and support process assisted by the Friends of the Farm group (FWG D3, Presentations 1991). The “mostly mowed-grass environment” at the site provided abundant potential for habitat creation, while the Central Experimental Farm’s Ornamental Gardens and Arboretum offered compatible surrounding land uses (FWG D3, Brochures – General). Early project descriptions stress, for example, that a wildlife garden would be a “natural adjunct to the arboretum”, able to demonstrate different ways trees, shrubs and other plants can be used to the benefit of wildlife, and ultimately showing that wildlife habitat and agriculture can co-exist (FWG D2, Project description, 1989, 1991: 1-2).

The area surrounding the selected FWG site, portrayed as “degraded woodland and regenerating agricultural land” (Brunton 2004, 28), turned out to be even more compatible than originally anticipated. A survey carried out early in 1990 by the landscape architect appointed to design the wildlife garden revealed that adjacent land offered even more potential for creating wetland and woodlot habitats. The size of the proposed wildlife garden tripled as a result of the survey, and its expanse and use were successfully negotiated in 1990 (FWG D2, Project description, 1991: 2 and 1995: 1).

6.3 *The final location*

Despite its highly touted accessibility, the FWG has been called “Ottawa’s best-kept secret” with a location “tucked” between Prince of Wales Drive and the Rideau Canal north of Baseline Road (see Figure 6.1), making the secret easy to keep (Hunt 2002, 9). Considering the FWG’s location at the scale of the city, it can be approached from different directions, depending on the means of transportation or geographical perspective – by vehicle or public transit from Prince of Wales Drive, on bicycle or foot from recreational pathways winding through the Arboretum, or from the Rideau Canal crossing at Harwell Locks. The FWG location is in fact, described in various ways:

- in relation to Prince of Wales Drive as located south and east of the traffic circle (Dickenson and Harrison 1992, Ife 1997, Young 2006), and stretching from Prince of Wales Drive down to the Rideau Canal (FWG D3, Presentations 1991),
- in relation to the Rideau Canal/River as situated on the “west side of the Rideau Canal” (Spears 1990), “adjacent to the Rideau Canal and Hartwell Locks” (Vitols and Hamilton 1998, 14), and “overlooking the Rideau River” (Spears 1991),
- in relation to the Central Experimental Farm and Arboretum as positioned “à deux pas de la Ferme expérimentale” (Lamontagne 2009), on the farm’s “southern edge” (Vitols and Hamilton 1998), just “south of the Arboretum” (Spears 1991, Dickenson and Harrison 1992, Willis 2000, Isaacs 2002), and “halfway between the toboggan runs and the Hartwell Locks” (Dickenson and Harrison 1990).

Figure 6.1: FWG location

Source: <http://www.ofnc.ca/fletcher/location.php>, accessed February 8, 2012.

These varying descriptions and perspectives add to the FWG's mystery, and to the potential confusion of first-time visitors. The latter point is echoed by long-time volunteer Michael, who points out that different information sources list different addresses for the FWG, including an address associated with Agriculture and Agri-Foods Canada on Carling Avenue. "It generates confusion," he says – confusion that could have motivated the following recent addition to the FWG website: "Please note: The telephone book lists us at 930 Carling. This is NOT correct. The Carling address is for the Central Experimental Farm. Although the FWG is on the Farm, it is not part of Agriculture and Agri-Foods Canada. Our mail comes through the Ottawa Field-Naturalists' Club" (<http://www.ofnc.ca/fletcher/location.php>).

The confusion, mystery, and secrecy surrounding the FWG is by and large related to its location tucked into an unused corner of the Central Experimental Farm, an area where miscellaneous features contributed to making the land undesirable and unneeded for agricultural functions. The same marginal location and mixed land characteristics made the area both desirable and available for the FWG project. At a broader scale, the FWG is

situated beyond what would be considered practical walking distance from the nearest residential neighbourhoods. The FWG is also surrounded by large institutional neighbours: the 400-hectare Central Experimental Farm on three sides, and the 100-acre Carleton University campus on the other side of the Rideau Canal. All these characteristics combine to make the FWG's location, and the vicinity as a whole, somewhat peculiar – a factor which may have contributed to a 2011 route optimization decision by the city's public transit body, OC Transpo, to restrict the bus route closest to the FWG to Sunday-only operations.

The overall outcome of the FWG's secret, marginal and curious location is a possible influence on the demographics of the volunteers involved in the project. Access to the site is limited by and large to people who

- can afford to drive vehicles or persuade others to give them a lift,
- have bicycles and know how to reach the FWG via the recreational pathways weaving through the Arboretum, or by way of other cycling routes,
- are willing to make the effort to take a bus to Carleton University, walk through the campus to the Rideau Canal, cross over at the Hartwell Locks, and walk up the hill to the far side of the FWG.

The time and effort required to complete the latter excursion has been a deterrent for certain volunteers who rely on public transit; they are not able to come as often as they used to. It may also make the FWG less attractive to potential new volunteers.

Another interesting point regarding the FWG's final location was raised by Christine. It seems that despite previous negotiations and agreements, the boundaries for the FWG were not formalized until 2003, at which time it was discovered that the site is smaller than originally anticipated: five hectares instead of seven. Christine is quick to add that although the official size may be different, the boundaries remain the same (Hanrahan 2004a, 80), as evidenced by maps discovered in the FWG archives. A 1996 map reveals a dotted, hand-drawn boundary line, along with hand-written details relating to setbacks and buffers. An updated 2003 version reveals the same details, this time in typed letters, with the same boundary line computer-generated, thicker, and blacker (FWG D2, Maps), making a more formalized and permanent impression.

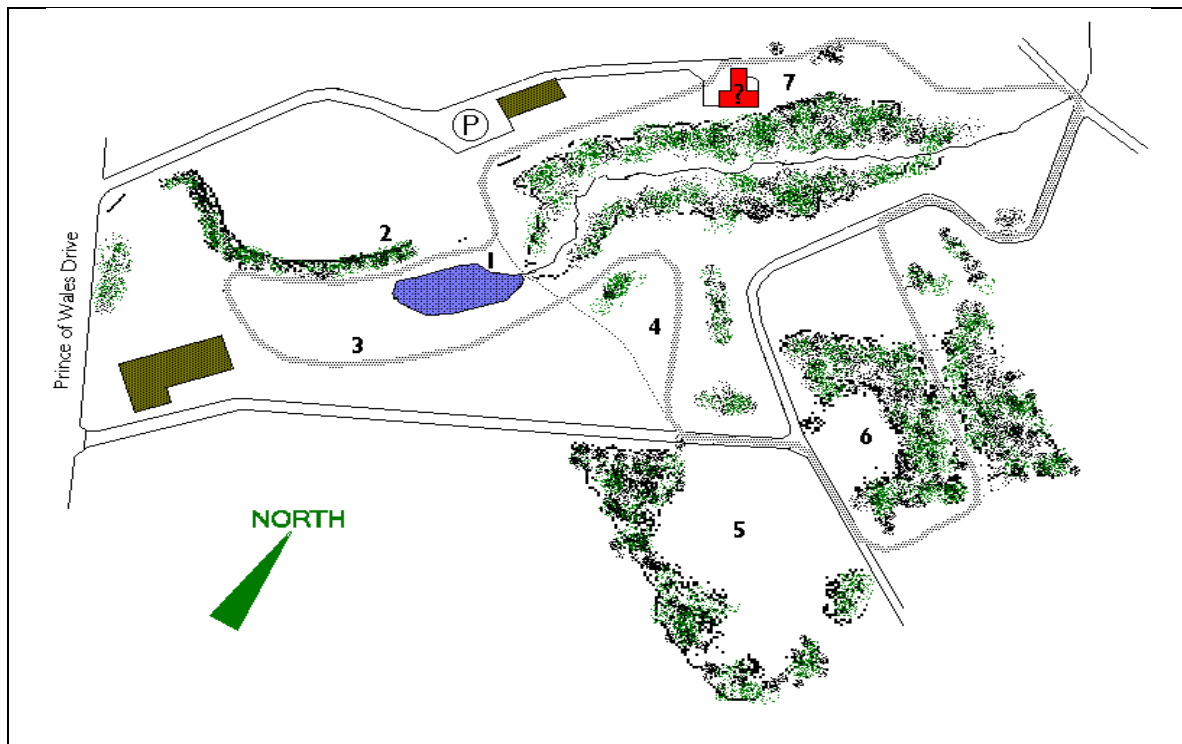
6.4 Internal locations – physical FWG features

The FWG rapidly metamorphosed from the original mowed grass environment with scattered trees into what Christine describes seven years later as “small woodlots with mature deciduous and coniferous trees and abundant understory plants, a pond heavily lined with cattails, a lushly vegetated and steep-sloped ravine with a stream running through, numerous stands of tangled thickets, and open weedy fields” (Hanrahan 1997b, 124) – a rich patchwork of diverse natural features intended to reflect the natural landscape of the region. FWG volunteer Kate describes this patchwork as a “microcosm of the greater world.”

These natural places and features are what Owain Jones would consider a “unique pattern or weave of elements” peculiar to an individual place (Jones 2008, 215) – elements represented variously as physical FWG assets (FWG SP, 2011), and interconnected plant communities or habitats (FWG D3, Brochures – General; Dickenson and Harrison 1995a). These interwoven elements, plant communities, and habitats can also be considered at the scale of the project site as internal FWG locations that help to define the work of volunteer teams, orient volunteer activities at the site, and guide visitors in their exploration of the FWG – as well as facilitate comprehension of the content in subsequent sections and chapters.

Let us, then, take a quick tour of the FWG to become acquainted with the various habitats and internal locations depicted in Figure 6.2. Our visit will follow the 2010 FWG trail guide (FWG Br4, 2010), and the virtual tour guide available on the FWG website at the time of writing.⁸ The habitat descriptions in this section are inspired by those sources, unless otherwise indicated.

Let us assume that we are travelling to the FWG by vehicle, or by bus, or by bicycle from the Arboretum. If we come by vehicle or bus, we will leave Prince of Wales Drive and either walk or drive down the lane depicted at the top of Figure 6.2 – a lane at times portrayed in rather bucolic terms as a “short, winding road” (Isaacs 2002). If we come by bicycle, we would probably enter the short, winding road through a gap in the hedge separating the lane from the Arboretum to the north. We may park our vehicle in the parking lot indicated with a ‘P’ in Figure 6.2, or we may continue to the end of the lane, where an *Ottawa Citizen* article (Johnson 1998) tells us to keep our eyes open for two things: the FWG Interpretive Centre and the Bill Holland Trail.

Figure 6.2: FWG internal locations

Source: http://www.ofnc.ca/trailguide/trailmap_e.php, accessed February 8, 2012.

Legend

- | | | |
|-------------------|---------------------|--------------------|
| 1: Amphibian Pond | 4: Butterfly Meadow | 7: Backyard Garden |
| 2: Hedgerow | 5: Old Field | |
| 3: New Woodlot | 6: Ash Woods | |

The Interpretive Centre, indicated in red at the top of Figure 6.2, is a “bright white building” (Isaacs 2002) which offers visitors and volunteers information on regional natural history, wildlife gardening, and the FWG. On the other side of the small, graveled parking area in front of the centre, a large sign invites visitors to enter the Bill Holland Trail, indicated in Figure 6.2 by the light grey line winding through the site. This 1-km or 1.5-km loop – the length varies depending on the source – is described, again in somewhat pastoral terms, as a “pleasant stroll ... with only two short slopes” that takes approximately 45 minutes. The trail twists and turns through the FWG, connecting the various habitats and encouraging visitors to discover how it feels to be “‘wild in the city’.”

The first stop on the tour (Figure 6.2, habitat #1) is the **Amphibian Pond**, created by the damming of a natural gully fed by runoff from the Central Experimental Farm. The trail leads along the north side the pond, offering visitors an excellent view of this small aquatic ecosystem that provides habitat for frogs, toads, turtles, ducks, red-winged blackbirds, tree swallows and herons – species with a preference for “wetter feet and roots.” The pond can be a lively spot where “T[t]urtles sun themselves on our purpose-built raft, while herons and red-winged blackbirds populate shoreline vegetation. If you listen, you should hear green frogs calling or spot the incredible assortment of insect life.”

A wooded ravine stretches east and downhill from the Amphibian Pond, carrying pond overflow in a small stream past the Interpretive Centre toward the Rideau Canal. This ravine is sometimes identified as a distinct habitat in FWG literature and dialogue, but it is not included on the FWG tour for two main reasons: (1) its steep, hazardous slopes, and (2) the sensitivity of the birds nesting there during the breeding season.

The Bill Holland Trail continues from the Amphibian Pond alongside the **Hedgerow** (Figure 6.2, habitat #2). This habitat is a row of trees, in varying shapes and sizes, planted widely and thickly enough to form a linear habitat and mini-ecosystem that provides wildlife with food sources, shelter for nesting and resting, and a corridor for travelling. Described as “chock full of nesting and hiding spots”, the hedgerow features native berry-producing trees, shrubs and vines such as elderberry, and red osier dogwood.

Partway along the hedgerow, the trail starts to swing south through the **New Woodlot** (Figure 6.2, habitat #3), an “ambitious” restoration project designed to re-forest an open field and create a buffer between the FWG and Prince of Wales Drive. A variety of tree species were initially planted, including fast-growing “pioneer” trees such as poplars which provided cover for saplings of longer-lived forest species such as red oak, sugar maple, and white pine. The most recent trail guide reports enthusiastically, “Now nearly 20 years old, the saplings we planted are reproducing and looking more and more like a ‘natural’ forest every year!”

The Bill Holland Trail comes out of the New Woodlot along the southern slope of the Amphibian Pond, offering another view of the aquatic habitat with its marshy fringe of cattails, before leading through more trees and veering south into the **Butterfly Meadow** (Figure 6.2, habitat #4). This sunny area is ringed with sheltering trees and filled with “a

constantly changing panorama of nectar-rich flowers” that offer a season-long supply of food to adult butterflies and other pollinators. Grasses, thistles, milkweeds, and trees also grow in the Butterfly Meadow, where they provide food for butterfly larvae (caterpillars). This combination of food sources, along with protection from the wind, and strategically positioned logs and rocks for basking, offers excellent pollinator habitat. Visitors are encouraged to visit the Butterfly Meadow several times during the growing season to admire the progression of blooms and colours, and to see the wide variety of insects attracted to the plants.

At the end of the Butterfly Meadow, the trail opens onto a stretch of roadway which borders the **Old Field** habitat (Figure 6.2, habitat #5). The Old Field at the FWG is an uncultivated farm field which offers a grassland-like ecosystem where meadow-nesting birds, along with rodents and the predators they attract, find important habitat for hunting, nesting, and living. To prevent this “grassland” from evolving into woodland – being quickly overgrown by weedy plants, followed by shrubs and trees – the Old Field is mowed every few years.

The Bill Holland Trail follows the roadway for a stretch before angling around the southern boundary of the FWG and the southern edge of the **Ash Woods** habitat (Figure 6.2, habitat #6). At the beginning of the project, this part of the FWG was a stand of mature green ash and red oak trees rising from closely cut grass – more of a parkland than a woodland. Over the years, FWG volunteers added leaf mulch and rotted wood to restore the forest floor. They planted native tree, shrub and ground cover plants to form an understorey and boost biodiversity. With time, this corner of the FWG has developed the complexity of a native mixed deciduous forest, and the section of Bill Holland Trail cutting through the Ash Woods feels like a woodland path.

The trail leaves the Ash Woods and crosses an open area before turning east and downhill toward the Rideau Canal. Visitors are guided down and around the bottom of the stream descending from the Amphibian Pond, then back up another slope to the **Backyard Garden** behind the Interpretive Centre. The purpose of this backyard-sized habitat, according to a FWG Backyard Garden reference guide, is to demonstrate how to create wildlife habitat at a “backyard-garden scale” with an emphasis on providing water and shelter, and using native plants for food (Ladell 2004). Christine adds that the Backyard Garden was designed to show

visitors how they can attract birds, small mammals and beneficial insects by cultivating a diversity of plants without using chemicals. The result is a garden that offers wildlife essential features such as shelter, water, food, and nesting and denning sites (Hanrahan 1999e).

The Backyard Garden could also be considered at a smaller scale, as a microcosm of the entire FWG, incorporating features of the larger habitats into a backyard-size setting which includes, for example, a backyard pond, a butterfly bed, an Ontario meadow bed, and a woodland walk. These features could, in turn, be perceived at an even smaller, “micro” scale as mini-habitats and specific locations nested within the larger Backyard Garden habitat. These micro-locations also serve to define the work of volunteers responsible for the maintenance and development of certain garden beds, and to guide visitors and gardeners in their discovery of this home-scale wildlife habitat.

6.5 Porous boundaries – location dynamics

All these habitats, and the FWG as a whole, are intimately connected to the surrounding green spaces – the Rideau Canal, the Arboretum, the greater Central Experimental Farm – through vegetated corridors, recreational pathways, and people’s imaginations and perceptions. An article in Montreal’s *La Presse*, for example, sets the FWG alongside the “nombreux champs de céréales ... magnifiques jardins ornementaux et ... arboretum” as one of the Central Experimental Farm’s facilities for learning about agriculture and horticulture (Champagne 2008). Such statements suggest that the impressions made by initial maps of the FWG – the lighter, less permanent-looking dotted boundary line of the 1996 map described earlier – may, in fact, more accurately reflect the site’s connections and porous boundaries. These connections and porosities in turn echo the interlinked and interdependent aspects of location stressed by Castree (Castree 2003, 174-5), the dynamic processes of location identified by Agnew (Agnew 1993, 263), and the transient, mobile character of material structures, forms, and bodies associated with locations, as emphasized by contemporary place theorists (Cresswell 2009, 169).

6.5.1 Connections

The FWG’s connections are suggested by long-time FWG volunteer Sandy Garland, who writes in a newsletter article, “We like to think we’re recreating a bit of wilderness at the

FWG, and even use ‘wild in the city’ as a slogan on our bulletin board. But we know that our area is not the only wild place in the Ottawa region.” She goes on to place the FWG in the context of the Rideau and Ottawa rivers, and the region’s Greenbelt (Garland 1998a, 1). Other volunteers are also quick to point out connections between the FWG and neighbouring spaces. Louise declares that the FWG is very fortunate to be situated alongside the Arboretum. “They blend in together,” she says. “People can come and explore both places.” Her point is echoed in an earlier version of the FWG trail guide: “For wildlife there is no boundary between the FWG and other habitats, nor is there for you!” (FWG Br2, n/d).

Birders are one group of visitors that consistently crosses the porous boundaries in pursuit of birds travelling freely in search of food and shelter. In one of her many reports on the FWG, Christine recommends the following: “When you have finished birding the FWG, why not cross the road and continue with a walk around the farm roads? A good day’s birding can be had by combining the FWG with the Arboretum and the Farm” (Hanrahan 1997b, 128). The FWG combined with the Rideau Canal, Arboretum and Central Experimental Farm, she points out, offers a mix of habitats that ensures a diversity of bird life, and a great place to go birding. “[A]nd all this in the middle of the city!” she declares (Hanrahan 1997b, 124).

Birds, able to come and go quickly and cover long distance in flight, are probably the most mobile wild animals associated with the FWG. A wide diversity of bird species actually comes to the FWG – either staying to breed and nest, or dropping in to feed and rest during migration. Valerie says she sees the FWG as a “connector”, a place where all species of wildlife can rest, eat, and find shelter before going further – particularly songbirds passing through on their migration routes to and from the boreal forest. Christine reinforces the porous boundaries the FWG shares with neighbouring green spaces in the September 2008 photo-blog, where she writes, “I always consider the little island in the Arboretum, just below FWG, to be an extension in a way of the garden, when it comes to bird life anyway. This is because you can often see birds flying from FWG to the island and back” (http://www.pbase.com/fwg/fwg_photo-blog_september2008&page=1). In another photo-blog entry, she adds that the Arboretum is “almost part of the FWG” because of the wildlife moving between them (http://www.pbase.com/fwg/fwg_photo-blog_feb_2010&page=1) – including more permanent, less mobile mammal species such as foxes. Christine points out that the FWG alone is not large enough to sustain a fox family, and that it is the combined diversity of the

Arboretum, Central Experimental Farm, and FWG that provides sufficient territory for foxes (Hanrahan 2007d).

Tracey, a committed long-time FWG volunteer, paints a particularly vivid picture of FWG significance involving another type of wildlife: insects, specifically butterflies. She says she imagines a butterfly flying along and seeing nothing but pavement. “In all this pavement, there is nothing of meaning to them,” she tells me. Her story continues with the butterfly spotting the FWG, an oasis where it can stop and rest. Tracey says she likes to think of wildlife looking down and seeing the FWG as “a place where they can have a rest, a place to stay if they are on a trip.” What makes the FWG such as oasis is the obvious difference, she points out, between its lush vegetation and the city’s paved surfaces. Additional differences can be observed between the FWG and much of the surrounding, manicured green space, as noted in a 1992 project update describing the changes that occurred in the FWG’s first season: “The grass has been left unmowed except for a series of walking paths, adding a definite ‘wild’ look to the site quite distinct from the adjacent Arboretum!” (Stevensen 1992b, 113).

In the context of pavement and manicured urban green space, the FWG plays a significant role. “The connection between the Fletcher Wildlife Garden and the rest of the city is very, very important,” declares Glenda, another committed volunteer. She adds that the FWG benefits migrating and breeding birds, as well as other wild animals and plants. The diversity of life that benefits from the FWG oasis also includes “urban-weary humans” who find solace on-site (Hanrahan 2003a), as well as opportunities to connect with the nature.

Unlike the Farm's popular and painstakingly cultivated botanical garden, this one [FWG] will feature weeds, bugs, rodents and any other sort of wildlife that cares to drop by.

(Baer 1990)

6.5.2 Locational cross-currents

The physical connections of the FWG to neighbouring green spaces offer very clear benefits. But they also carry potentially threatening undercurrents which, alongside the connections, help to illustrate the animated, dynamic, and meaningful characteristics of the FWG.

Central Experimental Farm

The FWG's fate is, for example, closely linked to the destiny of its host, the Central Experimental Farm. While FWG agreements with the farm ensure the garden's long-term survival as long as the farm endures, the FWG is not protected from what appear to be periodic threats to the Central Experimental Farm's future.

In the latter 1990s, for example, *Ottawa Citizen* commentary reported that federal government downsizing had resulted in a 60% reduction in Central Experimental Farm research staff, along with a 'surplus' designation for 40 buildings and the sale of little-used farm property. In the context of the uncertain future of the farm, a pair of columnists expressed concern for the survival of what they portray as "non-mission lands ... the other farm – the green space at the heart of our city" – green space that includes the FWG:

[W]e think the farm represents a key component of the 'green' heritage of Ottawa. The 'non-mission' lands contain the magnificent century-old Dominion Arboretum, *the Fletcher Wildlife Garden with its interpretive centre and 17 acres of demonstration wildlife habitats*, the Ornamental Gardens, groves of historic trees, walkways, bicycle ways and farmland.... As the city continues to expand and in-fill increases, this patchwork of green space has incalculable value to people and wildlife. We need to keep Ottawa's green heart beating (Dickenson and Harrison 1995b, my emphasis).

Three years later, this precious green heart was still beating, but the future of the Central Experimental Farm was still unclear according to an *Ottawa Citizen* editorial. The farm had been designated a national historic site in the meantime, which ensured its general survival, but the editorial raised questions regarding the sort of future awaiting the farm. The writer expressed support for continuing the farm's "tradition of useful research", and for adding education oriented toward learning about nature and cultivating farm and garden plants in Canada. "For many decades," the editorial points out, "the Experimental Farm has had its Ornamental Gardens, its Arboretum with 2,000 kinds of trees, shrubs and perennials and recently the *Fletcher Wildlife Garden, which shows us that there is a delicate ecology to our back yards.*" A recommendation that the farm add educational facilities focusing on "the garden and ecology" (Ottawa Citizen 1998, my emphasis) – a theme relevant to the FWG – concludes the newspaper piece.

What is interesting in both the column and the editorial is the fact that the FWG is included alongside the long-established Ornamental Gardens and Arboretum as an essential

component of the Central Experimental Farm – a component that adds educational, ecological and recreational value to the farm and the city as a whole.

Ottawa Botanical Garden

In the year following the publication of the Central Experimental Farm editorial, another potential threat – a proposal to create a botanical garden on Central Experimental Farm lands – occupied considerable space in the *Ottawa Citizen* and prompted the creation of two specific files in the FWG archives. In an interesting twist, the unused portion of the farm chosen for the FWG was, according to two FWG volunteers, the site of a previous botanical garden project. Gordon refers to the earlier botanical garden as a “false start”, while Mark explains that it was in fact a 1967 centennial project which lost funding in the 1980s and faded into oblivion. “It explains a lot of what I see out there,” says Mark, referring to unusual tree species that have been neglected. The location of some of those strange species is revealed in a FWG file dedicated to the earlier botanical garden project. The file contains a list of trees and shrubs left over from that endeavour, as well as a map of the original botanical garden. The map shows lilacs growing in the area now occupied by the FWG Butterfly Meadow and Old Field, and roses occupying a clear area west of the Ash Woods (FWG D2, Botanical Garden 1967-1984). And so, the FWG’s involvement in the recent botanical garden controversy is not too surprising – a somewhat ironic return to its roots.

The turn of the new millennium was the period of most heated debate and exchange concerning a campaign to create, specifically, a 145-acre botanical garden on Central Experimental Farm lands. This attraction would introduce new gardens, including a children’s garden and a First Peoples traditional knowledge garden, along with new features such as a Conservatory, Butterfly House, and nursery greenhouses (Ottawa Botanical Garden Society 2000, 8-14). This most recent campaign apparently joins a list of periodic botanical garden creation attempts stretching back to 1889, three years after an act of Parliament made provisions for both the Central Experimental Farm and a National Botanical Garden (Pritchett 1999a).

Why the ongoing pressure to establish a botanical garden in the city? Ottawa, it appears, is one of the world’s few national capital cities without a botanical garden (Klotz 2003). And it may continue to go without one, considering that the 1999-2003 campaign was as unsuccessful as its predecessors. Yet the dream of a botanical garden in Ottawa has not faded

entirely. Mark indicates that a considerably more modest and scaled-down project focusing mainly on education may indeed become a reality on land just south of the FWG. A 2006 *Ottawa Citizen* article reinforces this possibility, stressing that the Central Experimental Farm's ornamental gardens, Arboretum and Fletcher Wildlife Garden would remain untouched by the new plan situating the botanical garden south of the wildlife garden on land that slopes down to the Rideau Canal locks across from Carleton University (Robin 2006).

What is interesting in the botanical garden debate is to see how the FWG fits into previous proposals. A map accompanying two *Ottawa Citizen* articles places the proposed botanical garden features within the existing Central Experimental Farm context – a context which includes the Fletcher Wildlife Garden, its boundaries clearly indicated within the Arboretum (Pritchett 1999b, Bell 1999) as an apparently valued feature.

Opposition to the proposed botanical garden points out that the project does not take into enough consideration other integral parts of the Central Experimental Farm – elements which support the farm's function as a public green space, and which uphold its heritage value, as commemorated in its national historic site status (von Baeyer 1999) – along with activities that another *Ottawa Citizen* piece describes as meeting needs for peace and serenity. Those needs, it stresses, are met at the Central Experimental Farm's Arboretum, Ornamental Gardens, and Fletcher Wildlife Garden without the expensive new facilities proposed by the Ottawa Botanical Garden Society (Moore 1999).

The FWG's contribution to the Central Experimental Farm's public green space quality and function is obvious. Less clear is the potential heritage value of the FWG. Michael, another long-time FWG volunteer, makes an interesting case. "It [FWG] is trying in a way to recreate the early conditions in the countryside when the pioneers were around," he says, "to create a piece of the landscape that might have been around at that time." Another volunteer, Bill, echoes Michael's thoughts in his vision of the FWG's role: to make the land look the way it used to be a long time ago, and to educate people regarding the region's historic natural environment. Yet the re-creation of historic landscapes does not enter into official FWG communications, despite its potential to contribute to the Central Experimental Farm's historical and educational mandate.

Rideau Canal

The Rideau River system, particularly the canal connected to the FWG by the stream running down the ravine from the Amphibian Pond, is an influential FWG “neighbour” in a manner of speaking. Valerie calls the Rideau Canal a “connector” for wildlife, while Michael describes it as a “corridor” enabling wildlife to come and go from the FWG. It is no wonder that so much wildlife finds its way to the site.

While the canal is undeniably an important connector for wildlife, and a contributing factor in boosting biodiversity at the FWG, the cross-currents are not always positive. During Winterlude, for example, the Rideau Canal is an important and popular attraction for Ottawa residents and visitors, with many activities taking place on and around Dow’s Lake, situated upstream from the FWG. Winterlude season is also a time when security increases substantially at the Arboretum, with police officers patrolling the site on all-terrain vehicles (ATVs) to prevent theft and vandalism in parking lots (Hanrahan 2007a, 2).

Security personnel have, however, occasionally gone well beyond the call of duty to patrol other, lesser-traveled parts of the Central Experimental Farm, including the FWG. Stating in a 2007 FWG update that the project does not oppose heightened security during Winterlude, Christine adds, “we do not understand why they [security personnel] feel it necessary to ride through the habitats, along our narrow trails, and over the pond bridge at FWG. There are no parking lots in the middle of the garden.” She also points out that the trails and bridge were not designed for ATV use, and that complaints seemed to have no effect (Hanrahan 2007a, 2). In the February 2010 photo-blog, Christine again reports seeing ATV tracks at the FWG. The tracks weave through the New Woods and the Butterfly Meadow; enter the Ash Woods, where they go off the trail into the forested area; and even cross the Backyard Garden, rolling over two of the garden beds. After that incident, the FWG chair wrote a more formal official letter to Agriculture and Agri-Food Canada about ATVs in the garden (http://www.pbase.com/fwg/fwg_photo-blog_feb_2010). Perhaps the letter had the intended effect, since no ATV incursions have been reported since 2010.

Carleton University

A slightly more distant neighbour is located just across the Rideau Canal from the Arboretum and the FWG: Carleton University. The FWG is easily accessible from Carleton University via the footbridge which crosses the canal at the Hartwell Locks, just downhill

from the southeastern edge of the FWG and the Ash Woods habitat. It would seem that this proximity might have led to some sort of formal arrangement between the FWG and Carleton University regarding research or outdoor education, but that has not been the case. Nevertheless, the occasional class finds its way across the footbridge, and Carleton biology professor Naomi Cappucinno and her students have been studying a certain invasive species – Pale Swallow-wort (*Vincetoxicum rossicum*), also known as Dog-strangling Vine (DSV) – on-site at the FWG for a number of years, with research results published in various journals (Doubleday and Cappucinno 2011, Ernst and Cappucinno 2005, Ladd and Cappucinno 2005, Cappucinno 2004, St. Denis and Cappucinno 2004).

Still, not all Carleton-related educational activities are constructive. One incident is described by Christine as “interesting, to say the least.” It involves Carleton University architecture students and professors, and it is too intriguing not to mention here. Christine describes it vividly as follows:

Modular units of canvas, wood and tubular piping appeared, disappeared (after each irate phone call to Carleton), and reappeared with frequency, each time leaving more trampled plants behind. At one point some overzealous types ‘clear-cut’ a large area, removing all shrubs and other vegetation. I will not repeat what was said when this was discovered! The whole episode took on overtones of the surreal when we found out that the object of all this activity was the staging of a dinner party for which our Ash Woodlot obviously provided the perfect setting (Hanrahan 1999d, 16-17).

Clear-cutting for dinner parties does not happen often at the FWG, but other education incursions do.

Student delight and energies have not always been channelled to the benefit of the FWG. Open fires are a regular occurrence at the FWG, usually taking place in early fall and late spring – timing which, Christine points out, coincides with the arrival and departure of Carleton students “when they are at their least settled stage.” She is quick to note the lack of evidence linking students to the fires, but adds that the coincidence with the timing of the fires, along with their location so close to Carleton University, is interesting and suspicious (Hanrahan 2005b, 2 and 2004a, 4-5). She describes the fires as mainly campfires, sometimes ringed with stones, but usually “a big untidy pile of branches ... accompanied by the tell-tale evidence of broken beer bottles and empty junk food packages” (Hanrahan 2004a, 4-5). So far, none of the fires has raged out of control, but the spread of fire is an ongoing concern, alongside repeated damage.

An interesting organic measure has been taken by the FWG to deter fire-making and partying on-site. As Christine reports in 2009, “Eventually, fed up with this [the fires], we asked AAFC if they would drop off some cow and sheep manure, which they did. Several of us then spent the afternoon raking it all over the worst hit sites. The smell of manure was eye-wateringly strong” (Hanrahan 2009a, 4). And it seemed to have the desired effect, because the fires stopped. The manure solution appears to have been in force since the mid-1990s at least. Sandy Garland wrote in 1996, “It smells delightful, but it put an end to the night activity immediately, and the plants love it” (Garland 1996b, 136) – a brilliant, multi-purpose approach that serves not only to discourage undesirable activities, but to encourage plant growth. Unfortunately, the effects are not long-lasting, and fires continue to occur.

Secluded and “abandoned land where rules don’t apply”

The FWG’s secluded location, along with the impression it may give of being overgrown and neglected because it is not as manicured as the neighbouring parkland, likely contribute to the way it is treated by some visitors. “We know,” writes Christine, “that some visitors, despite our habitat and trail signs, still view the area as abandoned land where rules don’t apply” (Hanrahan 1999d, 17).

Certain activities demonstrate this attitude. In 2005 Christine writes about trouble arriving with an orienteering group in June of that year – a group of 20 to 30 people who, “dashed ... back and forth through the FWG, heedless of newly planted shrubs and nesting birds.... Adding insult to injury, it appears that they *drove* through the old field earlier (narrowly missing a Yellow Warbler nest) in order to set up their ‘checkpoint’.” She adds that a letter was sent to the group responsible, and points out that if the FWG had been notified of the event in advance, they could have ensured sensitive areas would be avoided (Hanrahan 2005c, 2, original emphasis). Orienteering does not appear to have been a problem since then, but it may have metamorphosed into a more recent activity: geocaching, described by the Official Global GPS Cache Hunt Site as a “real-world outdoor treasure hunting game” with players attempting to locate hidden containers, known as “geocaches”, using GPS-enabled devices (<http://www.geocaching.com>). Geocaches and geocachers have been detected at the FWG, and contact has been made to reduce the impact of this activity on FWG habitats and the wildlife using them.

Christine also cites examples of cadets on manoeuvres in the ravine, students removing plants in the summer and setting insect traps without permission (Hanrahan 1999, 17), boundary signs removed and damaged, bird nesting boxes and bulletin boards vandalized, a car driven through the backyard garden (fortunately in winter when damage was less serious), and a picnic table “borrowed” in the winter and found far from its original location later in the year (Hanrahan 2009a, 4 and 2006a, 2). During coffee break one Friday morning, a volunteer talked about coming across a group of students “building a fort” as they said, with wood from a fence they had just dismantled at the FWG. She said she made them take the wood back to where they had found it, but they didn’t put the fence back together (Apr. 17, 2009 field notes). A cumulative impact of all these activities, as well as the partying described in the previous section, is the creation of informal trails. Christine points out that the FWG is too small to accommodate multiple trails without serious habitat fragmentation, and that the FWG tries to discourage them. It is, however, a difficult task, because some of the unwelcome trails lead to what she portrays as “well used hidey-holes where quiet spots to drink beer have been created” – spots that are popular, judging from the quantities of beer bottles (Hanrahan 2006d, 4-5), and difficult to monitor, considering that the activities take place at night.

The FWG’s secluded setting makes it generally difficult to monitor, a circumstance which provides conditions for plant theft and damage at the FWG. Over the years, branches have been cut from flowering shrubs, flowers picked from the Butterfly Meadow, and plants dug up from different habitats or stolen in their pots just before the annual plant sale (Hanrahan 2004c, 4 and 2004a, 2-4). In one 2004 incident, three newly planted specimens of the same attractive native wildflower disappeared from the Backyard Garden within weeks. “Over the years we’ve generally lost a few plants annually,” writes Christine, “but three in such a short period is especially frustrating.” She adds a statement expressing what all volunteers instinctively realize: “it would be unusual if FWG was immune to the various problems that plague any modern urban centre such as theft and vandalism, and we are not” (Hanrahan 2004a, 4-5).

6.5.3 Personal cross-currents

Frustration is one response FWG volunteers involved in the project have had to the loss and damage to FWG land, property and plants – in addition to compassion for individual

volunteers especially affected by the occurrences. While they may instinctively realize that the FWG is not immune to theft and vandalism, individuals nevertheless react emotionally to real and potential threats and distress relating to aspects of the FWG that have grown important to them.

Impassioned FWG correspondence discovered in FWG archival material relating to the proposed Ottawa Botanical Garden – communication responding to the ambiguities, confusions, misunderstandings and controversy afflicting the project – is one example of the depth of volunteer attachment to the site. Over the course of interview discussions, several volunteers expressed varying levels of emotional reactions to possible FWG threats. Lisa, a relatively new volunteer said, “I’d be sad if they wanted to build houses on it”, while long-time volunteer Audrey stated, “All of us would feel indignant if the city decided to do something else, cover it up.” Thomas was more emphatic. “I don’t want people to mess with it,” he said, adding that he would lie down in front of bulldozers to protect the FWG.

Real threats elicit similarly strong, although slightly more nuanced reactions. Margaret doesn’t feel that the FWG fires are a major threat – “people just having a drunken wiener roast,” she says – but she does indicate that the FWG is an open space that can make her feel vulnerable. Joyce, on the other hand, expresses intense frustration verging on anger with people who don’t control their dogs, or who drive their cars into the backyard garden. “You work so hard,” she says, “and then someone comes in ...” – she pauses and adds “I’m not happy when people are idiots. I don’t suffer them lightly.” Christine is another volunteer who doesn’t suffer bad behaviour lightly, and whose frustration can escalate into anger and confrontation when provoked. She tells the following story of plant theft before the 2003 FWG plant sale:

It involved a couple in a big truck on a night of cold, drenching rain trying to make off with more than a dozen plants which they had obviously carefully selected and placed a short distance from the Centre for ready pick-up. Unfortunately for them, it was the night of the Taverner Cup compilation at the FWG and I was looking out the window when I saw them trying to abscond with the plants. Outraged by this, I opened the door and yelled which sent them off in a rush, plants abandoned. Not content to leave it be, I followed them and we had a showdown on Maple Lane! I’m still torn between hysterical laughter and righteous indignation whenever I think of this incident! I can’t imagine what compelled them to try and steal from a small, non-profit, volunteer run group (Hanrahan 2004a, 4).

Stealing from a volunteer group does make the act of plant theft difficult to understand, although would-be thieves may believe they are stealing from the larger, federal-government-affiliated Central Experimental Farm – an assumption that does not justify the

act, but which does put the theft into the broader context of location. Then again, thieves may simply believe that absent volunteers, an empty Interpretative Centre, and a secluded setting sufficiently reduce the risk of detection – again, a matter of location.

I witnessed first-hand the aftermath of plant theft one Friday morning shortly after I arrived at the FWG and walked into the Backyard Garden to see where I could be of help. My field notes for that day start with a description of Linda standing in front of the garden bed that is her responsibility:

As I walked up, she exclaimed that someone had taken some plants – 2 butterfly weed plants, one that was particularly magnificent, and a prairie plant that had been put there to attract a certain butterfly ...

Linda was quite upset, understandably. She kept saying how she had been there on Sunday ... and the plant had been there, magnificent. I told her I believed her – there were the ID markers, the holes. She kept repeating it over and over, like she couldn't believe it, like she was in a bit of shock. I think she feels very strongly about that space

Linda kept talking about the stolen plants, even after we got onto doing something else (Aug. 14, 2009 field notes).

Linda, who was unable to participate in the research project for various reasons, was a keen volunteer who took her responsibilities for the garden bed in question very seriously and very personally. She was intensely committed to that space, and she simply could not fathom how anyone could steal those plants. It hurt her deeply.

Another volunteer deeply affected by plant theft and other bad behaviour is B., who has been involved in the FWG project since its early years. During our interviews, she told me she has been on the point of quitting many times, particularly because of early frustrations with vandalism, and with people making fires in the woods. “It’s like a wound” she says. “Like someone is attacking you ... it gets you in the gut ... how can somebody do this?” She tells the story of an area near the Ash Woods where she had left a tarpaulin spread on the ground for over a year to discourage vegetation. When the space under the tarp became bare, she moved the tarpaulin and filled the spot with plants she had dug up from elsewhere. A couple of weeks later, a group of people came into the area, built a fire, had a party and, as she said, “destroyed the whole thing.” She was so devastated, that she couldn’t go back to that spot. Then she said something which reveals the depth of attachment, concern, and commitment the volunteers have to each other. She spoke of C., who “in his sweet, sensitive way” planted conifers in the disturbed area to change the look and feel of it. Now C. can go back there again.

C.'s perceptive and compassionate act is a brief glimpse into the strength of the bond that has formed between many of the volunteers at the FWG – a relationship inextricably entwined with the land, along with the trees, plants and wildlife that pass through or call it home. The land and the purposes for which the FWG has been cultivated and managed are, in turn, affected both positively and negatively by the location carefully chosen for the project. These relationships and purposes contribute to the dynamics which make the FWG such a unique and vibrant place – dynamics which are physical, relational, affective-evocative, and synergistic, as revealed in chapters to come. But first, let us take a closer look at the physical human and nonhuman presences active in these relationships and dynamics.

Chapter 7 The complex Fletcher Wildlife Garden

When the Fletcher Wildlife Garden (FWG) project was in its infancy, over 20 years ago, journalist Tom Spears wrote: “In another year or so most of the heavy work of planting and landscaping will be done. You'll see pools and bits of bog for the ducks, turtles and salamanders; nesting spots for kestrels, cliff swallows and kingfishers; long grass for small animals; and bushes that produce berries for the birds. Human creation will mimic nature” (Spears 1991). Human creation and hard work on the part of many different participants, and the growth and activity of diverse natural elements have made his prediction of a natural oasis in the middle of the city a reality. The FWG’s “material structure”, to borrow Cresswell’s phrase and description of both permanent and transient presences (Cresswell 2009, 169), has changed considerably at the FWG over time, as evidenced by the diversity and richness of habitats and both resident and migratory wildlife described in the previous chapter.

What makes up the “wilds” of this natural urban oasis? What do people encounter on-site? Who maintains the FWG, and who visits? What are the different physical presences and activities that characterise the FWG, that give it physical shape and deeper meaning? They are both human and non-human, planned and spontaneous, anticipated and unexpected, positive and negative, and generally complex and entangled, as the following sections portray. This chapter explores the human and nonhuman physical presences and activities embodied in moulding, maintaining, and generally influencing the FWG and its complexity.

7.1 Human-natural complexity at the Fletcher Wildlife Garden

The strong human and nonhuman presences at the FWG, along with the wide variety of human and nonhuman activities that take place there, make the Fletcher Wildlife Garden neither entirely human, nor entirely natural, but rather a dynamic merging of the two. Certain FWG volunteers are quick to point out that the FWG is not exactly ‘natural’. “I would say that Fletcher is a natural environment within an urban environment,” says Bill, “which makes it not a natural environment.” Gordon and Valerie agree. They describe the FWG as “artificial”, in echo of journalist Tom Spear’s observation that human creation mimics nature at the FWG (Spears 1991). Gordon stresses the artificiality with his point that the Backyard

Garden, located on a hill, has been furnished with a small pond and surrounding mini-wetland – habitats normally found in low-lying areas. Kate states that the FWG is “concocted”; she points out that the plants brought on-site and “forced” to grow now require FWG volunteers to provide conditions the plants need to survive at the FWG location. As Michael states, the FWG couldn’t possibly be ‘natural’ in an urban setting. “Some elements of what ought to be here if it was natural,” he explains, “can’t manage to survive in this location.”

Yet despite its artificiality, Valerie points out, the FWG it is a “healthy” ecosystem that would flourish even if humans were no longer involved; the only essential volunteer activity at this time, in her view, is the removal of highly competitive invasive species. Cavity-nesting birds, she asserts, would find other places to nest if nesting boxes were no longer available, and birds would find other food sources if the bird feeders were no longer accessible.

For the time being, however, humans continue to be intricately involved in the FWG’s distinctive environment. Visitors and volunteers are attracted to the FWG because of the wildlife and natural features there. The main human activities that take place on-site – including volunteer tasks in the various habitats, along with dog walking, birding and photography (focusing on plants and wildlife) throughout the FWG – are immersed in the project’s ecosystem and involve nonhuman presences. It could, in fact, be argued that humans be counted among the biological organisms active on-site – an intriguing element of human-nonhuman complexity at the FWG.

7.2 Non-human presence at the Fletcher Wildlife Garden

Non-human presence – in essence the natural world – is a significant and defining aspect of the FWG. Creating an urban nature refuge – where “wildlife of all sorts can feel at home in the city” (FWG 1987, 180) – was, in fact, one of the main objectives for establishing the FWG project, and it could be argued today that the natural environment *is* the FWG. Marie, a relatively new FWG volunteer, calls the natural environment the FWG’s “star attraction” for both people and wildlife. “That’s where it’s happening,” she says. “Everything is growing out of that piece of land.” Randy makes the point that he volunteers because of the land and the natural environment, He tells me that he started working with the project after retiring,

moving into a condo, and finding himself with no opportunity to garden or work outdoors. Gail also started volunteering after she moved into an apartment and lost her garden. She states that 90% of the project is about the land.

What characterises this natural environment? As already suggested, it is complex, rich and diverse. Volunteers and ancillary sources highlight trees and plants, wildlife such as birds and insects, and even abiotic presences such as water and rock – natural elements and actors that contribute to shaping and defining the FWG place and project in ongoing processes that will emerge in relation to other themes in the pages to come. These nonhuman presences also have an impact on visitors and the lives of individual volunteers. The 2011 FWG Backyard Garden report provides an engaging snapshot of this natural diversity and its impact on people:

Our usual denizens, the chipmunks and red squirrels, remained well fed and a thrill for bipedal visitors to watch. The bird feeder and bath hosted various feathered friends and provided many a photo opportunity. Even toads and frogs obliged by sunning themselves on pond rocks for excited children! We found one tiny tree frog keeping his bum cool in the collected water of Cup Plant leaves, as well as the occasional sipping bee taking advantage of the drink. One evening, a mink visited the pond, no doubt chasing the frogs and tadpoles. Insect visitors included bees, wasps and butterflies although there seemed to be fewer butterflies this year, with only a few Monarchs seen. Those that did appear were followed by enraptured volunteers (Nicol 2011, 12).

Visitors and volunteers feel these natural presences, interact with them, and engage with the natural world at the FWG in ways that best meet their needs for reconnecting with the natural environment. Volunteers reap particular benefits as the chapters to come will reveal, in response to opportunities for connecting with and finding meaning involving the natural beings and elements described in the following pages.

7.2.1 Abiotic presence

The nonhuman presence which attracts most people to the FWG is the wildlife, yet abiotic elements such as water and rock are also important as revealed in a 1996 FWG newsletter update, which states that the foundations of the Backyard Garden have been laid with the installation of a two-level pond and a rock garden (FWG NL 1996b, 2).

Water

Water has been an especially significant defining presence of the FWG since the beginning of the project. Initial location selection criteria called for a site with open water or

shores, and both dry and wet areas, as well as potential for creating a pond (FWG D2, Wildlife Garden – Other Sites).

The Central Experimental Farm location offered all these characteristics, with a lowland meadow catching runoff from the Central Experimental Farm offering potential for wetland creation (FWG D2, Project description, 1991: 2 and 1995: 1). That meadow has become the Amphibian Pond, intended to provide wildlife habitat as well as, according to a 1992 *Ottawa Citizen* article, cleanse the stormwater that drains from the fertilized fields of the Central Experimental Farm into the Rideau River (Ottawa Citizen 1992). The Amphibian Pond has become one of the FWG's most dynamic habitats, animated throughout the year by the presence of different wildlife species. The 1998 FWG brochure recommends to visitors: "In late spring, watch for tree swallows swooping over the pond in search of food for their young. By July, water striders will be skating on the surface of the water. Late into the fall, you'll see several species of dragonflies hovering over the water. In winter, you might see fox tracks across the snow-covered ice" (FWG Br3, 1998).

Although such large ponds are obviously better for wildlife, a small backyard pond surrounded by native plants can also provide important resources to wild species (FWG Br3, 1998), as demonstrated by the small pond in the Backyard Garden where birds, small mammals, and insects find drinking and bathing opportunities, and where frogs, toads and dragonflies (effective consumers of insect pests) find a place to lay their eggs (FWG BYG Br1, 2007). The elevated bird bath positioned just behind the Interpretive Centre is another important alternative water source at the FWG. "Even if you have no food, cover or nest sites," the Backyard Garden brochure points out, "birds will come to a bird bath from all over the neighbourhood to drink and bathe" (FWG D3, Brochures – Model BYG). These backyard-scale water features serve to (1) attract wild species to an accessible setting where visitors and volunteers can enjoy their presence, and (2) offer important educational opportunities for people wishing to make their gardens more wildlife-friendly.

Rock

Another significant abiotic presence in the FWG's Backyard Garden is rock. Large rocks actually surround and delineate the Backyard Garden pond, providing sites where frogs and young turtles can bask in full view of visitors and volunteers. A rock pile in the Woodland Garden provides additional shelter to insects, toads, and Eastern Chipmunks (FWG BYG

Br1, 2007), while stone walls in different Backyard Garden locations are frequented by both Red Squirrels and Eastern Chipmunks. A couple of these walls were apparently extended several years ago – “no doubt delighting the chipmunks who frequent the wall on a regular basis,” writes Christine (Hanrahan 2006b, 1), as well as people observing them.

The most significant rock presence in the Backyard Garden, however, is the Rockery. This part of the demonstration garden started as a rock garden, and eventually evolved into a garden bed to demonstrate xeriscaping, or dry land gardening, in a well-drained, sandy area in full sun (FWG D3, Brochures – Model BYG). In the early 2000s, the rock garden was re-designed and renovated, with large, flat stones added to resemble rock strata and a more natural environment. The stones were carefully placed to catch rain and channel it into the Rockery, where it pools on the uneven rock surfaces, available to birds, small mammals, and insects (Hanrahan 2004a, 2; FWG D3, “Habitats”). It may seem that the more difficult conditions of the Rockery would make it less vibrant than other parts of the Backyard Garden. Yet despite its dryness, the Rockery is a dynamic corner of the FWG, due in large part to the lively presence of chipmunks there, an animal whose antics are much appreciated by volunteers who work in the Backyard Garden.

7.2.2 Soil presence

Soil is not a presence that readily springs to mind when one thinks of a natural environment – or any type of environment, for that matter. Yet soil is the foundation, literally, of many human activities, and its presence is something anyone involved in cultivating plants is keenly aware of. Gillian Boyd, the FWG volunteer who guided the initial work in the Butterfly Meadow, declares, for example, that soil was an important factor in establishing that habitat. She describes, in a 1994 report, how the first planting beds were dug into “a wonderful rich clay loam” that held moisture well. The following season, she writes, was drier, and the area they cultivated had more clay, which was difficult to work with when it became dry and hard. Still, she reports, they were fortunate to have a clay base which held moisture well: “the soil was so rich that all the plants grew bigger and more quickly than they would have in the wild. In poor, sandy soil there would be less variety and less impressive results” (Boyd 1994, 53).

Results in the Backyard Garden are impressive as well. Sheila, Margaret, Evelyn and Gordon all remark on the somewhat unnatural size of the native plants that grow there. Why

do they grow so large? Perhaps owing to the compost, the enriched soil regularly distributed to nourish the various garden beds. As the Backyard Garden brochure declares, “No garden should be without a compost heap” (FWG BYG Br1, 2007), and the FWG is no exception. The compost pile near the Interpretive Centre develops quickly during the growing season, from the results of pruning, thinning, dividing and weeding activities in the Backyard Garden.

Other volunteers get excited about soil in general at the FWG – about its presence and the opportunity to work with it. Eight of the volunteers mentioned soil during their interviews, talking about how much they like working with it, getting their hands in it, smelling it. A 1997 FWG newsletter item – a gardening tip from Landscape Ontario – recognizes the desire of gardeners and other growers to work the soil. “After the long winter, most of us can hardly wait to get out and start gardening,” it states, continuing with guidelines for determining when the soil is ready to be worked: “Squeeze a small amount of soil into a ball. If it stays together without crumbling it’s still too wet. It crumbles easily with just a little pressure, it’s just right” (FWG NL 1997b, 2).

7.2.3 Botanical presence

The right time to work with soil outdoors also means that botanical elements of the FWG will soon become more present. Seeds will germinate and grow, perennials will push up new shoots, and trees will produce buds and eventually leaves. Trees and other plants are nonhuman presences which motivate considerable volunteer activity and involvement, and inspire complex meanings, as discussed in chapters to come.

Trees

Trees have been particularly powerful and defining presences at the FWG since its beginnings. The FWG was, in fact, inaugurated in June 1990 with the official planting of a ceremonial butternut tree (Hall 1990, 128-9). Going back even further, initial FWG site selection criteria called for an area with not too many trees: neither heavily forested nor shaded, suitable for habitat creation (FWG D2, Wildlife Garden – Other Sites). At the same time, the wooded ravine and existing ash woodlot were valued as assets for habitat enhancement (FWG D2, Project description, 1991: 2 and 1995: 1). Certain FWG habitats, both created and enhanced over the course of the project, are in fact, defined by trees.

The New Woodlot, for example, did not exist at the beginning of the project. Established in essentially a “grassy field” (Garland 1997b, 1), it has taken shape through the hard work and planting of a wide diversity of trees and shrubs which have created the wooded habitats visible there today. A 1998 FWG newsletter article proudly reports that “[T]rees planted in previous years are now tall enough to be visible above the grass and for the first time the site is beginning to look like a new woodlot” (FWG NL 1998d, 1). Today, the trees and shrubs there have grown so tall and thick that they form a miniature forest of sorts, providing a wooded buffer between the FWG and Prince of Wales Drive which shelters wildlife, provides a wooded refuge for visitors, and inspires feelings of success and pride for volunteers involved in the project.

Plants

Other plants have also been defining elements of the FWG since its beginnings. The lack of plant diversity at the original “mostly mowed-grass” site (FWG D3, Brochures – General) helped the Central Experimental Farm location meet the criteria of “a sort of ‘wasteland’” that offered good habitat creation potential (FWG D2, Wildlife Garden – Other Sites). Since then, various plant communities have become the foundation for particular FWG habitats.

The Amphibian Pond and the Backyard Garden ponds, for example, are characterised by wetland plants. The larger Amphibian Pond, planted with sedges and cattails in the early 1990s (FWG D2, Project description, 1995: 8), has been left to evolve naturally, with occasional intervention to remove exotic species, such as Flowering Rush, that tend to invade wetlands. The Backyard Garden pond has been more carefully planted with moisture-loving plants such as cardinal flowers, blue flag irises, marsh marigolds and sedges (FWG BYG Br1, 2007). It was recently ‘rehabilitated’ to create a moister ring around the pond where other moisture-loving plants such as Joe-Pye Weed, Boneset and Swamp Milkweed can be established and thrive. The Backyard Garden Rockery, on the other hand, is defined by plants that are typically drought-tolerant and low-growing, species that thrive in well-drained, gravelly soil and don’t need extra water (FWG BYG Br1, 2007).

The Butterfly Meadow and Backyard Garden Butterfly Bed are defined by a wide diversity of plants that provide for the needs of butterflies and other pollinators. The well-tended Backyard Garden Butterfly Bed, for example, is planted with the following: New England Aster, Flat-topped Aster, Butterfly Weed, Swamp Milkweed, Purple Coneflower,

Bee Balm, and more (FWG D3, “Habitats”). The larger Butterfly Meadow has characteristically contained Red Clover, Black Eyed Susans, Wild Lupine, Queen Anne’s Lace, Vetch and other plants (FWG BR2, n/d), along with nearby grasses, thistles, and trees for caterpillar food (FWG Br3, 1998).

It is the presence of this wide diversity of plants at the FWG that attracts many volunteers. Tracey, for example, says she became interested in the FWG because she was fed up with buying plants from nurseries and wanted to learn how to grow plants in her own garden. Cindy tells me, “there’s something about plants that really draws me in.” She adds that it was the native plants in particular that attracted her to the FWG, and that she has been inspired to work more with native plants in other settings.

Evelyn was similarly motivated by a desire to learn about native plants, but also by the strong presence of an invasive plant species: Dog-strangling Vine. “I ... noticed the Dog strangling Vine everywhere,” she says, “and thought that perhaps more volunteers would be useful.” Randy tells me about visiting the FWG with his daughter early one summer and discovering the masses of Dog-strangling Vine. “I was shocked to discover this plant that was taking over everywhere,” he says, adding that the presence of the invasive plant “primed” him to get involved. Dog-strangling Vine is, in fact, such a strong presence that it prompted the creation of a new FWG work team in 2011: the Tuesday Invasive Species Group (TISG), which meets and works on Tuesday mornings. The impact of this species on the FWG project and volunteers will be discussed in more detail in Chapter 10.

7.2.4 Zoological presence

The FWG’s trees and plants, and the habitats they define, support a wide diversity of wild animals – from mammals and birds, to reptiles, amphibians and insects. Supporting wildlife is, as already discussed, one of the FWG’s main purposes – a purpose inscribed in the second word of the project’s name. Wildlife presence is also a factor motivating many volunteers to work at the FWG.

Mammals

Mammals are among the more noticeable wildlife presences at the FWG. For many volunteers, mammals – particularly species not often seen in the city – are associated with

their most memorable FWG experiences. A number of volunteers also appreciate the predictable presence of more common urban species.

Weasels are an uncommon wildlife presence mentioned by six of the case study participants. Tracey, for example, talks about weasels coming to the FWG Christmas party one year. They appeared, she says, toward the end of the party when most people had already gone home. Someone leaving the Interpretive Centre noticed the animals and went back inside to tell the rest of the group. People alternated between two observation activities: going outside in groups of two to see the weasels hunting, and staying behind to watch from the window. Kate, referring to the same incident, points out that there were three weasels in total, all white with black tips to their tails, hunting in the snow in the two levels of the plant nursery across from the Interpretive Centre. It made her feel happy, she says, that the animals felt comfortable hunting there, “unafraid, not intimidated, secure.” Gail also saw the weasels hunting that day. She describes it as a powerful experience – “a “momentous occasion I will always remember.”

Other volunteers talk about a more common presence at the FWG – the chipmunks they encounter regularly on-site, particularly in the Backyard Garden. Gail says she loves watching the chipmunks, even though they are so common. Robert tells me he finds it fascinating and cute the way they are always “dashing around”, as well as coming close and stopping. Sheila shares that chipmunks are her favourite woodland animals. “I could sit and watch the chipmunks all morning,” she says. Joyce enjoys feeding them peanuts.

Birds

Joyce, along with many of the other volunteers, also has a particular fondness for birds at the FWG. Birds and people – in that order – keep her coming back to the site. Many volunteers enjoy the presence of birds while they are working outside. Theresa values bird song. “The birds, they sing so beautiful!” she exclaims. Gordon enjoys just being at the FWG and, in his words, “seeing birds up close that one normally doesn’t see in the city.”

The richness of bird life at the FWG is not lost on local journalists, who have long acknowledged the FWG for the significant presence of birds there, and for the opportunities it provides to learn about birds (Francis 2009a, Careless 2003, Reed 2002, Willis 2000). Former *Ottawa Citizen* birding columnist Elizabeth Le Geyt⁹, for example, mentioned the FWG regularly with respect to interesting photographs people have taken of birds there,

sightings of rare species, and observations of migrating birds returning to the region. She writes in May 2010: “Many warblers can now be seen and the Fletcher wildlife garden in Ottawa is a good place to see them” (Le Geyt, May 16 2010).

Spring and fall, when birds are migrating, are particularly good times to experience the presence of different bird species in the FWG’s various habitats. Christine, for example, describes a day in May 2003 when she saw over 30 species of birds within one hour. “And all this in the midst of the city!” she exclaims (Hanrahan 2003b, 4). Elsewhere she describes the FWG as an important oasis and stopover point where birds can feed and rest before continuing their annual north- or south-bound journeys (Hanrahan 2009b, 121; 1997b, 126-7). In winter, the FWG bird feeders also provide important resources for hungry birds, and for bird-hungry photographers. On two consecutive visits to the FWG Interpretive Centre one winter to consult archival documents, I witnessed the photographic hunger for birds myself. In my field notes, I recorded four different photographers focused on the Backyard Garden bird feeder, one of whom braved the snow and freezing temperatures for almost three hours on a particularly cold morning (Dec. 2 and 9, 2010 field notes).

Reptiles and amphibians

The FWG is also an oasis for reptiles and amphibians. They are attracted, not surprisingly, to the Amphibian Pond and the Backyard Garden Pond. Christine, interestingly, associates frogs and toads with the FWG spring and summer “soundscape” (Hanrahan 2007b, 4), an aspect of human-nature connection not often discussed. Christine writes about the pond resounding with the song of green frogs and gray treefrogs (http://www.pbse.com/fwg/fwg_photo-blog_may_2010&page=2), and of spending “enchanted evenings” in late June listening to a chorus of frogs and toads at the Amphibian Pond. “The cacophony was quite literally deafening, but wonderful,” she declares (Hanrahan 2005c, 6) in a statement capturing the powerful impact of sounds in nature.

The Backyard Garden pond is an easily accessible place where frogs can be found consistently throughout the growing season. Lisa says she finds it “fun” to observe the frogs and toads moving into the little pond each season. It is not unusual to see three to five frogs gathered in that little space, and she and other volunteers often pause there to observe the animals between volunteer tasks. Occasionally a baby turtle will join the frogs in the Backyard Garden Pond, and when it does, it causes a stir. Joyce was particularly charmed by

a baby Painted Turtle she describes as “a little bigger than a twoonie.” She and other volunteers watched it for a couple of weeks, but then one morning, Joyce tells me, she found it dead, with a hole in its shell and missing its head. “A bird got it,” she says sadly.

Insects

Just as the Amphibian Pond is named for the wild animals most prominent in that habitat, so are the Butterfly Meadow, along with the Butterfly Bed in the Backyard Garden, defined by the insects present there. Both are named for a popular and desirable insect, yet these parts of the FWG actually attract a wide diversity of insects, as do the FWG’s other habitats – a fact that has not escaped local journalists, who write about the FWG in relation to butterflies and other pollinators (Taylor 2010 and 1998; Spears 2008).

FWG volunteers are also well aware and appreciative of insect presence on-site. Butterfly Meadow habitat manager Diane Lepage, for example, is especially conscious of and knowledgeable about moths. She has spent nights “mothing” and identifying new species at the FWG, and is credited with substantially expanding the FWG moth list (Hanrahan 2010a, 6; 2009a, 6). Christine, who is fascinated by insects in general, expresses both astonishment and delight at the diversity of insects at the FWG (Hanrahan 2006d, 6; 2007c, 4). In the e-mail updates she sends regularly to a group of people interested in developments at the FWG, Christine reports on what she sees and experiences in the various habitats; at certain times of year, the insect presence is particularly rich. In spring 2010, for example, she reports observations of various flies, some of which she has not yet been able to identify; three different spiders on a single plant, as well as diverse jumping spiders; Bumblebees, Nomada Bees, Andrenid Bees, and Halictid Bees; Mud-Daubing Wasps, Braconid Wasps, Ichneumonid Wasps, and Yellowjackets; butterflies such as Viceroy, Little Woods Satyr, Canadian Tiger Swallowtail, White Admirals, Red Admirals, American Ladies, Silvery Blues, Ringlets, and Silver-Spotted, Long-Dash and Hobomok Skippers; as well as treehoppers, leafhoppers, and stink bugs (Christine e-mail updates, May 18 and June 10, 2010). Many of the photographs and descriptions she posts to the FWG photo-blog in the spring and summer feature and describe this wide diversity of insects in their different life stages, including eggs, caterpillars and adults.

The breadth and richness of insect diversity described by Christine may not be as apparent to other FWG volunteers, but they are definitely aware of insect presence on-site. Margaret,

who works mostly in the Backyard Garden, expresses appreciation for pollinators and how they relate to native plants, birds, and other insects. The FWG, she feels, could play an important role in raising awareness of these relationships, and of the general importance of pollinators. Cindy is proof of the awareness-raising power of the FWG. She reveals that she is paying more attention to bees and their diversity as a result of working at the FWG. “There are many different types,” she tells me. “I just didn’t know them.” The desire of FWG volunteers to know more about pollinators and other insects, and the intense interest of certain individuals in identifying the wide diversity of insect species found on-site, reveal the importance of insect presence at the FWG, and the potential roles insects can play in connecting people with the natural environment.

7.3 *Non-human activity at the Fletcher Wildlife Garden*

Insects and other wildlife engage in a wide diversity of activities at the FWG, including feeding, drinking, bathing, nesting, constructing, resting, growing, playing, defending and moving-travelling, as suggested in previous sections. Many of these activities, and the roles they support, will emerge in the context of discussions in upcoming chapters. Let us focus here on an aspect of nonhuman activity that is subtle and intriguing, and which tends to appeal to human curiosity, intellect, and a certain aesthetic sense – signs of nonhuman activity, and the potential stories they tell.

Actual nonhuman activity can be exciting and rewarding to witness, as the story of the weasels at the Christmas party reveals. Yet that occurrence may have gone unobserved had people not been in attendance at the party that day. Much nonhuman activity is not, in fact, easy to see and watch. It can be rapid and fleeting, sometimes occurring at night when humans are not as active, or in places and at scales (e.g. microscopic) that are not easily discernible. On the other hand, many nonhuman activities can leave traces that are more durable, and that offer intriguing potential for awareness, interpretation and learning.

Signs of nonhuman activity – including tracks in the snow, empty nests, and food remains – are abundant at the FWG. They are reported on the photo-blog, in newsletter articles, and in recorded observations. In a 1997 newsletter article, for example, Sandy alerts us to the many different types of animal tracks visible at the FWG, including hundreds of mouse and vole tracks criss-crossing grassy areas after a new snowfall, when these animals are looking for seeds to eat (Garland 1997a, 2). Every track also tells a story, as Christine points out in the December 2007 photo-blog, by way of introducing photographs taken by Sandy, along with the following account: “Signs of high drama at the FWG today. This flurry of prints and tracks in the snow south of our Amphibian Pond ... reveals the frenzied attempt of a small animal, possibly a rabbit, to escape from a predatory bird of some kind.” Wing prints made by the hunting bird, Sandy points out, are visible at the bottom of an accompanying photo (<http://www.ofnc.ca/fletcher/newsletter/Photo-blog/December2007.php>). Other animals feeding at the FWG leave signs such as chewed stems of shrubs and trees (Cottontail Rabbits), mushrooms hung to dry, apples set in tree forks, and nuts placed on branches (Red Squirrels)¹⁰.

Another activity that can leave durable and interesting traces, particularly in the fall when trees have lost their leaves, is nesting. Christine has found and recorded some fascinating nests over the years, including a Baltimore Oriole nest interwoven with strips of birch bark, a small Yellow Warbler nest interwoven with Dog-strangling Vine, and a fallen Red Squirrel nest constructed mainly from fine strips of peeled conifer bark. She has also found empty cup nests re-used by chipmunks to store seed, or restored by mice with plant fibres for further nesting, as well as bird nesting boxes containing paper wasp constructions¹¹ – discoveries that intrigue and delight Christine and the people who visit the FWG photo-blog.

Other signs of nonhuman activity that inspire delights and surprise – in people visiting the FWG in winter, and others reading the photo-blog – are the ways in which some animals deal with snowy conditions. Red Squirrels, for example, make temporary tunnels in the snow to travel safely. Christine describes encountering a Red Squirrel in a tree one January, and seeing the animal jump straight into its tunnel upon her approach (http://www.pbase.com/fwg/jan_photo-blog_2011&page=2). She also writes about Meadow Vole tunnels in the snow, often accompanied by a pile of nearby scat. “Although we are largely unaware of this” she writes, “life goes on in the sub-nivean layer, that is, beneath the snow” (http://www.pbase.com/fwg/fwg_photo-blog_december_2008&page=2) – more signs of which become apparent after the snow melts, revealing the remains of vole tunnels winding through the dried vegetation where the animals seek weed and grass seeds to eat¹². There is no lack of nonhuman activity at the FWG, particularly by resident species such as squirrels and voles, who do not travel far.

Interestingly, human visitors to the FWG also leave traces of their passing and activities alongside those of the wildlife. A photograph in the 2010 February photo-blog shows the frozen Amphibian Pond full of human and non-human tracks – a visible indication of the FWG’s human-nonhuman complexity. “The human tracks dominate here!” writes Christine in the accompanying description. “You can see where skiers have crossed the pond, where dogs and owners have criss-crossed it. At the far end of the pond, you can also see where crows, rabbits, and fox have also crossed the pond” (http://www.pbase.com/fwg/fwg_photo-blog_feb_2010&page=2).

7.4 Human presence at the Fletcher Wildlife Garden

Signs of human activity such as ski tracks are indications of transitory presence at the FWG – unlike nonhuman presence and activity, which is consistent, diverse, and in many cases permanent. Nevertheless, the presence of people – from volunteers, visitors and regular dog walkers, to people attending special events and groups seeking outdoor working and learning experiences – is powerful and influential. Human interest in and activity at the site is encouraging considering that the FWG was created not only to provide habitat for urban wildlife, but also to motivate people to garden in harmony with nature. Human presence at the FWG can be divided into four distinct categories: visitors, employees, groups, and volunteers.

7.4.1 Visitors

Visitors are one of the main human presences moving around the FWG and its various habitats. Field notes, interviews and ancillary sources reveal the following visitor diversity:

- gardeners wishing to see the Backyard Garden and collect information on wildlife and native plant gardening,
- naturalists coming to walk the Bill Holland Trail and enjoy the wildlife,
- birders seeking to observe and hear birds in the different habitats,
- butterfly watchers arriving in the warmer months to see butterflies,
- photographers visiting throughout the year to photograph wildlife and flowers,
- dog walkers coming daily to stroll with their dogs in the FWG and surrounding Arboretum and Central Experimental Farm lands,
- urban residents looking for a pleasant place to walk,
- tourists who have heard or read about the FWG,
- people attending special events (workshops, the annual native plant sale),
- individuals and groups coming, often unseen, to party and engage in occasional and visible destructive activities, as reported in the previous chapter.

Students enrolled in a 2007 Carleton University geography field course conducted a FWG visitor survey, which sheds further light on visitor presence. According to the survey, most visitors are local residents between the ages of 40 and 60, who typically spend about one hour at the FWG, with photographers often staying as long as two hours. Favourite locations within the FWG include the Backyard Garden, the Amphibian Pond, and the Butterfly Meadow, with birds, flowers, and wildlife also mentioned as attractions. Birdwatching and walking were the main reasons reported for visiting the FWG (FWG NL 2008a).

The proportions and numbers of other FWG visitors, along with their reasons for visiting, shift with time and with opportunities and circumstances such as special events, publicity, and the changing seasons. During the summer months, for example, the Interpretive Centre is open to the public on Sunday afternoons and at other times when volunteers are working on-site. Even in the winter, visitors can be surprisingly present at the FWG. A February 2009 photo-blog entry reports that despite the cold weather, there were “People all over the place, skiers, snowshoers, photographers, birders, dog-walkers, walkers.”¹³

Many of the year-round visitors to the FWG value the creation and ongoing maintenance of the various habitats, and they occasionally express their appreciation. Some address volunteers working on-site directly, while others communicate in writing. Christine, for example, shares the following message from the FWG’s 2003 Visitor’s Book: “An honour to be the first to compliment all the volunteers who maintain this oasis of colour and creation! One of our favourite cycling destinations in Ottawa. Thank you” (Hanrahan 2003b, 7).

7.4.2 Employees

The FWG is maintained and operated mainly by volunteers, but temporary employees are sometimes also present and active on-site. As stated in the 2011 draft strategic plan, the temporary employees are largely students hired for the summer when funds are available (FWG SP, 2011). The summer student employees can be very present on weekdays at the FWG, where they staff the Interpretive Centre, communicate with visitors, work on FWG documentation and outreach materials, and carry out a variety of other tasks in the different FWG habitats: conducting fieldwork, monitoring habitats, photographing and documenting wildlife and habitat changes, removing invasive species, leading guided walks, helping with group activities, and more, depending on their skills and interests, and on project needs (Hanrahan 2008a, 4; 2007c, 3; 2006c, 4; 2003b, 3; 2004c, 3). The 2011 summer employee, for example, helped to organize the annual plant sale and exchange, and to tend the plant nursery.

7.4.3 Groups

Various groups have come to the FWG to learn about nature and wildlife, or to lend a helping hand. Over the years, student groups, Boy Scouts and Cubs, Girl Guides and Pathfinders, and Stewardship Rangers have come to the FWG to take part in tours and hikes

(FWG NL 2011f, 5; Hanrahan 2007c, 2; Currie 1996, 2), to participate in educational activities (Hanrahan 2007c, 2; Currie 1996, 2; Garland 1996b, 139), to plant trees (Garland 1997b, 1; 1996b, 138-9), and to remove invasive species (Hanrahan 2006d 4; Currie 1996, 2).

Over the past several years, corporate groups have also spent volunteer service days helping out at the FWG. Since 2007, for example, a group from Price Waterhouse Cooper's 'Green Team' – as many as 20 individuals at a time – has spent a day at the FWG planting trees and removing invasive species (Hanrahan 2010a, 3; 2009a, 3; 2008a, 3; FWG NL 2008b; 2007d). In 2011, employees from IBM also enjoyed a FWG 'day of service' experience (FWG NL 2011c, 6). The same season saw yet another interesting group presence at the FWG: a botanical drawing class offered by the Nepean Visual Arts Centre (FWG NL 2011c, 4-5). All these groups – whether they come to learn, help, or walk through the habitats and experience the wildlife and natural surroundings – connect with the natural world at some level, a further indication that the FWG is capable of appealing to different human interests and needs.

7.4.4 Volunteers

Just acquiring the right to turn this bit of Ottawa into a wildlife area hasn't caused it to happen. It has taken plans, good educated plans, good management and the remarkable persistence, past and on-going, of many volunteers – people who quietly give thought, time and muscle so the rest of us may benefit.

(Bryant 2003)

Aside from people walking their dogs daily in all seasons, volunteers are the most common, and definitely the most influential, human presence at the FWG. They are also the most necessary to the project. As Christine points out, "Volunteers are the backbone of this project and without them the whole thing would fail quickly" (Hanrahan 2005a, 4).

Volunteers are present and active on-site at the following times, from spring to fall:

- 1) **Friday mornings:** the long-established Friday morning work group maintains the Backyard Garden and plant nursery, and performs tasks in other habitats as needed,
- 2) **Wednesday evenings:** this volunteer team works in the Butterfly Meadow under the supervision of the Butterfly Meadow habitat monitor,
- 3) **Tuesday mornings:** the Tuesday Invasive Species Group (TISG) works in various habitats to remove invasive species,

- 4) **Sunday afternoons:** during the summer months, the Interpretive Centre is open to the public on Sunday afternoons and staffed by a volunteer.

Of the 27 volunteers who participated in the study, 22 reported also coming to the FWG at other times, for various reasons: showing the garden to family and acquaintances, taking photographs, compiling inventories, filling bird feeders, and leading group tours. The volunteers come from near and far – some from as far as 45 and 60 minutes by vehicle, others from only two or three kilometers away. Three study participants come to the FWG by bicycle, and two come by bus – although, as already mentioned, that option is now limited following bus route changes in Autumn 2011.

The number of FWG volunteers present at the FWG fluctuates from year to year. I estimate the number of volunteers active at any particular time – including individuals who did not to participate in my project, as well as Management Committee members – to number between 40 and 50. Of the twenty-seven volunteers who participated in my study, nine were men, and eighteen were women. Most of the research participants (82%) are retired and over the age of 50, with two between the ages of 50 and 36, and three aged between 35 and 20. This group of volunteers represents a predominantly older demographic, one with the time and the means to engage in volunteer activities, and the availability to work on-site at the FWG on Friday mornings. As the following chapters reveal, members of this group also have certain things in common: childhood exposure to and experiences with the outdoors, a love for nature along with a generally positive perception of the natural world, and the likelihood of sharing a predisposition to volunteering in nature – all of which cannot help but influence their perception of the FWG, as well as place certain parameters on the results discussed in the pages to come. As already mentioned, however, I was unable to join the Wednesday evening Butterfly Meadow group, which has been attracting younger volunteers who are likely to offer different insights into FWG volunteering.

As in other volunteer organizations, the volunteers associated with the FWG come and go. Over the course of the four seasons that I have been a regular FWG volunteer, active mainly with the Friday morning group, the volunteer mix has been in constant and subtle motion. At the time of the interviews, 9 individuals had been working on the FWG project for over ten seasons, 8 volunteering between five and ten years, 4 between one and four seasons, and 6 people involved in the project for only one season (less than one year). Two of the younger

research participants, aged between 20 and 35, did not have full-time employment at the time of the interviews and were able to fit volunteering at the FWG into their schedules; but they have since found jobs that prevent them from continuing to work at the FWG. Other volunteers were obliged to cease volunteering, or found themselves unable to work at the FWG as often as they had previously, because of illness, conflicting commitments, or other reasons.

Based on my observations and experiences with the research participants and other volunteers, and on interviews and casual conversations, I have identified the five general categories of FWG volunteers represented in Figure 7.1. The categories are fluid, as reflected in the third column, which reveals the shifting numbers of research participants in each category. Over the four seasons I have volunteered at the FWG, some people have shifted up or down a category, depending on their circumstances.

Figure 7.1: FWG Volunteer Types

Volunteer type	Characteristics	# research participants
Dedicated-regular	• have been involved with the FWG for several years • come regularly to participate in one of the work teams – unless they are travelling, ill, or otherwise unable • may have been involved with the FWG before volunteering regularly • state that volunteering at the FWG is an important part of their weekly schedule, and one of the highlights of their week • tend to assume particular responsibilities – for example, maintaining a particularly Backyard Garden bed	17-18
Dedicated-irregular	• may also have been involved with the FWG for a long time, and the project is important to them • work on-site as often as they can, but unable to come regularly because of other interests and commitments • do not tend to accept particular responsibilities at the FWG • are inclined to avoid obligations that will bind them to a schedule, because they wish or need to remain free to pursue other activities such as work or travel (“footloose and fancy free” in one individual’s words)	5-7
Casual-irregular	• do not find the FWG project to be particularly important to their lives • come and work on-site when they feel like it, when it is convenient for them, or when help is needed for special events or occasional work bees (e.g. removing invasive species, annual plant sale) • tend to place higher priorities on other commitments and activities such as travelling, spending time at the cottage, or being with their families	1-2
Infrequent	• come to the FWG infrequently • tend to come when help is needed for special events or occasional work bees • may come more often early in the season when other, conflicting activities have not yet started (fade from the scene later) • some, particularly elderly individuals, tend to come to the FWG for specific reasons (e.g. helping with a particular garden bed, with plant sale)	1-2
Suspended	• no longer come to work at the FWG for reasons such as health, conflicts, employment, conflicting commitments, other interests, or because working at the FWG no longer meets their needs	3-4

“It grows on you ...”

It is interesting to hear the volunteers describe their own commitment to the FWG. Dedicated-regular volunteers, not surprisingly, make some of the strongest statements. Glenda, who has worked at the FWG for over seven years, says she is 100 percent committed, and that the FWG is a higher priority than any of her other interests. She adds that if she lived closer, she would come more often. Robert has been coming to the FWG for over ten years. He describes his commitment as “strong” and explains that he schedules his week around FWG work, adding that if he fails to come, it is because he is travelling. Sheila, who has also been involved in the project for over 10 years, tells me FWG volunteering is inscribed on her calendar. She describes her commitment as “totally enthusiastic” and says that she feels privileged to work at the FWG.

Some of the newer volunteers express commitment and pride that is almost as strong as Sheila’s. Evelyn, for example, has been volunteering less than five years. She is also one of the younger (36 to 50) members of the FWG Friday morning work team, and a dedicated-irregular volunteer because other parts of her life make demands on her time. Evelyn says that she believes in the FWG and takes it seriously. She stresses that she made a conscious decision to volunteer as much as she can, even though the rest of her life sometimes interferes.

Thomas, a long-time dedicated-regular volunteer, expressed his commitment spontaneously one drizzly Friday morning when we were returning to the Interpretive Centre after working to install a bench in the Butterfly Meadow. Pulling a wagon loaded with equipment, Thomas stopped suddenly and said musingly, “‘It’s quite a place, this Fletcher garden. It grows on you ... I don’t work like this in my own garden. It suffers from benign neglect’” (May 29, 2009 field notes).

7.5 Human activity at the Fletcher Wildlife Garden

Benign neglect definitely does not apply to the FWG, particularly in the case of the volunteers working hard on-site. Other human activities also take place at the FWG, some of which emerged in the previous chapter, and others to emerge in the contexts of chapters to come. The following section provides a brief overview of the range of activities associated with the groups of people consistently present at the FWG: volunteers and regular visitors.

7.5.1 Regular visitor activity

The visitors who come to the FWG regularly engage in the following recreational activities:

1. walking (with or without dogs),
2. birdwatching, and
3. photography.

Walking and birdwatching are, in fact, the main visitor activities reported in the 2007 study conducted by Carleton university students (FWG NL 2008a). Those activities, along with photography, are also highlighted by Christine in her regular updates.

In a 2004 “News from the FWG” article, Christine writes about all three activities, noting that dog-walkers are probably the most regular FWG visitors, and that she is increasingly seeing photographers in all parts of the garden throughout the year. Christine also indicates an increase in birders at the FWG, pointing out that when she first started counting birds at the site ten years earlier, she rarely saw other birders (Hanrahan 2004b, 3). In 2005, Christine repeats that dogs and their owners are probably the most numerous visitors to the FWG (Hanrahan 2005a, 2). I would add that they are the most consistent year-round visitors; it is rare to visit the FWG at any time of year, including winter, and not encounter at least one person walking there with their dog(s). Field notes recorded on one of the few occasions I was able to join the Wednesday evening Butterfly Meadow team reveal that people with dogs stopped by every so often to chat with the volunteers. One was a man with a terrier, who complemented us on our work; later, two women with a young German Shepherd stopped by and started talking to one of the long-time Butterfly Meadow volunteers, who remarked on how large the dog had grown (July 8, 2009 field notes). It is interesting to note that this specific dog-walking visitor group is not an entirely “human” category. It is, in fact, a combined human-nonhuman group which requires the combined presence of a human person or persons, and a dog or dogs – a reflection of the complexity of the FWG itself, a quality which will emerge in chapters to come.

7.5.2 Volunteer activity

Dog walking may, arguably, be the most frequent activity at the FWG, with certain dog walkers and their dogs visiting regularly, almost daily, in all seasons. Yet FWG volunteers, when they are working on-site during the growing season – anywhere from late-March into

November, depending on weather conditions – are a strong and influential presence, engaging as they do in physical activities which have the power to shape and re-shape the land on-site.

Volunteers are most present and active on Tuesday mornings, Wednesday evenings, and Friday mornings when the work teams carry out their various tasks. Thirteen volunteers revealed that they also came regularly at other times of the week to take care of the garbage and recycling, check on the garden and bird bath, fill the bird feeders, remove invasive species, prune trees and shrubs, compile inventories of wildlife, observe birds and other wildlife, take photographs, and work in a part of the FWG that needs attention (usually weeding or watering). Some said they came occasionally to walk, relax, take photographs, help with special events, show the garden to others, lead tours for groups, or observe wildlife.

Regular FWG volunteer activities, the vast majority of which involve human-nonhuman interaction, might best be understood in terms of (1) habitat creation and enhancement, (2) habitat maintenance, (3) inventorying, monitoring, recording, and (4) other sundry activities.

1) Habitat creation and “renovation”

Habitat creation activities – including land and soil preparation, invasive species removal, planting, and other physical endeavours appropriate to a particular habitat – are at the core of the FWG. Habitat creation in the New Woodlot, for example, involved planting hundreds of trees.

The Backyard Garden, which originally took shape with assistance from Algonquin College students in the early 1990s (Harrison 1993, 8), was renovated several years later by a “dedicated band of volunteers” working hard at “taking up grass, digging out tenacious perennial weeds, shovelling and moving countless loads of soil, gravel, rocks, stones and sand and also moving assorted shrubs and plants” (Boyd 1997, 47).

The establishment of the Butterfly Meadow began when the land was ploughed and clover and alfalfa seeds sowed, with more specific plant beds later cleared, dug and planted with diverse desirable flowering plants (Boyd 1994, 52-3). The Butterfly Meadow is currently undergoing major renovation to remove the invasive Dog-strangling Vine and to re-establish plant biodiversity. The main activities include turning and sifting the soil, removing the Dog-strangling Vine roots, and planting desirable flowering plants (Lepage 2011, 8-9).

2) *Habitat maintenance*

The various habitats are maintained through numerous activities, performed in combinations appropriate to individual habitat needs. Activities include typical gardening tasks such as weeding, watering, mulching, dividing [perennial plants], transplanting, edging [garden beds], pruning, grafting [trees], mowing, composting and general clean-up and care as needed. During the January 1998 ice storm, for example, the Ash Woods sustained considerable damage, including fallen branches and broken young trees; the following spring volunteer crews cleaned up the fallen branches and trees and piled them into tangles to shelter birds and small mammals (FWG NL 1998d, 1).

Since the late 1990s, another dimension has been added to habitat maintenance: invasive species removal, or what Thomas calls “destructive gardening.” Non-native Dog-strangling Vine and Buckthorn have been the focus of sustained removal activity. Buckthorn was discovered during the 1997 “bio-blitz” and identified as posing potential problems for tree regeneration and understorey development in the wooded habitats, where it was already out-competing other species (Vitols and Hamilton 1998, 17). Volunteers pull the smaller Buckthorn trees out of the ground by the roots with help from a weed wrench. Larger trees are cut down, and their stumps covered to prevent re-sprouting.

Dog-strangling Vine was identified in the ravine when the initial baseline inventories were conducted at the FWG (Dickson, 1992, 42). By 1998, it was moving into other habitats, spreading by seeds and roots (Garland 1998c, 2) to grow into what some volunteers consider the FWG’s most serious invasive species challenge. Methods to keep Dog-strangling Vine in check include pulling the vines from trees they have climbed, hand-cutting and scything, and covering patches of the vine with a tarpaulin to smother its growth. In garden beds, Dog-strangling Vine plants are dug up by the roots. These activities inspire a wide range of responses among volunteers, as discussed in Chapter 10.

(3) *Inventorying, monitoring, recording*

At the FWG, biodiversity is inventoried, habitats and artificial enhancements are monitored, and as many observations as possible are documented for FWG records. Baseline inventories were initially conducted to determine which species were present at the site before and after habitats were created and enhanced. Original inventories identified plants, birds, mammals, butterflies and other insects (Stevensen 1992a, 39; Hall 1990, 129-30). The

first mammal inventories required a team of people to lay down a ‘trap line’ of drain-pipe tube traps to record mammal tracks (Dickson, 1992, 40).

Biodiversity inventorying is ongoing, with new species regularly identified, based on observations recorded by visitors and FWG volunteers. Not only does the FWG seek to keep track of different wildlife species, but also of their activities. In 2003, Christine put out a call for volunteers to spend a bit of time at the FWG every few weeks to make and record regular observations concerning wildlife behaviour. “We’re keen to find out what plants they eat (seeds, fruit, leaves, twigs...),” she writes, “where they nest, what flowers attract which insects, which plants host which larvae, where the paper wasp nests are hung, and ... well, you get the idea” (Hanrahan 2003, 8). The condition and evolution of the various habitats are also regularly monitored and recorded, as is the condition and spread of invasive species.

(4) Other sundry activities

Observations and interview responses reveal that volunteers also carry out a diversity of other activities at the FWG. A certain sub-set of activities revolves around the plant sale: collecting seeds which are later germinated and grown into plants offered for sale, potting the young plants for the sale, maintaining the plant nursery where the potted plants are kept, planning the sale, and helping on the day of the event. Another sub-set of activities involves general construction and maintenance: mowing and maintaining the Bill Holland Trail, picking up garbage in the various habitats, cleaning and tidying the Interpretive Centre, filling the bird bath and bird feeders, and constructing and maintaining specific items (bird feeders, nesting boxes, brochure boxes, bulletin boards). These items are, in fact, permanent symbols of human presence on-site, thereby reinforcing the complex character of the FWG.

All these volunteer and visitor activities contribute to establishing human presence at the FWG. Volunteer activities in particular help to maintain the FWG’s natural habitats – to the advantage of the many nonhuman presences associated with the place, and to the benefit of visitors and volunteers who are able to connect with the natural world on-site. The physical tasks carried out at the FWG also enhance the experiences of many of the individual volunteers, as discussed in the next chapter.

7.6 *The complex Fletcher Wildlife Garden*

The ongoing presence and activity of both human and nonhuman beings and elements at the FWG certainly define and shape the place, creating a distinct entity that has changed considerably from its beginnings over 20 years ago. On the human side, volunteer action and effort has created, maintained, monitored, and occasionally “renovated” the various habitats in view of their attraction and suitability to a diversity of wildlife, as well as their existing and potential leisure and educational use by human visitors. Those activities continue to this day. On the nonhuman side, biotic elements such as water and rock, as well as trees and plants – some original to the site and progressively encouraged, others deliberately established or planted – attract wildlife, providing habitat and other resources to species who visit and inhabit the FWG, where they interact in complex relationships with each other, with the greater garden environment, and with human volunteers and visitors.

The result of this rich intermingling of the human and the nonhuman, of human-natural complexity, is a place that is different from its surroundings, a place that is neither entirely human nor entirely nonhuman, a place that is a reflection of its unique, historically and geographically contingent circumstances. These particularities include the physical urban setting discussed in the previous chapter; the vision, imagination, intentions and activities of FWG volunteers; and the capacity of the diversified and enriched natural environment and its processes to provide conditions that encourage vegetation to grow, attract wildlife species, support nonhuman interactions and relationships, and meet a wide range of human needs to connect meaningfully with the natural world, as the following chapters reveal.

Chapter 8 The active Fletcher Wildlife Garden

The Fletcher Wildlife Garden (FWG) has fulfilled the intention of becoming, as journalist Tom Spears wrote over twenty years ago, a “complex ecosystem” (Spears 1991) in the middle of the city – an ecological system rooted in and fuelled by human and nonhuman presence and activities as discussed in the previous chapter. Over time, the FWG has, in fact, become a place characterized by intense physical activity, most visibly the numerous and diverse outdoor tasks involved in maintaining the different habitats. The active dimension of the FWG reflects the notion of places as settings for activity (Agnew 1993, 262) that are never complete, always in process, where the things people do contribute to the meanings that unfold there (Cresswell 2009, 169; Cresswell 2002, 20).

Many of the volunteers involved in the FWG project are attracted by the opportunity to engage in physical activity there, to participate in outdoor work on-site. How do those physical activities affect the volunteers? What sorts of needs are met by the physical tasks accomplished at the FWG? How deep are the roots of those needs for individual FWG volunteers? What are the broader implications of the sorts of physical outdoor volunteer opportunities offered at the FWG? This chapter explores the human needs for physical activity fulfilled at the site.

8.1 Meeting physical exercise needs at the FWG

The magical transformation [of the FWG] was not really the result of magic, but of sheer hard labour by dozens and dozens of volunteers over the preceding 20 years, and continuing today, of course.

(Hanrahan 2010c, 163)

As discussed in Chapter 4, physical activity that takes place in natural settings offers particularly strong benefits – including increased rates of physical exercise encouraged by access to urban green space (Faculty of Public Health 2010b, 3), and generally better health among people living in neighbourhoods offering abundant green spaces (Green Cities: Good Health, 2011). In this light, it is not surprising that many volunteers involved in the FWG project appreciate the opportunities it offers to be active outdoors. The outdoor exercise aspect of the project is, in fact, a benefit which keeps certain individuals coming back to volunteer.

8.1.1 Getting out of the house

At a certain basic level, volunteering at the FWG motivates individuals to get up, get out of the house, and be active. As simple, even simplistic, as this may sound, getting out can be an issue for people who become housebound or inactive for various reasons. Conversations with FWG volunteers revealed that people who retire, for example, or people without employment can find themselves without a schedule, and without a reason to leave their homes – a situation which can lead to physical inactivity and social isolation, with consequences for both mental and physical health. These impacts are often associated with elderly individuals, but they can be issues for people of all ages.

It comes as no surprise when Audrey, retired and a long-time dedicated-regular volunteer with her husband at the FWG, states in relation to the benefits of volunteering on-site: “It gets us out.” Luke, another long-time dedicated-regular volunteer considers working at the FWG as “an outing”, while Joyce says, “it gets me out of the house.” Randy, recently retired, tells me he comes to the FWG deliberately to “get out” and “get outside.”

Interestingly, it is two of the FWG’s younger volunteers, without employment at the time of the interviews, who emphasize and elaborate on the benefits of “getting out of the house.” Lisa tells me that she has never considered herself to be outdoorsy, but that she keeps coming back to work at the FWG because it adds to her routine and gets her outside. She also reveals that she gets bored easily and that she therefore appreciates the variety of work offered at the FWG.

Jo presents a different perspective. “I am at heart an incredibly lazy person,” she declares, adding that she loves to read and would spend the whole day indoors with a book if she had no reason to leave the house. “This is the first period in my life when I haven’t had the schedule of work,” she tells me. “Having something fixed on my calendar keeps me busy.” Volunteering at the FWG is good for her, she stresses, because it gives her a set time to get out of the house, as well as a “good workout.” Volunteering at the FWG also provides a fixed season – March to November, depending on weather conditions – to prompt volunteers in general to be active outdoors. As Tracey exclaims one February day, “Won’t it be nice when spring comes and we can muck around in the dirt again.”

8.1.2 Physical activity

“Mucking around in the dirt” and other physical activities are an integral part of the FWG volunteer experience, and an important draw for many of the individuals involved in the project. Glenda, for example, says that she doesn’t like being inactive, and that she enjoys the exercise involved in volunteering at the FWG. Robert also expresses appreciation for the exercise opportunities, and for the additional benefit of fresh air. Luke tells me that he likes moving around doing “grunt work” on the trails, and that volunteering at the FWG is “good exercise.”

Both Kate and Paul tell me that physical exercise is part of what keeps them coming back to volunteer at the FWG. Paul enjoys doing manual tasks outdoors, particularly when they relate to the natural environment. “I like working with my hands,” he states. Kate, who has been involved with the FWG since its beginnings, says when she was younger and more energetic, she enjoyed the challenge of work that required brute force or balance. Now she avoids those tasks because they are problematic for her. “My endurance and physical stability have declined,” she reveals, adding that if she feels pain, she looks forward to doing something that requires less physical effort. “Most of my time is spent weeding, cleaning up or trimming,” she states.

For volunteers like Kate, who experiences physical limitations yet still wishes to remain active, the FWG offers plentiful small maintenance tasks in the Backyard Garden, plant nursery and Interpretive Centre. Glenda, for example, spends most of her time doing maintenance work such as weeding, watering, and transplanting in the Backyard Garden. But occasionally, when work in that part of the FWG slows down, individuals who normally work there join crews active in other habitats. One of the most regular alternative work crews focuses on pulling up the non-native Buckthorn trees invading the FWG’s wooded habitats. I have often joined the Buckthorn crew myself on Friday mornings. Pulling up the small trees involves operating a “weed wrench” which is fastened to the base of a small tree, then levered back to yank the tree from the ground by the roots. The work can be strenuous, but satisfying for those seeking physical exercise.

Jo declares that pulling Buckthorn is her favourite activity because it offers a good workout. “This works up a sweat and feels purposeful,” she declares. Randy, who says he likes the “harder physical stuff”, talks about wrestling with the Buckthorn stumps and ripping

them out. He expresses appreciation for the exercise involved in the work, along with the satisfaction of seeing visible results – a point echoed by Thomas, who speaks of the “instant gratification” of Buckthorn pulling. Thomas and Randy, who both like being physically active, also acknowledge their physical limitations. “I don’t have the brawn I used to have” says Randy. He talks about going home after working at the FWG and being exhausted. Thomas tells me that he finds it difficult to work with some of the younger volunteers, because he can’t keep up with them. “I can only do about 1 ½ hours,” he says, “then I’ve had enough.”

It's an immense job – planting more trees and shrubs to cover much of the area that's mainly cut grass today...
(Spears 1990)

An alternative exercise option

Thomas is doing well if he is able to undertake one and a half hours of sustained physical exercise. Many people who pursue other forms of physical activity – such as cardiovascular or weight training at a gym – do not, or are unable to engage in workouts that last any longer. As much as cardiovascular and weight training are encouraged, particularly for aging adults, they are not always successful, partly because many people find the “high-tech” environments of gyms unappealing or intimidating (Birch 2005, 244). Health researcher Veronica Reynolds adds that many individuals find it challenging to sustain a strict exercise program; some people are “put off” by the notion of going to the gym, and many lack motivation to exercise on their own (Reynolds 2000, 520). Yet physical activity is essential for health. Medical doctor William Bird points out that sedentary living is the greatest risk for older adults, and that remaining physically active – because of its apparent impact as an antidote for other risk factors – is perhaps the “single most important thing” an older adult can do to maintain health (Bird 2004, 24). Bird also points out that moderate exercise, including brisk walking, and gardening or conservation activities can help achieve physical fitness, while gyms and sports, despite popular belief, do not add further health benefits (Bird 2004, 17).

Jo, one of the younger FWG volunteers, would agree. She tells me she is “not fond of normal exercise options” and that she appreciates the workout offered by pulling Buckthorn at the FWG. Gordon, who describes himself as “an approaching geriatric”, expresses similar feelings. He says he comes to the FWG instead of going to “the commercial gym”, and that

working at the FWG contributes to maintaining his mobility. “One can get all the exercise one needs pulling weeds and pruning trees,” he declares in conversation at this home. “I come back feeling quite refreshed.”

The notion of FWG work as an alternative exercise option arose spontaneously ‘on the job’, so to speak, as revealed in field notes I wrote about ‘buckthorning’ in April 2009:

I ... like the pulling, a bit of a workout, and fun! I said the thing about workout a couple of times. The first time, A. responded that she’s going for her workout after the FWG. I said, “So this is your warmup!” She laughed and agreed. The second time I said we should market FWG volunteering as a new form of workout (April 17, 2009 field notes).

The “new form of workout” offered informally by the FWG is, in fact, a concept that has been evolving in the UK. Known as “Green Gym”, it encourages people to engage in outdoor physical conservation work as a way of increasing physical and mental health (Bird 2004, 50). A critical and motivating aspect of the “Green Gym” program is the outdoor setting – also an important consideration drawing people to volunteer at the FWG.

8.1.3 The need to be outdoors

“I’d rather be outdoors than indoors. I’ll put it that way.”

(Joyce, FWG volunteer)

Many of the study participants choose to volunteer at the FWG because it offers the opportunity to be physically active outdoors – a critical consideration for certain individuals. Valerie, for example, speaks of an “almost frantic need to be outside”, while Bill tells me that for as long as he can remember, he has spent as much time as possible outdoors. “I live for nature,” he says. “I’d just as soon walk in the woods as go to a movie.” Margaret states that “working outdoors in nature” keeps her coming back to volunteer at the FWG. She talks about the “really good feeling” she gets from being outside on a June morning, hearing the birds and handling the plants – a sentiment echoed by Marie, who tells me she loves being outside in the woods and fields with the birds, the earth and the sun. Theresa identifies another benefit: fresh air. “Breathing that beautiful air is good for me,” she declares.

Paul tells me he looks forward to “getting out with nature” and working with his hands at the FWG. “I guess it’s the farmer in me,” he adds, with that statement drawing attention to another dimension of the need to be outdoors: the stronger connections previous generations often had with rural and outdoor ways of life. By extension, people of a certain age also tended to have more physically active, open-air childhoods. Those robust, outdoor, often rurally connected early years contribute to the appreciation FWG volunteers have for the

natural environment, and to the need, deeply ingrained and instinctive, they continue to have to be outdoors and to be active.

8.1.4 An outdoor childhood

“Play outdoors? Where else was there?”

(Thomas, FWG volunteer)

When asked if they played outdoors much as children, most of the study participants respond swiftly and unequivocally. “Yes, all the time,” Tracey says. “I can remember very little playing indoors.” Pauline declares, without hesitation, “Oh yeah. We had no choice”, while Louise responds quickly, “Oh yes. We were kicked out of the house.” Joyce, who declares that she would rather be outdoors than indoors, presents a more voluntary perspective. “My mother had to haul me indoors at night,” she explains.

How were Tracey, Pauline, Louise, Joyce, and other FWG volunteers spending their time outdoors when they were children? The activities they report are as rich as their childhood imaginations, and as varied as the environments they frequented. Some volunteers tell me about nature outings where adults and other family members played important guiding and accompanying roles. Kate talks about her solitary childhood growing up downtown with a “muddy laneway” for a backyard and no nearby nature. But her father regularly took her to the outskirts of the city, where they explored the natural world and identified discoveries with the aid of field guides. Valerie speaks of joining her grandmother on excursions to the seaside and countryside, where they explored tidal pools and hedgerows, discovering birds and other wildlife. Louise’s outdoor childhood experiences also involved trips to the countryside, as well as to the beach and a large nearby park, where she and her siblings chased butterflies and picked wild fruit.

Other volunteers describe an outdoor childhood spent playing regularly in nearby green spaces. Marie, for example, talks about collecting grasshoppers in a jar from the fields across the street from the house. Tracey speaks about train tracks just across the road, with long grass and “hollows where you could hide”; she adds that she loved to sneak over to play around the train tracks. Mark was attracted to a nearby creek when he was young. He speaks about going there often with the boy next door, “chasing frogs and doing whatever.” Gordon also grew up near a creek, located only two blocks from his home. He speaks of making rafts using railway ties, an idea echoed by Glenda, who talks about building rafts and floating on

the water “like Tom Sawyer” – examples of the creative benefits of playing in wild outdoor places. Gordon explains that he and his friends were “always making things” and “getting into all sorts of vandalism” such as building a cave under a road, which caused the road to collapse – an important learning experience. Creative outdoor play, he says, is “much more productive than organized sports activities.”

The structure involved in the organized sports mentioned by Gordon contributes, along with other scheduled and supervised activities, to alienating young people from the natural environment today, as discussed in Chapter 4. A life filled with programmed pursuits leaves little opportunity for a childhood of “unsupervised loitering, wandering and exploring” (White 2004) – in short, the freedom that characterized the early lives of FWG volunteers. Valerie talks about running “wild” in the fields and woods around the school. “A bunch of little savages,” she says. “It was great.” Margaret describes the big park three blocks from her childhood home, parts of which were wild. She tells me how every weekend, she and a friend would go there with dogs and lunch and spend the morning. “We had that freedom,” she says – a point echoed by Glenda, who stresses that those sorts of activities were possible back when parents didn’t worry about children “disappearing for a day.” Another volunteer, who grew up in a rural island setting, reveals that she spent “24 hours a day almost” outdoors without parental supervision. “It was just so safe,” she declares, then ponders the safety of being out in a dinghy without a life jacket, and swimming every day in the freezing ocean. The freedom to wander and explore unsupervised was very important to her. “We had nothing, no toys ... it didn’t matter,” she says, adding that to this day, she loves the sound of the wind and the rain, and that she would never exchange her early days for the childhood of today.

Cindy’s fondest outdoor play memories involve cottages, where she and other children in the family went fishing, swimming, cycling, canoeing and – she adds with some hesitation – tadpole hunting. “I’m not sure that was a good thing,” she says, “but when you’re a kid it’s all about the experience.” Cindy, among the younger volunteers, is one of the few to mention cottages, and the only one to emphasize their importance to her childhood. Perhaps the cottage trend was not yet strong when the older FWG volunteers were young, many of whom grew up in, or often visited, rural environments which may have fulfilled cottage-like functions in their families. Interestingly, some of the most memorable rural outdoor

experiences reported by the FWG participants involve farm chores. Bill for example, talks about spending a great deal of time on neighbouring farms, helping out voluntarily with farm work. “I just loved it,” he says. Michael also speaks about neighbouring farms where he did “bits of things” such as digging up thistles and stacking sheaths of grain in the summer. Margaret tells me she was lucky to have an uncle with a farm, where she helped pick raspberries and pack peaches. She thought it was wonderful to have “all that space to walk around in”, and she appreciated the freedom of being on the farm.

Theresa and Evelyn, who grew up on farms, also valued the freedom of the countryside. “I spent a lot of time walking,” Evelyn tells me, adding that she and her sister had the responsibility of bringing in the cows from different corners of the farm. Evelyn adds that she also spent time in two woodlots on the farm. The space and the freedom were important to her, she says. Theresa’s childhood was similar. She speaks about going out to the pasture with the horse, cows and sheep, and coming home in the evening – activities that entered her soul, she says, and inspired her love for birds, insects, and the natural environment.

Another volunteer’s rural upbringing also entered his soul, to the degree that he felt compelled to offer the same experiences to his own children. “Being raised on a farm was part of my education,” he tells me, explaining that he moved his own family from the city to a rural setting because he wanted to make farming a part of his children’s education. At their new home in the country, the parents and three sons farmed and gardened as a hobby. For ten years, they raised animals, cultivated a large garden, and managed a woodlot. “They loved it,” he says, speaking of his three sons. “They still talk about it.” The youngest son, he tells me, has become a microbiologist, as well as a birder and environmentalist.

If we read between the lines, the outdoor activities of these children – what has been described evocatively as the unsupervised “thousands of delights of free play” (White and Stoecklin 1997, 2) – along with farm chores and the freedom to wander at will through open green spaces enabled them to experience the world directly and intensely, and to derive the sorts of developmental benefits scholars today attribute to unstructured play outside (Bird 2007, Kellert 2005, White 2004, Hamma 1999, Moore 1997):

- creating a sense of independence as they explored, discovered, and tested the margins of their worlds;
- employing and honing different senses as they interacted with their environments;
- expanding awareness and observational skills;

- fostering creativity through diverse and inventive play;
- cultivating imagination and the sense of wonder, important motivators for lifelong learning;
- stimulating a sense of rootedness and place, and forging a link between themselves and the places they lived;
- developing a relationship with the natural environment that helped them reach a certain potential.

These developmental benefits, while not expressed explicitly in discussions with the FWG volunteers, are nevertheless implied in the active and memorable outdoor experiences they share. Tracey sneaking across the road to explore hidden corners of the train tracks, Michael digging up thistles on neighbouring farms, Kate exploring the wild verges of the city with her father, Gordon constructing rafts and caves with his friends, Theresa accompanying farm animals to the pasture – all these activities are direct, intense, and formative experiences of childhood environments.

8.1.5 Preventing nature-deficit disorder

'Unless people appreciate that we're part of nature and start to get opportunities for hands-on experience with nature, my concern is that as a species, we're not going to come to grips with the real environmental problems and their solutions.'

(Baer 1990, quoting Jeff Harrison, originating FWG member)

The outdoor childhoods that provided FWG volunteers with opportunities for early development also, it would be safe to say, prevented nature-deficit disorder. This phenomenon – described in Chapter 4 as the costs to children who are deprived of direct contact with nature and of opportunities for free outdoor play (Driessnack 2009, 73) – was not a direct focus of discussions with the volunteers. But it did come up in conversation with certain individuals who expressed concern regarding the fact that children spend less time outdoors.

Mark, for example, implies that his children may have been deprived of contact with the natural environment because they were never particularly drawn to the family of his wife, who grew up on a farm. When we talk about the benefits of being active outdoors as children, Mark says slowly, with an expression both startled and sad, “and those are the kinds of experiences my kids never had ...” In another part of our conversation, Mark expresses a “huge concern” that people growing up in an increasingly urbanized world will have “no empathy with the natural environment.” He quickly points out, with visible relief, that one of

his sons graduated with a degree in environmental science – “so he has a feeling for something,” Mark concludes.

The lack of feeling also troubles Kate, who points out that our society is generally disconnected from the natural environment. “We’re not teaching our youth about our place in nature or its benefits – physical and mental,” she says, “And we’re not fostering an appreciation for it, or any reverence for it.” She talks about encountering children in Algonquin Provincial Park who are “barrelling along trails, loud, knocking the trees, picking the flowers, tearing along yelling.” She points the finger at their parents who do not foster appreciation for nature in their children (perhaps because the adults are themselves disconnected and therefore unable to model and cultivate appreciation in the younger generation). “Kids don’t get this way by themselves,” Kate declares. “There’s no respect for nature here, there’s no connection. They [the children] are bored to tears because there’s no connection.”

Responsibility for the disconnection, and the lack of opportunity for connection, may actually lie with more than the parents. Human activity in general is degrading the natural environment that used to be a setting for outdoor play and discovery. Cindy, for example, speaks about swimming in the river daily as a child, and seeing wildlife there. She regrets that her niece is deprived of the same experiences because the river is usually closed to swimming now – something Cindy remembers happening only once when she was young. “The things I used to do as a kid,” she says, “... my niece doesn’t have those opportunities. It’s devastating.”

Just as devastating is the outright aversion that can result from the lack of opportunity to connect with and appreciate the natural world. “I can’t believe that kids don’t play outside nowadays,” Randy tells me, adding that he has encountered children who shudder at the idea of playing outdoors. “I don’t get it,” he muses – from the perspective of one whose childhood was very different. Evelyn, whose young life on the farm was also very different, shares an intriguing story of nature aversion. She tells me about assisting a teacher with a class where the children were tasked with responding to a piece of writing about a boy who catches and interacts with a frog. When one of the girls in the class reacted with distaste to what was happening in the story, Evelyn tried to reassure her that frogs are not so bad. The girl, Evelyn says, replied with some incredulity, ‘You’ve seen one?’

As startling as Evelyn's story might be, it is not surprising that some children in today's increasingly urbanized and technologized society may never encounter frogs. Cindy tells a similar story of disconnection and aversion, one that offers a happy ending rooted in direct experience. She speaks of visiting her boyfriend's family on the coast and learning that his teenaged nephews had never been to the ocean, although they lived only one hour from the water. So Cindy and her boyfriend took the nephews to the beach, where the young men were initially afraid, shrinking away from the sea life, not wanting to touch anything. But gradually the aversion gave way to curiosity and anticipation. "Every time they turned over a rock, they were so excited, instead of that initial uneasiness," she tells me, adding that over time, the nephews "fell in love with the experiences." Apparently now, when Cindy and her boyfriend go back to visit, or when they just talk to the nephews on the telephone, the young men always ask to go back to the ocean. "Kids just naturally are drawn to nature," she says. "It's a natural curiosity."

A child's natural curiosity about nature can be stimulated and satisfied by direct, physical exposure – even transforming aversion to fascination in teens, as Cindy's experience reveals. Evelyn, also concerned about the disconnection of children from the natural world, reinforces the idea of reconnection through direct experience. Acknowledging that access to green space can be limited, she suggests that people cultivate pollinator-friendly areas and spend time there focussing on smaller life forms with young children. Such places, she points out, could be established anywhere, even in small urban spaces, and made very accessible.

My field notes reveal the natural curiosity Cindy describes, along with the ease with which it can be stimulated and satisfied by the simplest of outings in existing urban green spaces. June 2011 field notes reveal the following observations while cycling to and from the FWG along the recreational pathway which follows the Rideau Canal:

A woman walking between the path and the river, holding the hands of toddlers looking about the same age, maybe twins. The toddlers' free hands were stretched toward a handful of Canada geese and goslings resting at the water's edge.

A young child, maybe 3 or 4, clambering around the buttressed roots of a large tree in the Arboretum, while a group of women spread a blanket and other items for what looked like a picnic. Other children were staying close to the women.

A toddler dashes across the bicycle path toward the water – and the rocks and flowering plants there – and a father runs after her.

An older child, a girl aged maybe 8 or 9, crouching a couple of feet from a mallard duck and duckling resting at the water's edge. The girl was wearing a bicycle helmet, and she was staying very still, staring at the animals.

A young boy, 4 or so, holding a fishing rod over the railings alongside the canal.

The adults, including me, were hurrying – walking, cycling, running – along the path, or sitting on benches talking, or walking along talking on cell phones ... although a couple of ladies had their heads turned toward a pair of mallard ducks swimming with 2 ducklings between them (June 11, 2011 field notes).

Could the direct and active contact with nature I observed that day, or other connections demonstrated and suggested by FWG volunteers – trips to the beach to search for sea life under rocks, time spent in a small urban green space observing insects – counteract nature-deficit disorder in children, and possibly in adults? Could some of the impacts of nature-deficit disorder increasingly identified by scholars in Western society – obesity, depression, impaired social skills, lower self esteem, lower educational achievement, reduced cognitive and creative capacities, attention deficit hyperactivity disorder [ADHD] (Charles 2009; Driessnack 2009) – be foiled by direct and not too highly structured outdoor activity in places like the FWG? Since this research project does not concentrate specifically on nature-deficit disorder, we can only speculate on potential responses to those questions based on the testimonies of FWG volunteers we have heard so far, knowing that a broader spectrum of benefits relating to human-nature contact will emerge in the pages and chapters to come.

Since this research project also does not explore the detailed physiological impacts of outdoor physical activity, we cannot offer any conjecture beyond the assertions of volunteers that working at the FWG is a “good workout” that gives them a “really good feeling” and leaves them feeling “refreshed.” These highly subjective findings do, nonetheless, reflect the results of other research exploring the effects of physical outdoor activity.

8.2 Physical outdoor activity – “synergistic benefit”

It is no mystery that outdoor physical activity is good for us. Positive associations have, as previous chapters reveal, been reported between access to natural spaces and increased rates of physical exercise for all age groups, particularly in urban areas that are densely populated, and where accessible green spaces tend to encourage physical activity outside the home (Faculty of Public Health 2010b, 3). Nearby green space abundance has also been correlated with generally better health among residents. People who frequent open spaces such as parks have proven more likely to attain recommended levels of physical activity than people who do not use green space (Green Cities: Good Health, 2011).

Recent research – concentrated overseas, representing disciplines ranging from medicine and occupational therapy, to sociology, geography, planning, and the biological sciences – has been examining the “synergistic benefit” (Pretty et al. 2005, 320) of physical activity in outdoor settings. Green space has, in fact, been cast in terms of a valuable and versatile “health resource” (Reynolds 2000, 520). Health researchers in the Netherlands have even coined an expression to acknowledge the many benefits offered by nearby green space: “Vitamin G” (Groenewegen et al. 2006).

Few elixirs have the power and punch to heal, restore, and rejuvenate the way that nature can.

(Beatley 2009, 212)

8.2.1 “Green exercise”

At the University of Essex, researchers associated with iCES (interdisciplinary Centre for Environment and Society)¹⁴ have been particularly active in studying the effects of “green exercise”, which they define as “engaging in physical activities whilst simultaneously being exposed to nature” (iCES n/d). Physical activity in a natural setting, they have found, reduces blood pressure and burns calories (iCES n/d), with the potential to help overcome Vitamin D deficiency – associated with increased risk of chronic diseases such as multiple sclerosis, type I diabetes, and cardiovascular disease – by exposing people to sunlight (Pretty et al. 2009, 9). In the context of a research project commissioned from iCES, most participants report that engaging in green exercise activities benefits their physical health. Participants made statements such as, “I feel as though I can do things without being tired. I am more active ... my body is looser and more agile”; “My fitness has improved, I feel refreshed and alive” (MIND 2007a, 1).

Feelings of aliveness and refreshment suggest enhanced mental health – another important outcome iCES researchers have associated with green exercise via indicators of self-esteem and mood (Pretty et al. 2007, Pretty et al. 2005). A carefully controlled laboratory simulation, in fact, revealed that exercise in a more ‘natural’, green outdoor setting is more effective than physical exercise alone, or than exercise in other settings, at improving both physical and mental health (Pretty et al. 2005, 334). England and Wales’ mental health organisation, MIND, has actually called for a “new green agenda for mental health”, one that offers immediately available, accessible, cost-effective, and clinically valid options to existing treatments such as drugs and psychological therapy – alternatives that are also free of obvious

side-effects (Mind 2007a, 1-4). These findings and assertions have led to green exercise effects being cast in terms of “synergistic benefit” (iCES n/d; Pretty et al. 2005, 320), with the key to the synergy being the place where the physical activity occurs: a green, outdoor setting.

8.2.2 “Green gym”

The immediate and synergistic health benefits derived from what Barton and Pretty describe as “short-duration physical activity in accessible (probably nearby) green space” (Barton and Pretty 2010, 3951) make green exercise a potentially significant therapeutic intervention in health treatment (Pretty et al. 2009, 10). One therapeutic green exercise intervention apparently being “prescribed” by general practitioners in the UK in place of conventional exercise regimes is “Green Gym” (Brown and Grant 2007, 68). This program is offered by The Conservation Volunteers (TCV) – before May 2012 known as the “British Trust for Conservation Volunteers (BTCV), the name which appears in most of the published literature – an organisation which seeks to reclaim and care for natural areas threatened with loss or degradation. These areas range from “everyday green places” in urban environments, to nature reserves in the countryside. Through the Green Gym program, a TCV trademark, the organization coordinates specific conservation and/or gardening projects. It works with community groups to help them take responsibility for local environments, inspiring people to improve their health and the environment at the same time (TCV 2012a, 2012b).

Green Gym volunteers help to plant trees, create community gardens, manage local woodlands, and maintain public footpaths (Mind 2007b, 12); they construct fencing and undertake other conservation tasks to restore and protect wildlife habitat (Reynolds 2000, 520). Specific physical activities include lawn mowing, seed planting, tree and shrub planting, lawn raking, weeding, digging, hoeing, clearing vegetation, carrying and chopping wood (Bird 2004, 16), watering, pruning and composting (Mind 2007b, 18) – tasks that reflect the physical work carried out by FWG volunteers. Dr. William Bird, the general practitioner who helped establish England’s first Green Gym in 1998, points out that these conservation and gardening activities are considered moderate exercise – identified by feelings of warmth, along with an increase in breathing and pulse rate sufficient to improving cardiovascular health and experiencing broader health benefits (Bird 2004, 15-17).

The UK's 'Royal Society for the Protection of Birds' (RSPB) is another organization which offers opportunities for physical outdoor conservation activity. The RSPB manages 200 nature reserves, totalling over 100,000 hectares of land where the organisation facilitates access to nature for volunteers of all ages who perform a variety of conservation-related tasks (RSPB n/d, 3). One volunteer's story illustrates the positive and compelling benefits of involving citizens in restoring, maintaining, and consequently valuing the natural environment.

The volunteer is a 38-year-old man who suffers from epilepsy and Asperger's syndrome. He experienced unemployment and bouts of depression which plunged him into what he calls "a very dark spell." At the urging of family and friends, he started volunteering at a local RSPB nature reserve. He has been working there for three years, performing various physically demanding tasks which he credits with building up his strength and his mind. "Tasks like digging holes are a real source of stress relief and act as a therapy," he is quoted as saying. "I can also feel myself getting fitter and stronger and this all adds to my confidence." He declares that volunteering at the RSPB has changed his outlook completely, giving him a new focus and helping him feel better both mentally and physically (RSPB n/d 5) – a powerful testimony to the power of what has been called "conservation volunteering" (Reynolds 2000, 520).

8.2.3 Synergy ... "beyond the purely physical"

The combination of benefits described by the RSPB volunteer – a synergy which goes "beyond the purely physical" in the words of health researcher Veronica Reynolds (2000, 520) – is one explanation for the success of green exercise ventures such as conservation volunteering. While regular physical activity is widely acknowledged as being beneficial, many people find it challenging to sustain a strict exercise program, as already discussed. But when exercise becomes a by-product of another activity, it takes on a new dimension.

When exercise becomes secondary to other benefits (e.g. environmental, social), it appears to be more sustainable than when it remains, in Bird's words, the "primary driver" (Bird 2004, 53). Those other aspects contribute to making the hard work of conservation volunteering more enjoyable, as described by Julie Bennett, horticulture project coordinator at the Solihull MIND green exercise site:

People actually work very hard on the site.... Digging, lifting, planting and pruning are all great exercise, but people don't think about it as exercise. If you go to the gym, you might spend half an hour on the treadmill, and sometimes it's hard to find the motivation to do that. Here ... it doesn't feel like exercise. It's certainly not as intimidating as a gym.

The wildflower meadow at the site requires considerable maintenance, she adds, with volunteers spending hours caring for it. "But because they're in the fresh air, and chatting and laughing with people," she explains, "it feels like nothing. No one would want to spend as long in a stuffy gym as they do out here – and even if they did I don't believe they'd get the same benefit as being outdoors" (quoted in Mind 2007b, 16-17). Enjoyment of the whole activity – including being physically active outdoors in the company of other people – is part of what Reynolds calls the "purely intrinsic motivation of enjoyment" (Reynolds, quoted in Larkin 2000, 1702), something she identifies as the main factor in helping Green Gym participants persevere with exercise (Reynolds 2000, 520). That perseverance, evidenced by lower drop-out rates, is one reason Green Gym is increasingly being prescribed by UK general practitioners (Brown and Grant 2007, 68).

8.2.4 Synergistic volunteering at the FWG

The synergy of physical exercise combined with environmental, social, and mental benefits also characterises volunteer work at the FWG, suggesting its potential for significance to a broad range of potential participants. Thomas, for example, tells me about a volunteer who came to work at the FWG because he had had a stroke and was seeking opportunities to get out for exercise. Working at the FWG was physical therapy of sorts, part of that individual's strategy for recovery. I remember that volunteer well from my first two seasons working at the FWG. He was quiet, pleasant, and not at the age of retirement, it appeared. But I have not seen him since, and I have not had news of him. Perhaps volunteering at the FWG contributed to his recovery to the point that he was able to re-gain employment, or find other meaningful occupation.

D. tells another, compelling story about an experience that illustrates the synergistic benefit of volunteering at the FWG – an experience she describes as a "transformation", something she says she feels "privileged" to have shared. It happened when a corporate group came to work at the FWG during their community service day. D. happened to be available to help co-ordinate the activities of the group, who had been assigned the task of turning over

soil in the Butterfly Meadow and putting down landscape cloth to prevent re-growth of the invasive Dog-strangling Vine.

In the beginning, D. says, everyone in the group seemed somewhat apprehensive. The idea of digging, sweating, and getting dirty did not appeal to most of them. She heard one individual ask why they didn't just rent a rototiller, while others said they would have preferred handing out food at the soup kitchen. Most people complained during the first hour, D. recalls, and some were unfamiliar with certain tools. The only exceptions were two women. One was a gardener, and the other had grown up in the country; they didn't mind digging.

After the first hour, D. says, things started to change. Everyone started to have fun, and the work became more appealing. People even initiated dirt fights. The individual who had suggested renting a rototiller looked back as the group was leaving the site and expressed pride in the work they had completed, in their accomplishment as a team. D. talks about the concrete results of their efforts and the "dramatic change" they had brought about in the Butterfly Meadow over the course of just four hours. She also notes the striking change in the group dynamics and the attitude of individual team members toward the physical tasks they had completed. "There's something about doing physical work," D. says. "It really does give you a major sense of accomplishment, especially when you work in a team." D. says those four hours were her most rewarding FWG experience. "I felt really privileged to share that with them," she tells me.

The satisfaction of teamwork and the privilege of sharing experiences evoke the relational aspect of synergistic volunteering at the FWG, a place which unites people around a common goal, and connects individuals with the natural world. Relational benefits reach "beyond the purely physical" to embrace notions of relationships already suggested – from social contact with visitors and other volunteers, to interactions with plants and wild animals, and more, as the following chapters reveal.

Chapter 9 The relational Fletcher Wildlife Garden – a community of interest and activity

The Fletcher Wildlife Garden (FWG) is, by its very nature, a relational place – from historical associations, to contemporary partnerships, to varying opportunities for social interaction, teamwork, friendship and remembrance. This diversity of relations reflects John Agnew's statement that places are settings for both activity and social interaction (Agnew 1993, 262) – interaction being, as Cresswell points out, one of the activities that contributes to the significance of places (Cresswell 2009, 169).

Green places such as parks have, in fact, been recognized for the contributions they make to social health, as settings where people can engage with the community, expand social networks, and develop personal relationships (Maller et al. 2009, 55 and 57). Social connectedness has been associated in particular with groups that are actively involved in nearby natural areas, where common community tasks unite volunteers in a shared purpose (Maller et al. 2006, 49; Townsend 2006, 114; Birch 2005, 245), as such expanding the synergistic benefits of volunteering in nature. The FWG is one such local natural area, a place where volunteers can engage in a variety of common community tasks to their physical advantage as discussed in the preceding chapter, and to their social benefit as the following pages will reveal. This chapter explores the relational dynamics and benefits of the FWG – from its historical roots, to contemporary associations that contribute to the FWG's maintenance and evolution, to opportunities for varying degrees of social contact.

9.1 *Relational roots*

Various relations, both practical and figurative, played a role in the creation of the FWG. Some of those relationships continue to influence the evolution of the project today.

9.1.1 *Productive partnerships*

Collaborations with various partners helped the FWG project to get started and take shape. Some of those associates continue to anchor the project in the community, and to contribute to the maintenance and evolution of the site today. In this section we will review certain critical project partners.

Ottawa Field-Naturalists' Club

The Ottawa Field-Naturalists' Club (OFNC) provided the impetus for the FWG project in the late 1980s, when certain of its members proposed the idea of establishing a site that demonstrated and promoted the creation of wildlife habitat in human-dominated environments (Hanrahan 2003, 1). The idea was presented to the OFNC's conservation committee, accepted, and officially launched as a long-term project in 1991. In the FWG's 2011 draft strategic plan, the OFNC is identified as a "dominant shareholder" who provides the project's financial and administrative structure. The FWG is managed by a dedicated OFNC committee responsible for decisions concerning garden operations, and for updates to the club regarding developments. The final authority for the project is the OFNC's council and president (FWG SP, 2011).

The FWG is actually described as a "continuing interest" for many OFNC members (Brunton 2004, 28) – so interesting that the club has become an important source of FWG volunteers. Twelve of the FWG case study participants make a direct connection between the OFNC and their decision to volunteer at the FWG. Both Sheila and Luke, for example, tell me that of all the volunteer opportunities offered by the OFNC, the FWG held the most appeal. Margaret states that when she was looking for volunteer opportunities, the FWG was the OFNC project where she felt she could make a contribution. "The fact that it promoted native plants and species," she says, "made it even more compelling."

Agriculture and Agri-foods Canada & Central Experimental Farm

Agriculture and Agri-foods Canada (AAFC) is identified as another "dominant shareholder" in the FWG project (FWG SP, 2011). The relationship between the FWG and AAFC, particularly the Central Experimental Farm (CEF) which operates on AAFC land, is long-standing and complex, and continues to this day.

Representatives from the CEF's Arboretum and Friends of the Central Experimental Farm group (FCEF), for example, joined the OFNC in submitting the initial proposal to AAFC to establish the FWG project (FWG D2, Project description, 1989: 1). Today the FWG is operated through a memorandum of understanding between the OFNC and AAFC. This agreement stipulates guidelines and conditions for FWG use of AAFC land, as well as obligations and responsibilities of both partners, who also provide representation on each other's advisory and management committees (FWG SP 2011).

Essentially the FWG's landlord, AAFC makes land available for the FWG project, takes responsibility for repairs and renovations to the Interpretive Centre, includes the FWG in its security network, provides land management advice, and supplies services such as tilling in the Butterfly Meadow habitat (to facilitate ongoing "renovation" work there) and periodic mowing in the Old Field habitat. FWG volunteers are aware of the FWG-AAFC relationship and its benefits. An early newsletter, for example, makes the following public acknowledgement: "We ... thank Agriculture and Agri-Food Canada for installing a new forced air heating system complete with new efficient furnace in the Interpretive Centre. Removal of the old furnaces has freed up a whole wall for display purposes and given us a lot more room to spread out" (FWG NL 1997a, 2). Gordon tells me he finds the FWG-AAFC relationship unusual and unique, while Margaret comments on the "good support" the FWG receives from both the OFNC and AAFC.

Landscape Ontario

An organisation which played a pivotal role at the beginning of the project – to the extent that it was identified as an "associate partner" in the early years (FWG D2, Project description, 1995: 3) – is Landscape Ontario, the province's horticultural trades association¹⁵. As the FWG 2011 draft strategic plan points out, Landscape Ontario's Ottawa Chapter (OCLO) was a critical supporter of the project, contributing "expertise and the ability to undertake and pay for major projects" (FWG SP, 2011).

Under the guidance of member and landscape architect Eileen Chivers, OCLO essentially developed and created the FWG Backyard Garden with assistance from students and instructors from Kemptville College and Algonquin College's Landscape and Horticulture Program. Kemptville College students grew plants for the project, while Algonquin College students carried out the construction work, creating pathways and patios, a pool and waterfall, and the original rockery (FWG D2, Project description, 1995: 8; Dickenson and Harrison 1992).

Eileen mobilized OCLO members to donate labour, services and materials, including sod, rock, nursery stock, design services, equipment use, trade show involvement, and more from 1992 to 1996 – a value of \$72,000 according to FWG archival material (FWG D2, Landscape Ontario). Eileen attended the FWG 20th anniversary celebration in June 2010 where she provided, as Christine writes in her retrospective, "a truly entertaining account of how the

BYG came to be.” Eileen’s involvement was critical, Christine points out, because Eileen had the contacts, expertise and background to “get things done right”, resulting in a garden which is today “a tribute to what a vision and hard work can achieve” (Hanrahan 2010e, 164-5). A “thank you” card from Eileen to the “Friday Morning Club and all the volunteers in the Backyard Garden” posted in the Interpretive Centre after the event expresses appreciation for the ongoing hard work in sustaining the vision. “My compliments to you all,” she writes. “The garden looks wonderful.... It is maturing nicely thanks to all your hours of dedication to its upkeep. It is a lovely spot to spend time with other dedicated gardeners.”

9.1.2 A link to the past

Vision and hard work characterise another FWG connection: a link to the past inscribed in the project’s name and evoked every time the FWG is referred to in writing or speech. By association, the name also forges a connection with the aforementioned AAFC, CEF and OFNC. The “Fletcher Wildlife Garden” name was chosen with great care, as the following announcement reveals:

After much deliberation, the garden was given an official name. The Wildlife Garden Committee considered a number of prominent OFNC members and individuals associated with the history of the Central Experimental Farm and Agriculture Canada, and felt that naming the garden after James Fletcher would be most appropriate. Fletcher was instrumental in the founding of the OFNC in 1879 and was Chief of Botany and Entomology at the Central Experimental Farm from 1887 until his death in 1909. Because of his great influence in the development of botany and entomology in Ottawa and Canada, it was felt that Fletcher was an ideal choice (Stevensen 1992a, 38).

FWG archival material confirms that the choice of name was based on James Fletcher’s “important historical connections” with the OFNC, the Central Experimental Farm, and Agriculture Canada” (FWG D2, Memorandum of Understanding).

The same material reveals that James Fletcher – born in England, and working in Canada first as an accountant at the Bank of British North America, and later at the Library of Parliament – studied botany and entomology in his leisure time and frequently advised the Department of Agriculture on entomological matters. So important was the role he played that he was appointed the department’s honorary entomologist in 1884, eventually becoming the CEF’s entomologist and head of botany and entomology (FWG D2, Memorandum of Understanding). James Fletcher also became the first curator of the Dominion Arboretum (Bryant 2003; Johnson 1998), the FWG’s neighbour.

James Fletcher is described as the “driving force” and “inspiration” behind the founding of the OFNC in 1879 (Dickenson and Harrison 1992), an individual who embodied the club’s “enthusiasm, idealism, and commitment” (Brunton 2004, 13-14), and a “fine field-naturalist, far ahead of his time who understood ecology and stressed the importance of interpretation of the natural world to the general public” (FWG D2, Memorandum of Understanding). He probably would have approved of the FWG project.

A 1992 *Ottawa Citizen* piece does, in fact, make the statement, “James Fletcher would have been proud” – an impression FWG volunteer Theresa was able to verify one Sunday afternoon when she was staffing the FWG Interpretive Centre. She tells me, with a touch of pride, about a family with three children, aged 5 to 12, who arrived at the Interpretive Centre and started speaking with her. They said they were visiting from Toronto, and over the course of the conversation, the mother revealed that she was a descendant of James Fletcher. The woman also told Theresa that her ancestor would be “very happy in his grave to see the garden like this.”

9.2 Human connections

Theresa’s pleasure and pride in the encounter with James Fletcher’s descendant demonstrates the potential for meaningful social interaction on-site. Research has, in fact, revealed the following explicit social advantages of volunteering in green places: opportunities for fun (Townsend 2006, 115), new friendships (Townsend 2006, 115; Reynolds 2000, 520), working with others on worthwhile tasks (Reynolds 2000, 520), and increased social networks and feelings of belonging (Moore et al. 2007, 260). The FWG volunteers who participated in my study confirmed these benefits and provided insight into other associated consequences, as the following sections reveal.

9.2.1 Tangential human connections

Tangential human connections are those which occur or develop between volunteers and the non-volunteers they encounter or communicate with as a result of working at the FWG. Some of these associations, however brief, can be rewarding, as demonstrated by Theresa’s encounter with James Fletcher’s descendant. Theresa is one volunteer who expresses pleasure and satisfaction in interacting with FWG visitors. “This place is for people,” she tells me, describing the families who come on summer Sunday afternoons when the Interpretive

Centre is open to the public. Families are drawn to the building, she tells me, and children are attracted by the indoor exhibits and excited to look at insects through the microscopes. “You should see their eyes,” Theresa exclaims with a big smile.

Other volunteers also remark on positive contact with visitors. Gordon tells me he appreciates feedback from “lay visitors” to the FWG, while Glenda, who calls herself an extrovert, talks about people coming to the Backyard Garden, approaching her while she is working, and thanking her and the other volunteers for the great job they are doing. She is obviously pleased with the positive response, as is Christine, who describes Sunday afternoon visitors expressing “delight and amazement” at the existence of the FWG, and joy at having access to such a wonderful oasis (Hanrahan 2004a, 3; 2004b, 3). I have had similar experiences while volunteering at the FWG. On a Friday morning in July 2010, for example, while I was working with another volunteer at the Butterfly Bed in the Backyard Garden, a woman approached carrying camera equipment. As my field notes reveal:

She had been taking photographs in the garden, and she stopped ... and said, ‘Thank you’ for all the work we put into maintaining that garden. She says she loves to come, and that it is her favourite garden in Ottawa. She thanked us repeatedly, saying her garden could never look as good as this one. I said that this one was maintained by a whole team of volunteers (July 2, 2010 field notes).

It is gratifying for volunteers to receive such positive feedback – particularly in the Backyard Garden where intense ongoing effort is required to keep the area looking tidy and attractive.

In other parts of the FWG, different sorts of encounters can be equally gratifying. In its first season of operation, for example, the Tuesday Morning Invasive Species Group reports that it was joined by a family wishing to offset the environmental impact of their travels to Ottawa. The group’s blog provides the following account:

This week we had the pleasure of having the Heffner family from Grand Rapids, Michigan work with us in our efforts to control Dog-strangling Vine (DSV).... The Heffners were in town on vacation, visiting son Daniel who is a grad student here in Ottawa. Aware of the environmental impacts of their travel, they try to offset these when travelling by giving back in some way to the community they are visiting. They found out about the Fletcher Wildlife Garden (FWG) and the struggle to control Dog-strangling Vine.... Upon arrival, the Heffner family enthusiastically got suited up with work gloves and dug right in, so to speak! In the couple of hours they gave to FWG, they were able to make a real difference.... The Heffners set a wonderful example of environmental stewardship and community involvement.¹⁶

The Heffner’s contribution to the FWG is unique, and the family’s contact with FWG volunteers is inspiring. Other connections, forged more frequently with regional groups and projects, can be equally gratifying. A 2008 FWG newsletter, for example, reports on FWG plant and seed contributions to regional school greening and conservation projects (FWG NL

2008a), while a 2009 newsletter expresses delight at being able to offer native plant advice to new garden projects at an elementary school and a housing co-op, as well as lend tools to different local groups for invasive species removal (FWG NL 2009a).

Trouble in the garden

Yet not all tangential connections are positive. Dog walkers and dogs, for example, encountered by many FWG volunteers while working, can be annoying for some individuals such as Joyce, who identifies “people and their damn dogs” as a major source of frustration. “If there were fewer dogs, I’d be happier,” she tells me. Lisa, on the other hand, views the unavoidable presence of dogs and their people less negatively, as a potential source of volunteer effort. Pointing out that they are the most regular users of the site, she says, “I think the dog walkers should do something.” She suggests that they participate in a work bee, which did in fact take place in 2005 in response to complaints about dog walkers not cleaning up after their canine companions. An initial survey of this group of visitors – described by Christine as coming from across the city and feeling “very strongly that the FWG was a special place which they were privileged to be able to use” – revealed their willingness to participate in a spring clean-up day (Hanrahan 2005a, 2). The event which was subsequently organized drew over 50 participants and was considered a “very worthwhile” outreach initiative (Hanrahan 2005b, 2). It seems that the effects of that initiative may still be in effect, since dog waste does not appear to accumulate noticeably of late.

Less noticeable than accumulated dog waste, yet more directly harmful to wildlife, is the potential threat posed by dogs whose owners allow them to roam off-leash at the FWG. Ancillary sources reveal the observation of a fox being chased by a dog in the ravine (FWG Obs 2007, 81), along with dead groundhogs (Hanrahan 1997f, 2), a dead frog (FWG Obs 2007, 41), and a dead rabbit (FWG Obs 2007, 124) – all likely mauled by dogs. “The FWG is a protected area where animals should be able to live without harm,” Christine writes in 1997. “Too many dog owners view squirrels and groundhogs as suitable sport for their dogs” (Hanrahan 1997f, 2). Ten years later, the situation does not appear to have changed. “They [dog owners] seem to view the FWG as a wasteland where their dogs can chase wildlife and run wherever they want,” she observes. “I have spoken to some of these owners, and it is a small minority that refuse to listen. Telling these people that we set up the garden for wildlife,

not dogs, does no good.... The saddest thing, for me anyway, is finding the animals killed by the dogs” (Hanrahan 2007a, 2).

The dog issues do not mean to suggest that canines are unwelcome at the FWG. Some volunteers, in fact, bring their dogs when they come to work on site. These animals, pleasant and well-behaved, are accepted (sometimes welcomed and plied with biscuits) by the others as companions of their fellow volunteers.

9.2.2 Communal human connections

Companionship in general is an important aspect of volunteering at the FWG, something FWG volunteers tend to appreciate and value. Christine, for example, writes about the “convivial company” of FWG volunteers (Hanrahan 2006b, 1), people Gail describes as “a very fine group of people” and “part of the positive experience.” Kate speaks of finding a place of acceptance and camaraderie among FWG volunteers. “Socially, I enjoy the company,” she tells me.

These portrayals demonstrate the communal aspects of working at the FWG and suggest a range of related benefits that have been associated with volunteering in natural areas: social interaction, conviviality, companionship, new friends, and collective identity (Mind 2007b, 6). These and other social aspects of volunteering – motivation, social exchange, sense of community, cooperative activity, friendship, and inspiration – emerged in conversation with and teamwork alongside FWG case study participants.

Motivation

The “congenial and very friendly group of people” (Hanrahan 2007a, 1) who work at the FWG are the reason many people continue to volunteer there. “I really look forward to seeing the other volunteers,” Sheila tells me. “I truly enjoy each one.” Luke echoes her sentiments. “I certainly enjoy some of the people here,” he says, calling them “an interesting lot.” Lisa states that she looks forward to interacting with other volunteers that are “nice”, “friendly”, and “pleasant”, while Pauline states simply, “I love the people.”

Tracey tells me that she comes to work with the Friday morning group because the people are all so interesting. Robert concurs, telling me he looks forward to interaction with “some very nice and knowledgeable people”, an impression reflected in Cindy’s statement that the other volunteers are “so well-educated, so together.” Margaret suggests that part of what

makes the other volunteers so interesting is their idiosyncrasies, while Sheila remarks on their diverse backgrounds – something I discovered during the interviews. I was fascinated to learn, for example, about the various professional and academic backgrounds represented in the FWG volunteer group: mathematics, civil engineering, nuclear physics, computer hardware, the military, the foreign service, historical research, classical studies/ancient history, biology, chemistry, environmental science, forestry, horticulture, geography, urban planning, landscape architecture, banking, administration, teaching, library science, communications, writing-editing, psychology, and theology.

Doubly interesting is the fact that I would not have known about most of that colourful background had it not emerged during the course of the study. When we are working together at the FWG, our sleeves rolled up, digging, weeding, pushing wheelbarrows and engaging in other physical outdoor activities, we are all the same – volunteers toiling to create and maintain habitat for wildlife and humans, with dirt under our fingernails and mud on our boots. A bit of our backgrounds might emerge as we work side by side, but we usually focus on the task at hand, and tend to discuss topics related to gardening and nature. Those task-related conversations prompt one relatively new volunteer to observe that between them the team members have a remarkable breadth and depth of knowledge which they are willing and happy to share, along with individual quirks and senses of humour which make working on-site rewarding and fun. Other new volunteers agree, including one who asserts that an important – we could add motivating – aspect of the FWG endeavour is to have fun.

Social activity and exchange

The sharing of knowledge among volunteers is an important aspect of working at the FWG, which for some volunteers has taken on a certain social significance. Bill, for example, tells me that volunteering at the FWG has become “more of a social activity.” Glenda says she cannot imagine working at the FWG by herself, and that she would come more often if other volunteers also came during the day. Marie makes the interesting statement that volunteering at the FWG helps to fill the social void she experienced when she retired.

Other volunteers may also seek to fill a social void, although they do not express it explicitly. Thomas however – an active volunteer who does not appear to like sitting still for long periods – surprises me when he says, “I don’t care if I’m not doing anything,” adding that he would be content to “just stand around and talk.” What he looks forward most, he

explains, is just *being* at the FWG. Joyce is another volunteer who appears to enjoy just being at the FWG. She was, for example, very generous with her time when we met there to conduct the interview. As my notes that day reveal: “we carried on for nearly 3 hours. I kept saying we could finish this another time, and she kept saying that she had all morning ... I have the feeling she enjoyed herself” (June 16, 2010 interview notes). Joyce also told me that she looks forward to coming to the FWG, seeing who shows up, and listening to the other volunteers talk during break time.

Break time, also known as “coffee break”, takes place at 10:30 on Friday mornings. A big pot of coffee is brewed inside the Interpretive Centre, and cookies, sometimes also cake, are provided at the big table in the main room. Every so often a volunteer will bring a snack they have prepared at home to share with the team. Coffee break is a welcome part of the Friday morning routine for many volunteers – particularly those who arrive earlier in the morning, and who work physically for up to two hours before coffee break takes place. Paul, for example, tells me he looks forward to coffee break as a rest from the physical work. “I’m usually so pooped out, I need one [a break],” he says. Other volunteers value coffee break for the social exchange that occurs around the table. “I love to just sit and listen to some of the stories,” Pauline says. Cindy is particularly enthusiastic about coffee break, her favourite part of the morning. “I think because it’s a chance for everyone to sit down and talk about what they’ve accomplished, what needs to be done,” she says. “I think that’s when I do most of my learning.”

Coffee break appears frequently in my field notes. It provides an opportunity for volunteers to relax, learn, share ideas, catch up with each other, ask questions, discuss issues, make announcements, plan events, and engage in show and tell. Volunteers often, for example, consult the group regarding the identification of flora or fauna they have discovered, usually plants. Individuals typically bring a leaf, sprig or twig to show or pass around, while other volunteers scrutinize it, consult references from the resource centre, and sometimes identify the species, often through teamwork.

One of the most intriguing and humorous coffee break show-and-tell incidents involved both FWG volunteers and visitors, and an insect in its larval stage. It was such a striking episode that it shaped up in my field notes as a story of sorts, bearing the title “A Tale of Two Maggots”¹⁷:

What I ... remember is A. getting up toward the end of coffee break, holding up one of those little clear plastic film canisters, and telling us that if we wanted to look at some maggots, B. had brought some in. Apparently B. had been cleaning off her front walk, and somehow these maggots were there, in association with some kind of leaf or something. They hadn't been there the previous day, so she thought she would grab them up and bring them in for us to look at.

A. said it would be in the back room. C. quipped as long as it wasn't among the cookies.

A few of us gathered around to look at it afterwards, speculating on where it had come from and what it might be. The 2 little larvae were squirming around, obviously wanting to get out.

Somehow we all got into the back room, where more people came to look. I said it would be nicer to call them larvae, not maggots. I also expressed concern about the larvae, adding that we must free them afterwards. Somebody remarked on that, saying only naturalists would say something like, "Free the maggots." D. came in and said, "What have you got there, a maggot?" It was so funny the way it came out. She took the jar and scrutinized it.

Someone else added something to the effect that it's not normal to see a bunch of people gathered like that, fascinated, around a couple of maggots in a bottle. E. responded by saying, "That's why I come here, because we're not normal."

A., interested as ever in getting photographic documentation, wanted to photograph the larvae. She wanted to snap pics of them outside, on a natural surface. That coincided well with my desires to set them free.

So we headed out into the BYG [Backyard Garden], to the rockery, where there was, of course, a lovely flat rock where A. could place the larvae and photograph them as they moved around. A couple of garden visitors, 2 older women, came along to see what we were doing. They were quite interested in the larvae, and we chatted about them, speculating on what they were, although I don't remember the details. The women seemed not at all put off by the "maggots", and seemed as interested in them as we were.

It was interesting to watch the larvae move around. They were obviously aware of each other's presence, and appeared to be following each other as they wiggled toward the edge of the stone. They didn't seem to be comfortable on the stone. One fell over the edge and worked its way to where the stone met the soil, and started to burrow into the ground. The other eventually followed.

We had quite an interested time watching them and following their movements, talking and speculating about what they were doing (Aug. 13, 2010 field notes).

We never did figure out what the larvae might eventually turn into, let alone narrow it down to a species. But the incident and the intense attraction of simple insect larvae, "maggots", reveal the depth of volunteer fascination with the natural environment and its denizens, and the power of coffee break to encourage what Margaret describes as "fellowship" among individuals with a common interest.

A sense of community

A common interest in the natural environment and its denizens, including "maggots", is a strong factor attracting volunteers to the FWG, keeping them coming back, and bonding the team members. The bonding aspect of the volunteer experience creates a sense of community, which Evelyn captures most directly with her statement, "There seems to be a community

there.” Evelyn uses the word “community” in its broad sense as a “social network of interacting individuals” often sharing a defined territory (Johnston 2000, 101), along with interests and/or values based on social identity (Gregory 2009, 103). If we take into consideration the well-defined, albeit porous boundary of the FWG, and the intensely interested, involved, and interacting volunteers who work on-site, the FWG network could definitely be considered a community. The “sense of community” Evelyn captures in her statement can be understood as the *experiences* and *meanings* associated with community – essentially the relational aspects rather than territorial considerations. Sense of community is characterized by feelings of belonging and identification, by emotional connection and senses of relatedness and mattering among group members (McMillan and Chavis 1986). This relational “sense of community” is strong among FWG volunteers.

The importance and pleasure of belonging to and identifying with a group of “like-minded people” is noted by many of the FWG team members. E. expresses it evocatively when she says, in the context of “A Tale of Two Maggots”, that she comes to the FWG because the people there are not normal – implying that they, like she, have certain unusual fascinations in common. Other volunteers express a similar appreciation. Paul, for example, looks forward to talking with people who have similar interests, while Gordon anticipates “just sharing experiences with like-minded people.” Cindy declares with characteristic passion, “I really enjoy being surrounded by people that share similar passions and interests. I really love it all.” Marie, quieter and less emphatic, tells me how good it feels to be around like-minded people who care about nature and the environment. A snippet of conversation with a new volunteer after coffee break one day reinforces the importance of volunteering with like-minded people. As I write in my field notes:

After coffee break, a few of us were in the kitchen washing our cups, and F. mentioned how she had been volunteering at the CEF with Friends of the Farm, working on the rose bushes. She said they worked mainly alone (she is such a social person and likes to talk so much, that must have been difficult!); and the rose bushes didn’t fare very well, so that was not satisfying (she talked about them dying by the end of the season); and she spent most of her time killing bugs in some sort of lethal solution, and she felt very badly about that. “Me, who takes spiders out of the house.” I told her, “Well, you’ve come to the right place” (June 11, 2011 field notes).

Interest, care and passion concerning nature unite all members of the FWG volunteer community and put them on equal footing, no matter what their backgrounds. It follows that, as much as the FWG connects people of different backgrounds around similar interests, it also provides opportunities to meet people who are different, albeit subtly – a benefit of

group membership that has emerged in the context of volunteering in nature (Townsend 2006, 116-17). Not many FWG volunteers mention this benefit, but those who do talk about it make it very clear. Gail, for example, looks forward to the fun and “sparky” presence of a certain other volunteer at the FWG. “She’s just different,” says Gail. “She thinks differently.” Evelyn views the differences between herself and other volunteers as providing opportunities to learn. “I feel like I’m encountering a different group of people than I encounter in my daily life,” Evelyn reveals. “People with knowledge that is different from people I know.” That new knowledge, she notes, has benefited her home gardening project and reinforced her perspectives on the natural environment. Cindy puts the differences in terms of a diversity of opinions regarding work at the FWG – differences which, she points out, make for interesting discussion and enhanced learning. In the interview, Cindy and I go on to talk about the different perspectives I and another volunteer have on a certain native shrub which he feels is overwhelming newly planted trees in the ravine. I, on the other hand, find the shrub to be beneficial because it produces flowers that provide nectar and pollen for pollinators, as well as berries that provide food for birds. He and I have agreed to keep the shrub clipped back from newly planted and other desirable trees. Cindy feels she learns a lot from those sorts of discussions and negotiations. They are a “really good way to learn more,” she says.

Cooperative activity

Discussions, negotiations and learning are part of the teamwork involved in maintaining the various FWG habitats. Thomas, in fact, tells me that he has learned about “co-operative working” and about bringing together people who are very different to work toward the same objective. Working as a member of what has been described as an “eclectic and enthusiastic crew” (Burns 1999, 1) is one thing many FWG team members tell me they appreciate and value about their volunteer experience. “Working with the people here, that’s very important to me,” says Glenda. Randy expresses a similar sentiment. “I enjoy being useful as well as being part of a group,” he states, adding that it is rewarding to have integrated “reasonably” well. Jo tells me the most satisfying aspect of volunteering at the FWG is being recognised, acknowledged and identified as part of the group, while Sheila puts FWG teamwork in terms of pride. “We take great pride in our work,” she tells me, stressing that it is a “huge privilege” to be part of the FWG team.

It is interesting, in fact, to hear the volunteers speak about their contributions to the cooperative activity on-site. Sheila considers her role to be “doing what everyone sees needing done”, while Lisa says she offers “another pair of hands” to carry out a “fairly monumental” project. Luke sees himself as “helping in a small way” to support other volunteers carrying heavier loads; “part of the game, whenever I’m needed” are the words he uses to describe his role. Jo says, “I bill myself as a general dog body, another pair of hands.” She explains that she generally finds someone who will tell her what to do, thereby suggesting the reciprocity that Pauline captures in the statement “me helping them, them helping me.”

Joyce is particularly modest about her contributions. She tells me she has no particular role, and when I point out the tasks she regularly carries out, she says that her work isn’t important, that she doesn’t do anything rewarding. “I enjoy the people, and I like to help out,” she states. “I like to be of use.” Joyce is, however, quick to identify the contributions of others, including previous Backyard Garden coordinators and the roles they played in the evolution of that habitat. Glenda also acknowledges the “great design” and “very positive influence” of a particular coordinator, while Valerie draws attention to the influence of all previous Backyard Garden coordinators – a “legacy” she calls it.

Concerns in the garden

This general appreciation of past and present fellow team members, along with modesty regarding individual roles and contributions, makes FWG volunteers hesitant to criticise or draw attention to negative aspects of their volunteer experience. As Gordon points out, people don’t want to hurt each other’s feelings. In the course of discussions, however, certain concerns did arise.

Leadership is considered an issue by some of the volunteers. Thomas, characteristically reluctant to appear negative, starts by stating that he hesitates to say what he intends to say because he does not intend it as criticism. He then expresses concerns regarding leadership at the FWG, and adds that he wonders what “ideal leadership” should be. “I don’t know how you lead a group of volunteers,” he says. Bill is less discreet. “There’s no definite leader,” he asserts, “and people don’t know what to do.” He adds that he often sees people coming to volunteer and not knowing where to turn. “I get frustrated for people coming along and not knowing what to do,” he states. A new volunteer’s experiences reflect Bill’s concerns. She

tells me it is difficult to know what is going on and to figure out what to do. Some people need structure to feel confident, she points out, adding that new volunteers who are shy might find the situation disorienting and discouraging.

Margaret draws attention to what she describes as the “ad-hoc” nature of work assignments and scheduling at the FWG, along with a lack of advance planning – something Marie attributes to a lack of vision. “Maybe there is a vision,” she says, “but it doesn’t seem to be apparent when I’m there.” She adds that a lack of consensus and/or differing opinions can leave volunteers feeling confused and uncertain. Although all these things frustrate Randy, he says that they strike him as “fairly normal” in a volunteer organisation. Gail, who has had considerable experience with community organisations, points out that it is difficult to have “tight control.” As much as the lack of direction and organisation annoy her, she tells me, she is not worried. “Things do get done,” she says. Glenda attributes the ongoing functionality of the FWG to the dedicated volunteers. “I think everybody is doing their part,” she observes. “It’s running as well as it can at this point.”

Tension in the garden

The volunteers “doing their part” to keep things running at the FWG sometimes also find themselves in situations of tension or even conflict with one another, occasionally resulting in volunteers leaving the project. Again, most people are hesitant to make critical comments. Marie, for example, alludes briefly to “differences of opinion” and “pussyfooting around”, while another volunteer talks about the “atmosphere of terror” and intimidating hierarchy that reigned when she first started working at the FWG – without mentioning any names. “I had a lot of frustrating experiences when I first started,” she says. “I was scared to death of pulling anything out in case it was something valuable.” People were “bossier” then, she explains, adding that they were people with more knowledge, who made her feel inadequate because she knew less. Nonetheless she persevered and now feels much more at ease. “I do find it is much more laid back now than when I started,” she observes.

The potential for weeding out valuable plants still exists. I experienced it myself when relatively new volunteers unfamiliar with plants in the Backyard Garden pulled up desirable native wildflowers along with some weeds they were removing, in the process trampling other native wildflower seedlings. The situation frustrated a long-time volunteer, who exclaimed to me, “You’re supposed to leave the garden looking better than it did, not

trample!” (June 12, 2009 field notes). The reverse situation can also occur. Gordon, for example, tells me it is frustrating when “you find some particular plants you’ve been nurturing to grow” and “you come along and found they’ve been pulled up.” He is not the only volunteer to feel that way. One Friday morning an individual who has since left the project told me that a volunteer she worked closely with on-site was hesitating to come back because, as I paraphrase in my field notes “it’s not very satisfying to have something you planted pulled up and moved somewhere else ... when you plant something one week, you look forward to coming back the next time and seeing how it is doing. When you find it isn’t there, your satisfaction in your work goes down” (Apr. 17, 2009 field notes).

That sort of situation can be upsetting to volunteers, as I witnessed on another occasion. My field notes tell the following story:

I put my things down in the building and went out to see where I could be of help, because there was nobody in the building. I saw G. standing on the pathway in her section, with H. ... G. looked upset. It looked like H. was lending a sympathetic ear.

G. gestured toward a patch along the pathway behind her ... and said, “Look, it’s all bare!” It did, indeed look as if a lot of vegetation had been removed. “What happened?” I asked. “Big rabbits,” replied G. I understood her meaning at once, but wasn’t certain – later I did manage to get out of her that she meant O., who had apparently come and removed a bunch of plants. G. was upset because of the bare look of her area. She has taken responsibility for it and obviously feels strongly about it and cares deeply about it (May 22, 2009 field notes).

The individual responsible for those plant removals – let us continue to call them O. – caused another upsetting incident. As I write in field notes later that season:

J. came by and pointed out the weeds in the gravel path. She said weeding that walkway was the task she had taken upon herself, and that she used to keep it nice and clean and free of weeds, and open and wide. But then, she said, she was told it was a “total waste of time” (she said it that emphatically, obviously quoting someone) and she stopped doing it. “And that’s what it is now,” she exclaimed, pointing to the result, with a “SEE!” implied. She had obviously taken great pride in keeping that walkway clean and nice-looking. I got the feeling she had been quite hurt to be told it was a “total waste of time” (July 3, 2009 field notes).

J. did not tell me who had made the “total waste of time” comment, but I assumed it to be O. since O. had said those same words to me regarding another activity, and I was quite taken aback by them. I will admit that my grasp of the situation regarding O. and the other volunteers is incomplete. During the interviews and other discussions, I did not wish to pry, promote discord among volunteers, or appear too focussed on negative aspects of volunteering at the FWG, so I did not probe for details. What the situation reinforces, interestingly, is the depth of volunteer attachment to the FWG and to particular areas of responsibility in the Backyard Garden, as well as pride in the work carried out there.

Friendship, admiration, inspiration

As much as differences, tension, and lack of direction and leadership can have negative impacts on people volunteering at the FWG – sometimes resulting in volunteers leaving the project – most social contact at the FWG is positive. Even during situations of conflict, volunteers support each other by lending a sympathetic ear, and attempting to help affected individuals deal with the circumstances. The volunteer who spoke of her many frustrating experiences with bossy people when she started volunteering at the FWG now declares the volunteers to be a “very, very nice bunch of people.”

Within this nice bunch of people, friendships have occasionally developed. Jo and Pauline tell me they have made new friends at the FWG. “There’s a lot of people here I really enjoy being around,” Pauline says. Thomas expresses a similar sentiment when he declares that he likes to be at the FWG “in the company of friends.” Louise explains that the social aspect of volunteering at the FWG is “very important” to her since she lives alone. “It gives me an opportunity to make friends,” she states. Lisa has also benefited from the opportunity to form friendships. She informs me that her friends have all moved away from Ottawa, and that she is now “chumming around” with another volunteer.

These friendships are not surprising considering the interests FWG volunteers have in common, and the admiration they feel for their fellow team members. Jo says it is very gratifying to witness the commitment of the volunteers who keep coming back “not just for the money.” Luke also says he is impressed by the dedication of certain volunteers who “pour their hearts and souls” into the project.

The highly devoted volunteers also receive public recognition for their work. In her FWG updates, for example, Christine never fails to acknowledge the volunteers who make the garden “a rewarding place to be” (Hanrahan 2006b, 6). “As always, our loyal band of volunteers deserve gratitude and thanks for their amazing work,” she writes. “They give freely of their time and energy to make the garden a special place to visit” (Hanrahan 2004a, 80). The following tribute to individual volunteer time and energy appeared in the FWG newsletter in the early years of the project. It recognizes the vision and hard work of Gillian Boyd, who established the Butterfly Meadow habitat, and who became coordinator of the Backyard Garden after its initial creation:

Gillian Boyd has been an inspired leader with a vision of the developing garden that we tried to help fulfil. She was never afraid to move established plants and shrubs to better locations,

expand flower beds, build ponds and patios, and generally take charge and give direction to our labours. She spent countless hours in the garden, planting, watering, and caring for plants when they needed it, not just on Friday mornings like the rest of us.

... The garden progressed in leaps and bounds during her tenure as coordinator, and we owe her a tremendous amount of gratitude for all she did for the FWG's backyard garden (FWG NL 1997d, 1).

This tribute provides another illustration of the degree of commitment the FWG can arouse in individuals – commitment new volunteer Mark describes as “awe-inspiring.”

The commitment of FWG volunteers provides a very specific sort of inspiration to two individuals. Marie, newly retired, tells me that the dedicated involvement of the other volunteers, who are generally older and retired longer, has given her “a more positive view of aging.” Evelyn, not yet at retirement age, also admires the dedication of her fellow FWG volunteers, along with their sense of purpose. “What I find to be a bonus and didn't necessarily expect,” she tells me, “was that I really like being with this group of people. I find them inspiring.” Other people she knows in that age range are having trouble with aging, she tells me, so she feels good being around the “senior members” of the FWG who are active and vibrant, who believe in what they are doing, and who are “just happy to be there.” Inspiration has also come from FWG volunteers of the past.

9.2.3 Memorial human connections

Certain FWG volunteers of the past continue to live on at the FWG today. They have left their mark in the memories and stories they inspired, in archived materials and OFNC publications, and in commemorative structures on-site at the FWG.

Bill Holland

Acknowledged in local media as a great birder, a keen volunteer, and one of the garden's founders (Presley Seward 1999, Johnson 1998), Bill Holland is memorialized most strongly in the name of the trail which winds through the FWG's various habitats. “It's official,” announces a 1996 FWG newsletter piece. “The system of trails connecting the various habitats at the FWG will be named after Bill Holland. Every day, from the inception of the FWG until he passed away in 1993, Bill spent many hours walking the trails as he counted and recorded bird species. Many of us owe our interest in bird-watching to Bill's patient encouragement and expertise” (FWG NL 1996c, 2).

The FWG owes more than that to Bill Holland, who is described by originating FWG member Jeff Harrison as “a man always willing to give a helping hand”, who offered “unswerving” and “unflinching” support to the FWG (Harrison 1994b, 38 and 50). In a tribute article published in the OFNC’s *Trail & Landscape* newsletter, Harrison writes that it was Bill’s “belief in the value of the project, his great sense of humour, and his constant presence at all our functions that spurred us all to work a little harder” (Harrison 1994b, 40). According to FWG archival material, when only vision and a lot of doubts prevailed in the early days of the project, Bill’s “unshakable” resolve and enthusiasm provided the “inspiration to succeed” (FWG D3, Brochures – General).

While conducting the FWG bird inventory one morning in November 1993, Bill had a heart attack and “passed away while on the job” (FWG 1994). “In many ways it was the most appropriate way for him to go,” writes Harrison (Harrison 1994b, 38) – a point echoed by Bill’s son, Tim, who describes his father’s death as “befitting of the way he would have wanted to die – doing something that he really wanted to do” (Holland 1994, 73). It is also fitting that the interpretive trail connecting corners of the FWG where Bill spent so many hours counting birds be named after him.

Eileen Evans

Eileen Evans is described as a “valued” and “good” “friend” of both the OFNC and the FWG, an individual who was often present at the FWG and the Arboretum with her dog (FWG 2008, 6; Hanrahan 2007b, 2). When she passed away in 2006, her family donated funds toward the construction of a long-anticipated pergola at the entrance to the Interpretive Centre. Christine writes in 2007 that the new pergola is “something we have wanted for a long time” and that Eileen would have been “delighted by this beautifully built structure” (Hanrahan 2007c, 2). Today, a plaque commemorates Eileen’s memory and legacy, and the pergola supports a grape vine which helps provide shade to seedlings waiting for the plant sale, and to volunteers taking a break from the summer sun. The pergola has enhanced the Interpretive Centre considerably.

Dale Crook

Bill Holland and Eileen Evans are known to me mainly by name, and by the memories FWG volunteers share. Dale Crook, however, I did meet, albeit only once at an event

unassociated with the FWG. Yet during our brief encounter, Dale made a strong impression with his kindness and his concern for the well-being of people in attendance. I did not know him as a fellow FWG volunteer because he passed away in 2005, before I started to work on-site.

Christine, reporting on Dale's passing, highlights his passion for nature, his "insatiable curiosity" about the natural world, and the interesting observations he shared with other volunteers. She writes that he was very active at the FWG, where he worked on removing buckthorn, inventorying trees, maintaining bird feeders, and much more (Hanrahan 2005c, 5). A FWG newsletter tribute adds that Dale was a "valued member" of the Friday morning work team, and a "good friend" to his fellow volunteers (FWG NL 2007d) – a point confirmed over the course of interviews with case study participants. Gordon, for example, talks about how rewarding it was to work with Dale at the FWG, while Joyce expresses sorrow at losing volunteers like both Dale and Eileen. Sheila says, with tears in her eyes, that her most memorable experience at the FWG was encountering Dale – "such a gentle person" – when he was dying of cancer. "He loved this place so much," she says. "He'd come along and just be here." She describes the last time she saw Dale at the FWG. He kissed her on both cheeks, she tells me, to say good-bye.

After his passing, three FWG volunteers constructed a memorial bench dedicated to Dale's memory (Hanrahan 2007b, 1). The bench was installed in the Backyard Garden, where it offers a view of various garden beds, the backyard pond, and the bird feeder Dale helped maintain while he was alive.

Vulnerable volunteers

The possibility of losing more volunteers lurks behind the scenes at the FWG. Every so often the vulnerability of FWG volunteers surges to the foreground, and we are all forced to acknowledge the changing dynamics of the FWG team, and perhaps even our own mortality. One such surge occurred on Aug. 21, 2009, when a dedicated long-time volunteer appeared at coffee break and, as I write in my field notes, "dropped a bombshell":

He has been diagnosed with colon cancer and will have surgery next Wed., followed by whatever treatment will be needed. Everyone was pretty shocked.... People generally did not know what to say, and there were silences, so at one point I came out and said something like, '... we wish you well and hope everything turns out all right' ... It was very brave of him to come and make that announcement publicly ... he seemed strong, yet frightened, his voice shaky at times (Aug. 21, 2009 field notes).

Earlier that summer, another long-time volunteer had also started undergoing treatment for cancer. Both individuals survived their treatments and continue to be involved in the FWG project today. Yet another long-time volunteer was undergoing cancer treatment as I wrote the first draft of this chapter; he has since passed away, his loss causing great sadness among the other volunteers.

Surgeries kept yet one other long-time volunteer away from the FWG for lengthy parts of two working seasons. And one individual was compelled to cease volunteering partway through the 2010 season because of high and unpredictable blood pressure. She did not, however, let it prevent her from attending the 2010 volunteer end-of-season party where, as my field notes reveal, she was warmly greeted by other volunteers. I write that she spoke that day about “how much she misses coming, how much she loves the place, and how this place is a part of her life. ‘For so many years this was my life,’ she said. She said that the doctor told her she shouldn’t do hard work. Her health is still not perfect” (Nov. 28, 2010 field notes). This volunteer has not been able to return to the FWG.

Her vulnerability, and the continuing vulnerability of the cancer survivors and other volunteers, makes the presence and company of each individual ever more poignant and valuable. Working with the cancer survivors on-site reminds us of the time when they were not among us and we asked ourselves if they would return and if we would see them again. I also wonder how the loss of committed volunteers affects the group and the project.

9.3 *Relational fusion at the FWG*

In proportion to their degree of involvement and their desire for social connection, all FWG case study participants feel the relational dynamics, including social benefits and tensions, of working at the FWG. The social benefits of the volunteer experience – from potential contact with FWG visitors, to teamwork in cooperation with other volunteers, to social exchange, friendship and inspiration – make the project and the land where it is situated an effective locale, in terms of a context and setting which facilitates social activity and connections.

The social dimensions of active engagement with projects such as the FWG can offer particularly significant opportunities for vulnerable groups in society. As Reynolds points out in the context of her evaluation of a Green Gym program in the UK, “it [Green Gym] offers

an opportunity for lonely or socially isolated people to develop new friendships, improve feelings of self-esteem and gain a sense of achievement through completion of tasks” (Reynolds 2000, 520). Other researchers point out that volunteering in nature offers “marginalized” individuals a route for reintegrating into society via a purpose shared with others, a different role and identity, and social networks regardless of age, gender, socioeconomic status, and other factors (O’Brien et al. 2011, 71 and 79).

One vulnerable group identified as benefiting from working in natural areas is the aging population (O’Brien et al. 2011, 79; Mind 2007b, 11; Moore et al. 2007, 260; Elings 2006, 49; Groenewegen et al. 2006; Townsend 2006, 117). Since sedentary living poses the greatest risk for older adults (Bird 2004, 24), the opportunity to work physically in outdoor settings like the FWG is important and valuable. Considering that older adults can also tend to be isolated socially (Moore et al. 2007, 260), the opportunity to experience camaraderie, teamwork and friendship while volunteering is another significant aspect of working at a place like the FWG, a benefit acknowledged by most of the older FWG case study participants.

These relational advantages could be viewed as contributing to the social capital – “links, shared values and understandings” facilitating trust and cooperation (Keeley 2007, 102) – experienced by FWG volunteers. Sharing those values and understandings in a compelling natural environment has been described by architect and sustainable cities researcher Timothy Beatley in terms of the creative “fusion” of our need for contact with both people and nature for health and happiness. These two needs, he observes, implicitly acknowledge that experience and learning related to the natural world can “nurture friendships and help to overcome the increasing social isolation felt by some Americans” (Beatley 2009, 231). It is this creative fusion in the complex setting of the FWG, perhaps, which makes the experience of working there so dynamic, and the physical-relational synergy so powerful for both older and younger volunteers. The next chapter discusses the “nature” half of the relational fusion experienced by FWG volunteers: the opportunity to experience and connect with nature and nonhuman life forms.

Chapter 10 The relational Fletcher Wildlife Garden – nature connections

According to a previous version of the Fletcher Wildlife Garden (FWG) brochure, “In Ottawa, we treasure our green spaces: they make us feel more alive and connected with nature” (FWG Br1, 2005). The brochure also identifies the FWG is a “place where you can experience and enjoy nature in the heart of Ottawa” (FWG Br1, 2005). Those statements capture an essential aspect of the relational Fletcher Wildlife Garden: the chance to make contact with the natural world and with wildlife. As important as the FWG is as a setting to engage in social interaction, with the potential for developing relationships with other people, it is also valued for the opportunities it provides to relate to nature – not surprising considering the complexity of the place and the creative “fusion” of contact with both people and nature (Beatley 2009, 231) possible there.

Opportunities to relate to nature are perhaps more important than we realize. A UK report, for example – based on focus group consultations regarding improvements to urban play areas, parks, and green spaces – reveals that people “right across the spectrum of underrepresented groups” value contact with nature in local green places. The focus group participants draw attention to contact such as seeing flowers, observing wildlife, experiencing the changing scenery, and simply being in the natural environment (described in Bird 2004, 56). These are the sorts of encounters social ecologist and environmental scholar Stephen Kellert associates with what he terms “ordinary nature” – ‘ordinary’ meant in “the dictionary sense of ‘routine, usual, or commonly encountered’”. Ordinary nature can come in many forms, Kellert points out – from nearby parks and green spaces, to backyard gardens and potted plants. As a normal aspect of life found in our neighbourhoods and communities, associated with our homes, places of work, and spaces of play, ordinary nature is experienced and valued as a matter of routine. It is integral to life, Kellert argues, with an impact on health and well-being (Kellert 2005, 9-10).

The FWG is one such place of “ordinary nature” in Ottawa. It offers the range of contact outlined in the UK report – exposure to changing scenery and flowers, contact with wildlife and nature in general (described in Bird 2004, 56) – to the people who volunteer there. That sort of contact, it has been pointed out, is inherent in the activities performed by members of

groups working outdoors to maintain green spaces (Townsend 2006, 117). At the FWG, the wide variety of volunteer tasks performed in the different habitats offers possibilities for varying depths of contact with nature, in accordance with each individual's interests and activities. As Theresa points out in the context of previous personal experience limited to manicured urban parks: "This [the FWG] is something different, something you can relate to." For FWG volunteers, that potential for relating to the natural world ranges in intensity from motivation to engage in on-site volunteer work, to immersion and appreciation, interaction and involvement, and intervention, as this chapter reveals.

10.1 A typology of values associated with nature

The importance of contact with nature in local green spaces, the diverse benefits associated with volunteering to maintain those places, and the potential deep significance of that sort of work can be understood in terms of basic values associated with human-nature relationships. Stephen Kellert has developed a set of such values based on long-standing research into what he describes as the "extraordinary diversity of feelings and beliefs people direct at the natural world" (Kellert 1996, 4-6) – a diversity which reflects the breadth of human needs for nature and the benefits people derive from contact with the natural environment.

The result of the study is a typology, or set, of nine basic values people hold with respect to animals and nature, as outlined in Figure 1. This typology includes certain values associated with particular human needs for nature reviewed in Chapter 4 (aesthetic, symbolic, scientific/educational, psychological needs), as well as values relating to benefits and significance of contact with nature discussed in the pages to come.

Figure 10.1 Typology of values associated with nature – Kellert (2005)

TERM/VALUE	DEFINITION
1. Aesthetic	Physical appeal of and attraction to nature
2. Dominionistic	Mastery and control of nature
3. Humanistic	Emotional attachment to nature
4. Moralistic	Moral and spiritual relation to nature
5. Naturalistic	Direct contact with and experience of nature
6. Negativistic	Fear of and aversion to nature
7. Scientific	Study and empirical observation of nature
8. Symbolic	Nature as a source of metaphorical and communicative thought
9. Utilitarian	Nature as a source of physical and material benefit

(derived from Kellert 2005, 34)

Kellert points out that these nine values reflect profound human cravings for connecting with the natural world (Kellert 1996, 9), and that the values have been critical in supporting and advancing human welfare and well-being. He also draws attention to their collective affirmation of humanity's dependence on natural processes and diversity for physical, emotional, intellectual, and moral benefits critical to our existence, security and fitness (Kellert 2005 50 and 57). The values outlined in Figure 1 help to make sense of the nuanced, and sometimes contradictory, tangle of human-nature relations discussed in the following sections.

10.2 Motivation

FWG volunteers come to the FWG mainly to work outdoors and to maintain wildlife habitat. They are motivated by the “wild” aspect of the place, and by the potential for direct contact with the natural environment, including wildlife and plants. Glenda, for example, indicates that birds and other wildlife are a “very big part” of her FWG volunteer experience. “It’s the main reason I’m here,” she states. Jo tells me candidly, “I signed up for the wildlife part of it, not the garden part of it.” She explains that she looks forward to the wildlife she might see while working, as well as flowers in bloom as the season advances. Gordon finds it gratifying “just to see wild animals in the middle of an urban area.”

Some volunteers are attracted by particular wildlife. Birds, for example, have an especially strong appeal, as evidenced by Luke and Thomas, who were both inspired to become involved in the FWG through birding connections and events, and by Sheila, who finds the simple presence of birds appealing. “The Fletcher Wildlife Garden is teeming with bird life,” she exclaims with obvious delight. “Sometimes you feel you’re in an aviary here.” Joyce does not proclaim her passion for birds as emphatically as Sheila, but she indicates that she acted upon her childhood love for gardening and birds when she decided to volunteer at the FWG. “I knew Fletcher was a good birding location,” she tells me, “and I was also looking for somewhere to volunteer.” She adds, “I love it, I really do.... the things you find here ... birds, pond.”

Other volunteers are drawn to the Backyard Garden and the prospect of working with plants, particularly native plants. “I love that idea, backyard gardening and native plants,” Glenda says, adding that native plants are the “one big attraction” for her. Cindy expresses a similar sentiment when she tells me that the FWG’s mission of using native plants to provide habitat for wildlife won her over. Tracey’s fascination with native plants started in childhood, with the native plants her mother grew at home. “I valued those plants from an early age,” she tells me, pointing out that she was originally attracted to the FWG because she wanted to learn more to grow native plants in her own garden. Bill and Evelyn also note that they were drawn to the FWG because they wanted to work with native plants and learn more about them.

Margaret articulates the appeal of native plants in broader terms. She became involved in the Ottawa Field-Naturalists’ Club and the FWG because she sought to learn more about the natural environment; she also found the FWG’s emphasis on native plants and wildlife “compelling.” Her work at the FWG, Margaret explains, has drawn her attention to the ways in which native plants “tie the environment together in a big way”, including insects and birds. “It’s something I was unaware of before working there,” she states, adding somewhat pensively, “Native plants tie in the whole spiral of nature.”

10.3 Immersion and appreciation

The appreciation Margaret has developed for native plants, the things she has learned about their relationships to “the whole spiral of nature”, are possible because of her

immersion in the natural environment at the FWG. When volunteers arrive to work at the site, they enter a natural world where, however ‘ordinary’ it may be, they have the opportunity to observe, discover and learn over time, at their own pace, according to their interests and needs. This immersion leads, in most cases, to a deeper appreciation of the natural world at the FWG, indulgence for its varying rhythms and dynamics (which include humans), and the capacity to manage emerging issues with tolerance and resourcefulness.

This immersion and appreciation reflects the “naturalistic” value associated with human-nature relations. Kellert describes this value as “the many satisfactions people obtain from the direct experience of nature and wildlife ... the pleasure we get from exploring and discovering nature’s complexity and variety ... from interacting with the natural world” (Kellert 1996, 11-12). Immersion in the functions and processes of the natural environment, he points out, offers various physical and mental rewards. The greater the immersion, the more alive and attuned a person feels. “Dull, colorless rocks become more varied; amorphous vegetation emerges loaded with meaning; the stillness of the landscape is transformed into many sensations,” he writes, adding that people who are not immersed, who lack a naturalistic appreciation typically confront a world that is “monotonous and dull world” (Kellert 2005, 52-3).

10.3.1 Appreciative volunteers

The world encountered by people coming to the FWG is far from monotonous and dull. A “vista of different habitats” writes a local journalist, draws butterfly watchers, birders, gardeners, scientists and tourists (Isaacs 2002) – as well as volunteers, who find themselves immersed in a natural environment which they can experience and explore to meet their particular interests and desires for contact with elements of nature.

Some individuals, for example, arrive early on Friday mornings to go birding together before starting their volunteer tasks. Evelyn speaks reverently of seeing Green Herons, along with Rose-breasted Grosbeaks and Baltimore Orioles at the FWG – birds she hasn’t seen for many years. “I didn’t know that they would all come to this oasis,” she says. Others seek opportunities to explore and experience the FWG by themselves. Thomas, for example, speaks about sitting and watching “for a while.” It is necessary to take the time, he stresses, “before things start appearing.” Pauline also likes to sit and observe. “I feel content when I’m here,” she says. “I can come here, sit outside and watch the birds. I feel comfortable here.”

Still other volunteers appreciate the opportunity to observe and experience the natural environment “on-the-job.” Sheila, for example, confesses that birds are very distracting for her, and that she is constantly laying down tools and picking up binoculars to look at birds while going about her tasks. Another volunteer expresses enthusiasm for all sorts of wildlife she encounters while working on-site, even wasps and bees. She shares her delight with the cheerful Chickadees, feisty Red Squirrels, and the strong presence of Chipmunks – including one with a burrow under the landscape cloth in the nursery, where she has seen it go when she works in that area.

Perhaps the most evocative and compelling account of FWG volunteer on-the-job contact with the natural environment is provided by Gillian Boyd, an early Backyard Garden coordinator, who shares her experiences in a progress report:

One of the bonuses of working alone in the backyard garden for much of the summer was the wildlife that dropped by or kept me company. A friendly groundhog would come out in the afternoons and graze unconcernedly on the grass about 10 feet away. Chipmunks scampered about the rockery and bobbed in and out of minute holes and crevices; Red Squirrels crossed the garden more circumspectly, taking advantage of available cover. A young Cooper’s Hawk flapped up out of the ravine onto a branch about 15 feet away and we must have been motionless, eye to eye, for all of half a minute. Catbirds relished the fruits of the serviceberry berries; thrashers swashbuckled under the more open shrubs. Barn swallows gritted in the rockery sand and a flicker enjoyed a dustbath in the bare soil. Three frogs found the pond a congenial home and lurked in disguise in the duckweed; dragonflies hawked overhead. A gaunt young fox wandered up the trail and through the garden entrance a couple of times and a pair of Sharp-shinned Hawks conducted an aerial drive out of the ravine and round the building. Monarch butterflies sailed over far less often than I would have liked, but Black Swallowtails were more frequent among the flowers (Boyd 1997, 48).

Gillian’s encounters were particularly rich and intense because she was working alone – perhaps also because the FWG was not yet attracting many visitors. Her solitary work may have prompted her to be more aware of other life forms around her, to ‘invite’ their company, in a manner of speaking. Yet even today, wildlife experiences abound at the FWG. Jo puts the impact of her wildlife encounters into the following words: “That’s the connection. That’s what makes it worth going back to.”

10.3.2 Ambiguity in the garden

The connections described by Gillian and referred to by Jo are so rewarding that they do indeed bring many volunteers back to continue working at the FWG. Yet as with all relationships, not every human-nonhuman contact is positive; not all nonhuman presence and activity is appreciated. The outcomes can be unplanned, unexpected, and downright undesirable, with the ongoing relationships challenging to negotiate.

Chipmunks, for example, are much admired and appreciated, especially by volunteers working in the Backyard Garden, where these small mammals have a strong presence. Yet their activities are not always welcome. An entry in the August 2003 FWG observations log, for example, reveals that Chipmunks were eating seeds stored in the Interpretive Centre, and that the animals needed to be “evicted” (FWG Obs 2007, 75). At the beginning of the April 2009 season, Friday morning volunteers were participating in a Backyard Garden walkabout to become re-acquainted with its various corners. I write in my field notes:

After the garden tour, we ended up in the nursery, where V. pointed out a section with 10 or so pots covered with some sort of wire cage (I don't remember what was in the pots). The cage is there because apparently there's a Chipmunk who lives in the nursery and considers it his/her turf and will not go away. The Chipmunk eats whatever is growing in those pots, so they are trying to keep it out. People chuckled at this. Somebody remarked with something along the lines of, “At least the wildlife is happy,” while others bandied about words like “free food” and “restaurant” (April 24, 2009 field notes).

Earlier, in response to observations of rodent damage to trees and shrubs over the winter, the tour leader had emphasized that the FWG is a wildlife garden and that we do not, therefore, want to “get rid of” wildlife that is destroying our plants – that we want the garden to be good for wildlife and meet its needs (April 24, 2009 field notes). A particularly animal-friendly volunteer agrees with that perspective. Speaking in defence of animals such as Chipmunks, she points out that they live at the FWG “full-time”, thereby suggesting that they have rights there. The issue of Chipmunk damage to potted plants was addressed in the fall of 2011 when the nursery was re-built, incorporating wooden plant boxes with wire covers to help keep out wildlife without taking action against the animals themselves.

The arrival of another animal in a different FWG habitat offers a more complex example of ambiguity and challenge involving a web of relationships connecting volunteers, visitors, and Beavers. While these animals had been observed now and again at the FWG since 2002 (Hanrahan 2005a, 5), many people were surprised when in the fall of 2009, and again in 2010, a young Beaver appeared and settled in for the winter, building a dam, taking down trees, and establishing a winter food cache in the Amphibian Pond.

Reactions to these developments, among both volunteers and visitors, were mixed. Many volunteers and visitors were delighted and excited at the possibility of actually seeing a Beaver. Others were uneasy over the situation, for different reasons. Some were concerned about the animal's welfare, and worried that the young Beaver might not survive the winter in the pond because of an insufficient food supply. Others were worried about the trees the

Beaver might continue to fell for food and dam construction materials. Still others reacted negatively to the mere idea of hosting a ‘Beaver problem’ at the FWG. As Christine writes in a fact sheet about the FWG Beaver:

The misinformation spread about these animals is so prevalent that I found some visitors were horrified at the thought of a Beaver living in our pond, even temporarily. Some even demanded to know what we were going to do about the “problem” and some helpful souls suggested they could set their dogs on it and drive it away. Others said we should call in a trapper. Naturally all such comments disturbed us. One woman, dismayed about his presence, told me that we would lose all our trees (Hanrahan 2010b, 3).

Throughout the 2009-2010 and 2010-2011 winter seasons, FWG visitors repeatedly broke the young Beaver’s dam, even though, as Christine reports, doing so in the winter can cause the animals to suffer and possibly freeze to death.¹⁸ According to various conversations at the FWG, certain volunteers had a secret desire to do the same; they felt the Beaver was a threat to FWG trees, and to the site in general. Their reactions surprised and mildly shocked one volunteer, not originally from Canada, who thought that Beavers would be loved and their presence welcome because they are Canada’s national symbol. Tracey also declared, in response to the Beaver debate: “We can’t kill the Beaver. It’s our national symbol!”

The negative reactions to the Beaver could be understood in terms of what Kellert terms “negativistic” values associated with nature. These values are associated with the inclination to fear and avoid nature in order to keep threats at bay – something Kellert describes as a “functional tendency” any species will manifest to help avert injury, harm, or death. “Human well-being depends,” writes Kellert, “on acquiring skills and abilities associated with some degree of distancing from potentially injurious environmental features” (Kellert 2005, 56). The distancing measures adopted to minimize potential threats posed by the Beaver, to reduce the possibility of harm to the Beaver, and to navigate the debate and divergent concerns among FWG volunteers, included wrapping valuable trees, bringing food to the Beaver, organizing a Beaver information session for volunteers in cooperation with the Ottawa-Carleton Wildlife Centre, and erecting a sign describing positive aspects of

the Beaver's presence. The text of the sign was written by Christine to "let people know that we feel privileged to have a beaver spending the winter at FWG":

A young Beaver is once again spending the winter in our [FWG] pond, waiting for spring before seeking a more permanent home.

This intriguing animal has helped us out by taking down some trees that were in the way of tree swallow boxes, and raising the water level of our pond.

Beaver are great wetland ecologists! They create and maintain habitat for a variety of birds, mammals, amphibians and plant life, all of which add to the amazing biodiversity of our planet.¹⁹

Although the presence of the overwintering Beaver stirred up a certain controversy, most responses were, as Christine points out, positive (Hanrahan 2010b, 3). Some local media portrayed the Beaver's presence in a positive light (OCWC 2010, Kenney 2010), while many visitors Christine encountered were thrilled at the possibility of spotting a live Beaver (Hanrahan 2010b, 3). One individual expressed excitement at just seeing signs of Beaver activity. "He commented that many people, living in the city, rarely get a chance to see this kind of thing up close," she writes in the FWG photo-blog. "He said he comes by often just to look at it because he thinks it is so neat. And of course, he'd love to see the Beaver."²⁰

Despite the many positive aspects of Beaver presence at the FWG, I believe people were generally relieved when the trend did not continue the following winter. The 2009-2011 Beaver situations were complex and challenging for FWG volunteers, some of whom were intensely involved in the issue, and others who found themselves at odds with each other over the affair. The situation certainly demonstrated how perceptions of nature and views of what is "natural" and acceptable in the city can diverge. The Beaver issue turned out positively in the end, however, with both young animals apparently surviving the winter and moving on, and volunteers and visitors learning about Beavers and each other from the experience.

10.4 Interaction and involvement

The Chipmunk and Beaver situations at the FWG involved a certain amount of action and involvement on the part of humans and animals: Chipmunks eating potted plants in the nursery, and volunteers constructing protective plant boxes; Beavers building dams and taking down trees, and volunteers wrapping the remaining trees, and bringing food to the animals. The human actions in those cases were actually (re)actions in response to situations at certain points in time. In this section we will focus on another type of human action: repeated, usually deliberate interaction and involvement with the natural world at the FWG as

a result of frequent and regular on-site activity. Interaction and involvement – as distinguished from immersion and appreciation which tends to be unidirectional – entail a certain mutuality of action, investment of energy, and physical participation in a transaction of sorts. The unplanned, sometimes surprising side of the equation is the nonhuman action as illustrated by the Chipmunk and Beaver activities just described, which demonstrate that wildlife is also capable of deliberate and purposeful action; some people may, in fact, call it agency.

10.4.1 Agency

Nonhuman agency not being the focus of this study, I will not embark on a comprehensive discussion of the concept here. Considering, however, the complex character of the FWG, the strong and active presence of nonhuman lives on-site, and volunteer awareness and appreciation of wild animals and plants, I would like to address the prickly nature of nonhuman agency in this section. FWG volunteers also alluded indirectly to nonhuman agency in conversation, and I feel it is important to include their voices in a discussion on the issue.

As I have pointed out elsewhere (Sander-Regier 2009), geography tends to emphasize agency as a human achievement – as the “capabilities of human beings” (Gregory 2000, 349), “people making their own geographies” (Goodwin 1999, 36), and “the power of human consciousness and human action to redirect the course of events” (Ley 1996, 205). The *Encyclopedia of Human Geography* (Kuhlke 2006) carries an entry for ‘human agency’ only, as have all editions of the *Dictionary of Human Geography* familiar to me (Johnston et al. 1994 to Gregory et al. 2009).

Standard all-purpose dictionaries tend to be more inclusive. The *Oxford English Dictionary*, for example, defines agency in terms of activity, action, and embodiment as concrete existence;²¹ it describes an agent as acting or exerting power, producing an effect, originating an impression received by a percipient.²² The *Merriam-Webster* dictionary echoes these definitions by putting agent and agency in terms of the state, condition, or capacity to act, exert power, achieve an end, and produce an effect.²³ These more basic perceptions of agency make it achievable by more than just humans.

This more achievable, open idea of agency is a direction certain geographers have taken in discussions of a less exclusive agency, particularly with respect to animals (Wolch and Emel

1998; Philo and Wilbert 2000). These geographers have articulated nonhuman agency in terms of the “creative presence” of nonhuman entities among us (Whatmore 1999, 35) and sought to design research that considers both animal and human agency simultaneously (Wolch, Emel and Wilbert 2003, 193). Certain “brave” individuals have even begun to address plant agency.

In his intriguing and provocative *Dominance and Affection: the Making of Pets*, Yi-Fu Tuan makes early suggestions of plant agency. The book admittedly emphasizes human dominance, yet Tuan points out that “plant life has exigencies of its own that may conflict with human needs and desires” (Tuan 1984, 63). He writes, for example, that trees, although they may remain where they are planted, have branches and foliage that grow and change “as though possessed of a will of their own” (Tuan 1984, 67). More recently, Paul Cloke and Owain Jones underscore the importance of taking tree agency seriously. They focus on everyday settings such as cemeteries and urban squares, and the ways in which human and tree agencies are bound and assembled in complex, both positive and negative, social and material relations (Jones 2008; Cloke and Jones 2001, 2003, 2004; Jones and Cloke 2002). Lesley Head and Jennifer Atchison, in a recent review of emerging human-plant geographies, draw attention to the impacts of plants in general on human lives:

... beautiful flowers bring aesthetic pleasure and fragrance and draw people to look and care for them. Particular plants provoke memories of the person who gave them as a gift or in whose memory they are planted.... Trees are highly valued for shade and beauty, but can also be a source of neighbourly conflict as roots excavate sewer pipes and leaves make a mess over the fence. Vegetables provide a source of food and a connection to notions of life and productivity (Head and Atchison 2009, 239-240).

Sarah Whatmore traces a portrait of one such source of food, the Soybean, as not only an industrial and biotechnological (re)assemblage, but also as a biological and ecological entity which responds to hybridization and genetic modification in ways she describes as “deviant and unintended” (Whatmore 2002, 124-5).

I have proposed (Sander-Regier 2009), based on the aforementioned standard dictionary senses of agency, a re-conceptualisation of agency: agency of presence, agency of action, agency of intent, agency of association, and agency of capacity. Some of these aspects of agency are demonstrated by the activities of Chipmunks, Beavers and other animals at the FWG; agency is, in fact, more easily imagined and attributed with respect to animals, whose actions we can easily perceive and often understand. Plant agency is more challenging to conceive. But it does manifest itself at the FWG.

Agency of presence is the least difficult aspect of nonhuman agency to attribute to plants. If, as John David Dewsbury and others suggest, “[M]ateriality is agency” (Dewsbury et al. 2002, 439), and if materiality involves “being composed of matter; material existence; solidity”²⁴, then the physical presence of plants – particularly trees and certain impressive plant species at the FWG – attests to their agency. This agency of presence, of plants ‘being there’ and making an impression does, however, reinforce the general perception of plants as being immobile – which they are, considering that they are essentially rooted in one spot. But rootedness does not mean plants are unable to act, an important aspect of standard dictionary definitions of agency, and the second aspect of plant agency at the FWG: *agency of action*.

Plant action is different from animal action. It is a less obvious “exertion of energy”²⁵, and more of a subtle functioning of the body or body parts, a quiet “act of will.”²⁶ Plant action occurs according to a rhythm different from ours, unfolding in what we might refer to as ‘botanical time’ or, in an arboreal context, “tree time” (Jones and Cloke 2002, 69). Plant action may, in fact, be better understood in terms of ‘activity’, a process carried on or participated in “by virtue of being alive.”²⁷

The aliveness of plants is undeniable. Seeds germinate, leaves unfurl, flowers emerge and bloom, seeds develop, and the cycle continues – but not, as horticulturalist and human-plant relations researcher Charles Lewis points out, according to “a human timetable.” Plants, he explains, function according to broader rhythms which determine when seeds germinate, flowers blossom, and fruits ripen (Lewis 1996, 63). The following description of a living wall of vines, “a thick and tangled mass of structural complexity” at Concordia University’s Topological Media Lab, provides an illustration of plant activity according to botanical time: “Time-lapse video allows us to see the seething, questing, twirling vines and flowers that unfurl and fade by day’s end. By rendering visible the plant’s movements, we are confronted with the facts of both their incessant activity, and immanent aliveness” – a “plant-directed” aliveness whereby vines grow, flourish, photosynthesize, draw nutrients from soil and water, and respond to changes in humidity, sun and shadow, and tending by people (Lunn 2011, 153).

This “aliveness” and activity exhibited by plants is further demonstrated by their capacity to appear where they were not intentionally placed, as FWG volunteers have experienced. “I’m surprised by plants that turn up that nobody planted,” Valerie tells me; she then

proceeds to list species that have arrived and settled at the FWG on their own. Gordon refers to these plants as “newcomers” and describes them as coming in and wandering through the FWG. Christine, writing about how gratifying it is to see native plant species in particular arrive on their own, stresses that they “appear without our help” (Hanrahan 2005c, 5).

Other volunteers provide examples of agency of action in the context of plants not co-operating. Kate, for example, states that “plants will do their own thing”, while Jo tells me that plants will what they do, “rather than what we are training them to do” – a tendency supported by Theresa’s statement that “They [plants] don’t want to live in the place you put them.” I witnessed this lack of cooperation myself one Friday morning when I joined two volunteers working at a Backyard Garden bed. I recorded the following exchange in my field notes:

I ... remarked that the space was looking really nice, and W. seemed pleased. She said, “Yes, but look” and showed me a clump of black-eyed Susans that was not where it had been planted. And where it had been planted, it was no more. She seemed distraught by that. I replied, “Maybe they didn’t want to be there, so they moved. Maybe we have to let the plants decide where they want to grow.”

Y. looked up from where she was weeding, and said, smiling “That’s good!” That thought obviously hadn’t struck her before (June 26, 2009 field notes).

This lack of co-operation, the determined and seemingly contrary behaviour on the part of the plants who move from the places chosen for them, who appear on their own, leads to a less straightforward aspect of nonhuman agency: *agency of intent*.

As presumptuous as it may seem to write about intent from a plant perspective, it is nevertheless a pertinent discussion considering the ways in which plants appear to chart their own courses. If we consider intent in the dictionary sense of purpose and will,²⁸ then the courses of action followed by plants, their aforementioned activity and aliveness, is their purpose. Plants live. They grow, reproduce and contribute to the survival of their species. We could say that living, or “livingness” in echo of Whatmore (2006, 602), is their intent and their will. Plants will do what is necessary to live and thrive – which can mean moving to a location which suits them better than the spot where they were planted. It may also involve “intrigue” as described by Glenda.

Glenda is fascinated by plants and their different interactions – yet another aspect of nonhuman agency: *agency of association*. “Plants are manipulative,” she says, in ensuring they are pollinated, in moving seeds around. She tells me about the Bloodroot flower, a plant

which grows at the FWG. The seeds of this plant include a piece she describes as a “carbuncle” which ants like to eat. The ants take the seeds back to the nest to share with the colony, and when the carbuncle is eaten, the rest of the seed is taken to what Glenda calls the ant colony’s “garbage dump”, which provides a fertile seed bed for the seeds to germinate. This example of plant manipulation – of the botanical power of intent to reproduce, of a plant’s unusual interactions with other species to fulfill its purpose – is an illustration of the *agency of association* with other life forms.

Plant action and interaction, intrigue and manipulation, and association with other life forms, brings us to the *agency of capacity*, which we can be understood as the unique powers and abilities²⁹ plants are able to produce, perform, or deploy³⁰ in the process of managing their own lives. These competencies and “skills” (Jones and Cloke 2002, 61) unique to the plant world – photosynthesis, for example, and the processes by which plants close down all apparent activity during the winter season in northern climates – are not addressed directly by FWG case study participants. Yet volunteers do participate in some of these processes at the FWG. They help potted plants in the FWG nursery survive the winter, for example, by covering the pots with mulch.

The many different capacities and skills of plants are also, interestingly, being studied by scientists whose research is revealing communication capacities in plants (Heil and Adame-Alvarez, 2010), kin recognition in plants (Biedrzycki et al, 2010, Dudley and File 2007), self-recognition in plants (Karban and Shiojiri, 2009), and overall plant intelligence (Baluška et al. 2009, Baluška et al. 2004). As a team of plant researchers writes, “Recent advances in plant molecular biology, cellular biology, electrophysiology and ecology, unmask plants as sensory and communicative organisms, characterized by active, problem-solving behavior.” The researchers recognize the controversial nature of this perspective on plants, which they attribute mainly to a “failure to appreciate different living time-scales” due to the rootedness and seeming lack of activity in plants, as opposed to animals who are able to change location with ease. Noting that plants do demonstrate movement, but that it occurs at very different rates from animal activity, the plant researchers stress that contemporary results are increasingly revealing that, “in contrast with the classical view, plants are definitely not passive automatic organisms. On the contrary, they possess a sensory-based cognition which

leads to behavior, decisions and even displays of prototypic intelligence” (Baluška et al. 2009, 1121).

10.4.2 Interacting and becoming involved

The inclusive agency discussed in the previous section – achievable by plants, humans, and other animals – contributes to making human-nature interaction and involvement at the FWG dynamic and rewarding (sometimes also frustrating) to the volunteers who work there. Randy, in fact, states that it is the FWG’s role to provide opportunities for people to interact with nature. Evelyn concurs, describing the FWG as “a place for people in the city to go and be in a natural environment and to experience it for themselves, and to experience the wildlife that is there.”

The experiences that FWG volunteers seek, according to certain individuals, is involvement with, and in support of, the natural environment. Gordon, for example, expresses admiration for the volunteers and their “passionate involvement with all aspects of the environment.” Other volunteers speak for themselves. Kate talks about “engaging with the land” and “engaging with the process”, while Margaret says that she is “working with” the land and the natural cycles at the FWG – with processes such as the transformation of leaves into mulch, which she describes as helping produce more plants, which in turn produce seeds. The purpose of the FWG, she points out, is to be productive so that it can support local wildlife.

Supporting wildlife is something Sheila feels is important to everyone who becomes involved at the FWG. “I think we’re all really going for the wildlife aspect,” she tells me, “and hoping we can make a difference.” Cindy confirms Sheila’s statement. “I love feeling like I am helping wildlife,” she says, explaining that her contribution involves planting trees as future resources for wildlife and helping maintain plant diversity for insects and birds. Lisa also feels her involvement is making a difference – specifically to the plants that provide the foundations for wildlife habitat. She tells me she feels she is “giving a better fighting chance to native plants” and contributing to a seed bank source for the FWG and other projects.

This sense of participation in the natural environment, specifically in support of wildlife, evokes the participatory aspect of the “naturalistic” value Kellert associates with nature. Participatory involvement with the natural world’s many functions and processes, he writes, reveals “boundless sources of stimulation and understanding” which has the benefit of

heightening awareness and attentiveness, of encouraging curiosity and peace of mind (Kellert 2005, 52).

Animal interactions and involvement

Wildlife at the FWG, as we have seen, provides volunteers with the sources of stimulation, awareness and understanding described by Kellert. Many FWG volunteers are, in fact, drawn to work on-site by the possibility of direct contact with wildlife. While most of the contact with wild animals at the site tends to be observational and unidirectional in nature, there is the potential for actual interaction, especially when food is involved. Joyce, for example, is charmed by Chipmunks; she is perhaps responding to the watchfulness described by others. Theresa interprets the watchfulness as an invitation: “They’re looking at you,” she tells me. “They’re waiting for you to give them something.” Joyce gives the Chipmunks food. She tells me she places peanuts on the Backyard Garden bench, and enjoys watching the animals fill their cheeks with the nuts.

Sometimes the feeding interaction is not necessarily planned. One afternoon I sat on the Backyard Garden bench, eating a peanut butter and banana sandwich while taking a break from working in the plant nursery. My field notes tell the following story:

A Chipmunk scurried away as I approached. They are all over that BYG [Backyard Garden]. One of them came out from the back of the Rockery and came up to the bench, close enough to sniff the shoes I had slipped off so that I could tuck my feet under me on the bench. It sniffed my shoes, then scurried back to the Rockery.

I bit into my sandwich and started eating. A Chipmunk emerged from the other side of the bench, the “Heritage Garden” side, crept onto the lawn and approached the bench. I tore off a bit of my ... sandwich and tossed it toward the Chipmunk. He/she grabbed it, sat up, and started eating it with gusto. I’m sure it loved the peanut butter, plus the banana!

And I’m thinking, “Is this a good idea?” Maybe I shouldn’t be feeding the wildlife here. Maybe there is a rule! But it is too tempting, and the Chipmunk is too cute. I tossed bits of crust to two other Chipmunks ... plus to a Red Squirrel that arrived from the bed over by the bird feeder....

It is fascinating to have that sort of wildlife contact, though the Chipmunks were not terribly wild (July 15, 2009 field notes).

Another example of inadvertent, potentially undesirable, wildlife feeding is provided by Glenda, who often carries a snack when she works in the Backyard Garden. She tells me that Chipmunks have tried to make off with apples she has left on the ground, and that one day a Red Squirrel actually succeeded when she put the apple down for a moment and stepped away to do something else. When Glenda turned back to her apple, it was dashing down the path in the mouth of a Red Squirrel. “It was a very funny sight,” she tells me, chuckling.

Food can, however, also be a contested issue in the presence of volunteers at the FWG. Christine, who has a particular fondness for Red Squirrels³¹, often observes, photographs, and posts images and descriptions of their food-gathering activities on the FWG photo-blog. She writes that walnuts are among the Red Squirrel's favourite food sources (Hanrahan 2007e), and describes incidents revealing their protectiveness of this resource. While visiting the FWG in November 2010, for example, Christine encountered a Red Squirrel with what appeared to be a walnut stash under the stone wall in the Backyard Garden. The Red Squirrel was "busily protecting it from all the other marauders", including Christine. "When I turned up," she writes, "he grabbed his walnut, leaped on a stone and scolded vociferously." In September of the same year, she describes a Red Squirrel who was "most unhappy" with her. "He was in a walnut tree," she writes, "and from the way he was behaving, scolding and stamping his feet, I guess he thought I was after his food! Long after I walked away I could hear him chittering and scolding. While I was taking his photo, his whole body was shaking with the vehemence of his annoyance."³²

Other interactions, more accidental in the course of garden maintenance work, can have directly negative impacts on wildlife. I witnessed a disturbance one day when a volunteer was working to remove vegetation that had grown up among the stones and bricks in front of the rock wall in the Backyard Garden. In order to dig up the weeds, she had to remove the bricks and stones – a disquieting task as it turns out. My field notes reveal the following:

At a certain point, she was struggling to bring up one of the bricks. I asked if I could help, and she said no. Then she indicated some ants scurrying around where she was working. And she said something about how she was causing major consternation among the ant colonies below. She described them as scrambling around in confusion, carrying their eggs, not knowing what to do. She said she felt badly about that, and told them to hang on a minute until she had done what she needed to do and replaced the brick (July 2, 2010 field notes).

This demonstration of sensitivity to the disruption of wild lives evokes another value associated with human-nature relations: moralistic value, which Kellert describes as flowing from awareness that a "basic kinship" binds all life together – a kinship which calls for humans to minimize harm to other life forms (Kellert 1996, 23). This minimizing of harm is rooted in what natural resource scholars Michael and Denise Conover call "empathetic wildlife value" and describe as "the emotional and intellectual ability to project one's own consciousness into that of another person or animal" (Conover and Conover 2003, 845). The volunteer working with the bricks expresses her empathy particularly well in her description of the impact of her actions on the ants, and in her efforts to replace the brick quickly.

Soil interactions and involvement

It is relatively easy to minimize harm to – conversely also to imagine beneficial interaction with – visible life forms such as ants, toads and squirrels. Not as clear is the potential for interacting with less discernibly active elements of nature such as soil, and the benefits of that contact. As soil ecologist David Wolfe points out, “we have spent more time and effort examining small patches on the surface of the moon and Mars than exploring the subterranean habitat of our own planet” (Wolfe 2001, 2). Unseen and underfoot, soil is overlooked and often referred to disparagingly as “dirt”. Yet soil is an extremely intricate and fascinating biological community, as demonstrated in the following invitation Wolfe extends to his readers:

Step out into the backyard ... push your thumb and index finger into the root zone of a patch of grass, and bring up a pinch of earth. You will likely be holding close to one billion individual living organisms, perhaps ten thousand distinct species of microbes, most of them not yet named, catalogued, or understood. Interwoven with the thousands of wispy root hairs of the grass would be coils of microscopic, gossamer-like threads of fungal hyphae, the total length of which would best be measured in miles, not inches. That’s in just a pinch of earth. In a handful of typical healthy soil there are more creatures than there are humans on the entire planet, and hundreds of miles of fungal threads (Wolfe 2001, 1).

This almost unimaginable complexity and richness is not easily perceived by the naked eye during activities such as digging or planting. Yet the FWG volunteers who talk about soil obviously sense and respond to something of the soil’s vibrancy at a deep, intuitive level. Perhaps they are also feeling the effects of the serotonin associated with soil bacteria, as discussed in Chapter 5. Whatever the attraction of soil for FWG volunteers, however the soil acts on them by virtue of its “aliveness”, they express excitement about the opportunity to work with it, get their hands into it, smell it – in short, interact with it.

Opportunities to interact with the soil abound at the FWG: digging, pulling up invasive species (and shaking the soil from their roots), planting, mixing potting soil, potting young plants, and processing and distributing compost. While all volunteers add material to the compost pile at the FWG, not many actually process it; Thomas and Bill are the only volunteers to tell me they are involved with the composting process at the FWG. Kate does not appear to work with the compost often, but one time when she does, she has a memorable experience, which she shares with me. It happened on a “cold crisp fall day” when she dug into the compost heap to spread it on the FWG flower beds. The first thing that struck her was the frost on the outer leaves of the compost heap. As she dug into the pile, steam rose into the

cold air. “My greatest surprise came as I grabbed a clod of partly decomposed leaves,” she exclaims, “and felt the amazing heat being generated by the leaves.” The discovery prompted her to learn about chemical changes and the role of bacteria in soil decomposition. “Who ever would have believed that this was going on all the time under our own nose,” she muses.

Other volunteers experience different types of soil at the FWG. My field notes, for example, describe potting up seedlings destined for the annual plant sale and exchange.

Y. said she finds the potting soil easier to work with when it’s wet, so we got a bucket of water and poured it into the bag of potting soil. Boy, did the soil ever absorb the water! We got it to a certain, relatively sticky consistency, porridge-like, then started potting.

Y. says she fills the pot about halfway, then pokes a seedling out of the tray, puts it into the larger pot, and fills in the rest with more potting soil. I did one, filling the pot halfway, poking out a seedling and putting it into the pot, tamping the soil down around the seedling, filling the pot, tamping again, then asked Y. to check it. She said it was fine.

Earlier, when we had started mixing water into the potting soil bag, stirring it in manually, our hands and forearms got all dirty. At that point, Y. was still talking about how dirty this was going to be, and how we would have to clean up after ourselves. She held out her arms to me ... “See?” she said.

... It felt good to be wrist-deep in dirt again, to get it under my fingernails. “This smells so good!” I said to Y. as we were mixing the water into the potting soil ... the smell of the earth, the dirt ... something primeval about it. We will soon be smelling the earth thawing outdoors. I’m looking forward to it (Mar. 27, 2009 field notes).

The passage is an interesting illustration of the embodied interaction between people and the soil. We pour water into the potting soil, and the soil responds by absorbing the liquid; we stir the moistened soil with our hands to obtain a certain consistency, and the soil responds by clinging to our skin. The moistened, agitated soil also releases an aroma, a stimulus which evokes emotions, memories, and yearning for olfactory signs of spring.

Field notes later that season describe a small group of volunteers potting up more seedlings for the plant sale and talking about how wonderful it feels to get the hands dirty (Apr. 17, 2009 field notes) – a delight reinforced in conversation with other volunteers. Audrey tells me, “I like digging in the ground”, while Sheila states, “I love to grub around in the soil.” Marie and Evelyn express sensual enjoyment of working with the soil. “I like the feel, the smell if it [soil]”, Marie says. Evelyn tells me she prefers not to wear gloves. “I love the soil,” she says. “I love to be in the soil.” Gail declares that her favourite FWG activity is to get her hands into the soil, “just go and get in the dirt and plants.” She shows me her fingernails, with dirt underneath, saying they are “never clean.”

Cindy expresses a particularly deep sense of engagement with the soil. She tells me she loves to perform “hands-on getting the hands dirty” work at the FWG – a predilection she traces to her childhood. “Ever since I was a little kid, I’ve always loved playing in the dirt,” she says, adding that “you can’t get more rooted” than when you work with the earth and soil. Yet not all volunteers enjoy such direct contact with “dirt” at the FWG, as my field notes reveal: “She [another volunteer] watched me put the plants into the hole and try to break up the thick clay to fill the hole with my bare hands. ‘I love how you just get in there,’ she commented. I replied that that was the only way to work with this stuff. She always wears gloves” (July 3, 2009 field notes).

Plant interactions and involvement

A closely related and equally satisfying nature connection involves working with plants at the FWG. This is the most obvious and direct human-nature interaction associated with the project. Human work with plants includes collecting and storing seeds, planting seeds and seedlings, potting up seedlings, putting plants into the ground, relocating plants, trimming, weeding, watering, mulching, and more. Many plant-related activities help to create conditions for plants to grow and thrive. And plants respond by growing and thriving – seeds germinating, buds developing, leaves unfolding, flowers blooming, seeds forming – essentially by living. The plants may on occasion change location if the place they were planted does not suit them; sometimes they also decline and expire.

Those volunteers who work to create growing conditions for plants at the FWG inevitably become involved in the lives of these botanical life forms, sometimes intimately. As Lewis points out, gardens connect people and plants because gardens are shaped “with hands and back as well as head and heart, love, attention, and caring – all opportunities for deep personal involvement” (Lewis 1996, 63). When plants flourish, the involvement can bring intense pleasure and satisfaction. Thomas, for example, tells me he finds it gratifying to see things grow – a sentiment echoed by Bill, who says he finds it most rewarding to discover a tree planted in the spring “doing good in the fall ... In other words, life ... growth.” Marie also finds it satisfying when plants thrive. “I care about them all,” she declares. “I like to see them healthy.” She particularly enjoys the “general ongoing care and upkeep” of the gardens, and participating in their growth and evolution. Margaret articulates her involvement with plants in terms of the “wonderful feeling” she has in helping plants “do what they do.” She explains

that the plants at the FWG do “amazingly well”, growing from initial “bumps in the ground” to two-foot-tall plants only weeks later – progress she finds very satisfying. She relates a bit of insight a gardening mentor once shared with her: that plants will do their utmost for the gardener who provides the right conditions.

Some of the plants doing their “utmost” at the FWG are the native plant seedlings grown from seed gathered mostly at the FWG by various volunteers, stored in suitable conditions at the end of the season, then set to germinate in an appropriate environment, and transplanted a minimum of two times in preparation for the plant sale. As the seeds sprout and grow from tiny seedlings to a size ready to be put into the ground, these young plants embody a vitality and promise certain individuals find particularly compelling.

Two volunteers speak specifically of starting seeds in their homes over the winter. One describes “diligently” nurturing hundreds of wildflower seedlings to life, and the rewards of observing the growing process as it slowly unfolds. “I got to experience observing the growing process from seedling to mature plant ... intimately,” she tells me. The other volunteer finds the activity a good way of getting through the “dark tunnel” of winter. “This is the perfect thing for me to do,” she says. “I’m gardening, and there are all these cute little plants growing.” She describes the anticipation she feels upon entering the growing room first thing every morning to check on the plants. “I love it when they grow,” she declares.

Other volunteers, involved in potting up the seedlings at a later stage, feel the same way about participating in the life and growth of the tiny plants. Theresa and Evelyn both talk about how much they love to work with the seedlings. “I actually really liked transplanting the little, tiny seedlings,” Evelyn tells me. “It feels so nurturing.” She describes the plants as “so tiny and fragile” and wishes them well as they “go out there and become something bigger.” Gail says she finds potting the seedlings the most rewarding activity at the FWG. “To see them growing and then to think of them growing in other gardens ...” she muses, her voice trailing off as she reflects on their role as native plant ambassadors. Evelyn echoes Gail’s thoughts. “I love the idea of all of these plants being distributed into the general population,” she tells me.

It is noteworthy that female volunteers are not the only ones to work with seedlings at the FWG. On a Friday morning early in the season, I had the following experience:

B., when he arrived, sort of hovered around, rather shyly. I invited him to join us – “if you’d like to get your hands dirty,” I said. I wasn’t sure what he wanted to do.... I think he may be shy. He is certainly quite quiet.

Anyway, he got to potting with us. I noticed he extracted seedlings from the tray with great care, and talked at one point about how well they do depending on how damaged or not their roots become during extraction (Apr. 3, 2009 field notes).

B. appeared to enjoy the experience, and his words convey his concern about the welfare of the little plants. His actions also express his solicitude; he handled the seedlings with more tenderness than any of the others working there that day. Perhaps he felt and acted intuitively on something another volunteer describes as the joy and vigour with which the seedlings have grown, and how much they give to the volunteers who work with them.

What the tiny seedlings growing with such “joy” and “vigour” have given is the opportunity to enter into a nurturing relationship – a quality Lewis emphasizes in relation to gardening. “From a human perspective, the strength of gardening lies in nurturing” he writes. “Caring for another living entity is a basic quality of being human.” Lewis explains that the deep emotions kindled by nurturing resonate profoundly in the gardener’s being, contributing to the capacity of gardening to make people feel good. The intimacy of the person-plant relationship, he stresses, is enhanced by the physical participation in the life of the plant, for which the gardener takes responsibility (Lewis 1990, 57-8 and 62).

Volunteers who have taken responsibility for certain parts of the FWG – from flower beds in the Backyard Garden, to other habitats, to individual trees – feel particularly deep emotions for the plants in their care. “I love it in the spring when I see all the plants grow,” C. tells me. “It’s like seeing old friends.” She associates particular plants with memories: wildflowers she rescued from a construction site, a tree from somebody’s property, saplings planted by students from particular schools. Another volunteer has developed a particular intimacy with the plants she tends regularly. “The plants have all become like close friends to me,” says D., “their wellbeing is what I strive for.” She tells me that she has “motherly” and “very tender” feelings toward the plants, and that she greets them when she arrives at the FWG. “I really love them,” she tells me. “They’re like little people ... You get very attached to them.” She also reveals that she pats the plants she works with. “Plants respond to love and touch,” she says, then adds an expression of profound kinship: “We’re like plants. We spread and grow to reach the sun.”

C. and D.'s deep emotions can also be understood in the context of Kellert's humanistic value associated with nature. Close association with companion animals and single species, he explains, enables the expression and development of emotional capacities for intimacy, attachment, caring, bonding, and kinship – important tendencies because they encourage altruistic, cooperative and helping behaviour critical to the survival of social beings like humans (Kellert 1996, 21-2). “Humans crave companionship,” he writes. “Emotional bonding with other creatures [or other life forms, including plants] can satisfy this need and enhance our capacity to direct these emotions toward others” (Kellert 1996, 22).

Yet emotional bonding with some plants – including the desire to create growing conditions, to nurture, and to protect – may involve intervention that hinders the capacity of other plants to flourish. As Lewis points out, the “extended encounter between person and plant ... call[s] forth a wide range of human responses” (Lewis 1990, 57). Human-plant relationships can, indeed, be thorny and entangled.

10.5 Intervention

Involvement in the life of one plant to help it grow and thrive may necessitate intervening on its behalf. Intervention, in this context, is a particular type of involvement with the goal of dealing with an issue or solving a problem, and it may occur at varying degrees – from intrusion or interference, to downright destruction. Intervention on behalf of one species may require hampering the growth of another, interfering with the life cycle of the offending plant or animal, or removing the offender altogether. At the FWG, intervention commonly takes the form of weeding.

10.5.1 Out-of-place – the trouble with weeds

While a specific focus on weeds is beyond the scope of this chapter, they do merit some discussion here, considering their inevitable presence at the FWG, the volunteer activity focused on removing them, and the general notion of undesired plants being or acting out of line. Weeds are defined as essentially plants “out of place” (Evans 2002, 10), growing where they are not wanted (Despard 2008, 87). Entangled as they are with human interests and activities, and with notions of desirability and undesirability (Despard 2008, Evans 2002), weeds defy clear-cut definition (Despard 2008, Evans 2002, Baker 1974). Cresswell, writing about weeds as ecological metaphors for displacement, nevertheless makes an attempt.

“There is very little that can be said to unite plants classified as weeds other than their undesirability,” he writes. “Weeds are plants that are uncultivated and undesired ... they crowd out the cultivated specimens in the garden or farm field.” He adds that weeds colonize available space and reproduce profusely, and that many plants become weeds for the simple reason that they are in the wrong place. The “wrong place” where weeds find themselves is characterized by what Cresswell describes as a “sense of order with each plant in its correct place forming a harmonious whole.” The mobile and rapidly reproducing weeds, he stresses, spoil the ordered environment of the place (Cresswell 1997, 335).

The spoiling of the ordered environment is a form of transgression, something Cresswell describes as crossing a line, either geographical or socio-cultural, with the latter implying a pre-existing classification system of sorts. “It may or may not be the case that the transgression was intended by the perpetrator”, Cresswell writes. “What matters is that the action is seen as transgression by someone who is disturbed by it” (Cresswell 2004, 103). The ordered environment where the weeds are transgressing, and the ‘someone’ disturbed by their presence actually determine the identity of the weed. Plant species that are valued, propagated, planted and nurtured at the FWG, for example – Black-eyed Susan (*Rudbeckia serotina*), Boneset (*Eupatorium perfoliatum*), Common Milkweed (*Asclepias syriaca*), and Spotted Joe-Pye Weed (*Eupatorium maculatum*) – are all considered weeds by the Ontario Ministry of Agriculture, Food and Rural Affairs.³³ In the agricultural environments at the heart of this provincial ministry, those particular plants transgress the order of the cultivated fields and disturb the agricultural producers by reproducing and spreading rapidly, by competing with the crop plants under cultivation, and by threatening the health of the crops and the bounty of the harvest.

The extraordinary vigour of these unwanted plants, their unrelenting activity, and their transgressing behaviour could be considered in terms of their agency – of presence, of action, of intent, of association, of capacity. Communication scholar Erin Despard draws attention to the capabilities of these unwanted plants to surprise us, “growing faster and larger than we expect, appearing in locations where we did not plant them, presenting an unusual growth habit”, and adapting quickly to changing conditions (Despard 2008, 91). Botanist Herbert Baker adds that in areas of ongoing human activity and habitat disturbance, human-plant co-evolution can result in the development of specialized local/ecological races or ecotypes such

as weeds particular to hybrid crops, or weeds that mimic crop plants (Baker 1974, 12-17). Historian Clinton Evans points out the intriguing fact that some weed species have developed “unusually intimate relationships” with specific domesticated species, mimicking the morphology and life cycles of crops so well that it is practically impossible to distinguish between them (Evans 2002, 15). He stresses that weeds – in essence “agents of nature” determined to colonize an ecological niche created by human activities (Evans 2002, 189) – have likely been responsible for forcing as many changes in human farming systems as humans have brought about in weed populations (Evans 2002, 17).

If we view the FWG Backyard Garden through the co-evolution lens offered by Baker and Evans, then native plants may be acting on the volunteers – for the most part individuals interested in and concerned about wildlife and the natural environment – and contributing to bringing about changes to contemporary garden systems. North American gardens tend to be dominated by lawns and introduced cultivated plant species, and the work of the FWG is enabling native plants not commonly planted in domestic flower gardens to gain a foothold in urban settings, a new ecological niche for these plants.

Meanwhile, the plants considered “weeds” in the Backyard Garden are diligently removed if they are considered “out-of-place” because they do not suit the vision or plan for a particular space, or if they perpetrate a transgression by spreading, overwhelming other plants, and threatening biodiversity on-site. Even native plants who “don’t behave themselves”, as FWG volunteers tend to express transgression, are weeded out. This activity – in seeming opposition to the nurturing acts and attitude discussed earlier (although in the entangled world of the weed and its complex relationships with humans, its removal encourages another plant to thrive) – is satisfying to certain volunteers.

D., for example, is unsympathetic toward weeds. “They’re interfering with plants I’m trying to grow,” she declares in defence of the plants she nurtures with devotion. She adds that she finds weeding uncomplicated because she knows the plants growing in her area so well. Audrey tells me that she likes weeding because of the opportunity it affords to learn to identify and differentiate between plants that are desired and undesired. “I find satisfaction in weeding,” she says, “because it means in that particular area I know the right things and the wrong things.” Glenda also likes weeding – particularly surveying the results of her efforts. “You look back on your handiwork,” she states, “and you see the plants you really want to

see.” She adds that she finds weeding relaxing and satisfying. Kate feels the same way. “I get a lot of satisfaction out of weeding,” she tells me. “I suppose it’s just allowing the plants we choose the opportunity to develop.”

Differentiating between plants that are desired and undesired, deriving satisfaction from suppressing undesired plants that interfere with chosen plants – it makes sense in light of the “dominionistic” value associated with human-nature relations. Kellert portrays this value as the measures people have long taken to subdue and control “unruly and threatening elements” of the world (Kellert 1996, 20), thereby gaining benefits of physical and mental fitness, feelings of security, a sense of autonomy, and confidence in their capacity to cope with challenge and adversity (Kellert 2005, 52). As much as this value may appear to have little relevance to contemporary human life, it is still important to human existence; survival today is still, in Kellert’s words, “a tenuous enterprise” calling for a certain degree of mastery and endurance, along with skills and competencies “honed by an occasionally adversarial relationship with nature.” Kellert stresses that this value can be expressed in ways both functional and self-defeating (Kellert 1996, 20-1).

Weeding appears to be a functional expression of the dominionistic value, a desire to discourage plants interfering with the welfare of other plants we wish to encourage – be it native wildflowers at the FWG, vegetables in our community garden plots, or crops in our agricultural fields. Yet the process is less straightforward than it would appear, the identity of desirable and undesirable not as clear as we would like, and the relationship of suppressor and suppressed muddled by surprising adaptations, and by ongoing transgression on the part of weed species. These undesirable plants, which we seek to discourage, can turn around and confound our efforts by mimicking crop plants, as Baker and Evans reveal, or by suddenly starting to misbehave.

10.5.2 Tangled – the trouble with Dog-strangling Vine

One such confounding and misbehaving species is Dog-strangling Vine (DSV), also known as Pale Swallowwort, or *Vincetoxicum rossicum*, or *Cynanchum rossicum*. At the FWG, it is generally called “DSV” and portrayed as a “remarkably resilient and aggressive plant” (Hanrahan 2005b, 3), and the “species that causes us most grief” (Hanrahan 2006c, 2) with its tendency to “quickly and completely” overrun natural spaces (Hanrahan 2005b, 3).

DSV is generally disliked, yet has the capacity, in the words of Lewis to evoke “a wide range of human responses” (Lewis 1990, 57).

The DSV trajectory at the FWG

In a FWG newsletter article titled “The Silent Invader that’s not from Mars”, volunteer Barry Cottam traces the history of DSV as it spread from its origins in the Ukraine and Russia, to New York State in the 1880s, to Ottawa where it was first recorded in the early 1900s. As Barry describes it, the plant seems to have behaved itself until 15 to 20 years ago when for reasons not yet determined, its growth “exploded exponentially”. It is not a visibly disagreeable plant, he remarks. “While it is establishing itself,” Barry writes, “DSV is pleasant enough in appearance: opposing, deep green, lilac-shaped leaves on a nodding stem and clusters of small yet pretty flowers coming in May.” It is so visibly inoffensive that it is, he observes, easily overlooked (Cottam 2011, 2).

What makes this easily overlooked plant so offensive, Barry notes, is the fact that it has few, if any, natural enemies in Canada, which enables it to spread easily where conditions are suitable. As a twining vine, it tends to climb into nearby vegetation, sometimes forming thick mats which overwhelm “other gentler, less prolific – and often more desirable – plants”. DSV also produces abundant “polyembryonic” seeds capable of producing more than one plant (Cottam 2011, 2), and it spreads by underground roots to form thick horizontal mats. These strong survival strategies are manifest throughout the FWG, where volunteers struggle to keep the plant’s vigorous growth in check, attempting to prevent it from compromising the biodiversity encouraged and carefully cultivated on-site. Paul, for example, says, “It’s a shame when what’s natural to here is suddenly invaded and taken over.”

Inventory work in the early years of the FWG revealed the presence of DSV in the ravine (Dickson, 1992, 42), where it did not appear to cause concern at the time. As Christine writes, “The real spread began when we took over the site and mowing, which had suppressed the growth, was stopped.” She points out that by the mid-1990s DSV was recognized as “a real problem”, and measures started to be taken (Hanrahan 2004c, 6). The situation hadn’t changed in 1998 when Sandy writes that “[C]rews of hard-working volunteers have been slaving away on weekends and evenings to try to keep it under control” (Garland 1998b, 1). DSV control activities include cutting off flowers and seed pods to prevent seeds from forming, scything open areas taken over by the plant, pulling the vines from trees and other

vegetation it is overwhelming, and digging up plants by the roots when possible – “a Sisyphean task” as Christine puts it (Hanrahan 2004a, 5). Newsletter titles and first lines of articles reveal ongoing struggles with DSV – “Swallowwort war wages on” (FWG NL 2006), “Volunteers desperately needed” (FWG NL 2007d), “Swallowwort is back – with a vengeance!” (FWG NL 2010). In 2009, the FWG started inviting the public to join in DSV “weeding bees”, and in 2011, the Tuesday Invasive Species Group (TISG) was launched; DSV suppression consumes most of the group’s time and energies.³⁴

A “wide range of human responses”

The relationship between FWG volunteers and DSV is understandably problematic – largely negative in reflection of negativistic and dominionistic values associated with nature, but not entirely. Consistent with the entangled nature of human-plant relations, some volunteers have mixed feelings about this particular species.

The initial reaction of many volunteers is surprise and shock when they first see the extent of DSV growth at the FWG. That shock actually prompted certain individuals to start volunteering with the project. Robert tells me he was taken aback at his first view of the garden and “the massive quantity of swallowwort.” Cindy expresses surprise at the “alien” appearance of the tree-climbing DSV, and the way in which the plant’s presence “totally transforms” parts of the FWG. “The swallowwort was a shock,” says Randy, who describes coming to the FWG, seeing the mass of vines “taking over everywhere”, and deciding to help address “the invasion.” Evelyn also noticed the DSV running rampant through the FWG when she was looking for a new volunteer activity; she decided to join the FWG crew partly to help suppress DSV.

On-site, many volunteers find grappling with DSV a tremendous and ongoing challenge. It is generally considered to be the project’s greatest struggle because of its pervasiveness, persistence, and success. Tracey, for example, singles out DSV as one of the project’s main problems. “DSV is intractable,” she declares. “It has affected the whole project in many ways.” She adds that it would be easier and more fun to work at the FWG if DSV were not as pervasive. Some volunteers have, in fact, found DSV so challenging and difficult that they have, Randy tells me, given up on it. “It’s impossible to get rid of, also extremely difficult to control,” he says. “On the other hand, something has to be done.”

The volunteers who continue to join in removing DSV express intense frustration and discouragement at the ongoing struggle and seeming lack of progress. Cindy states that she feels like she never accomplishes anything when she is removing DSV. “The more I pull, the more I discover the need to keep pulling,” she tells me. Gail feels the same way. “The Dog-Strangling Vine is just too much,” she declares. “You look and it just goes on forever.” Kate describes DSV removal as “an overwhelming and endless task”, but stresses that efforts should nevertheless continue in order to prevent the problem from growing. Other volunteers feel the problem is already large enough. “I don’t think anyone is any closer to a solution,” Joyce declares. “In the meantime, we’re being overridden.”

The frustration also brings out stronger emotions. Joyce, for example, exclaims, “Gosh, I hate that stuff,” while Glenda asserts, “The one [plant] I hate, of course, is swallowwort.” Evelyn is the only volunteer to express anger. “I don’t know,” she says, “with the DSV there’s a lot of anger.” She tells me she feels a need to protect the FWG from the invader, which we are responsible for introducing. “I do feel quite strongly about the DSV, I must say,” she concludes.

The strong feelings of frustration, anger and hate toward DSV can be accompanied, on the other hand, by similarly strong feelings of fulfilment in removing the plant. Both the activity and the accompanying satisfaction appear to provide some hope in the situation, inspiring a sense of responsibility and purpose which emerge differently in individual volunteers. Paul, for example, states that the removal of DSV and other invasive plants is important for restoring the FWG to a pre-invasion condition. “You feel you’ve helped Mother Nature a bit,” he says. Audrey, who finds DSV removal to be one of her favourite activities, tells me, “Not that I particularly like it, but it grabs me.” She finds “unveiling trees from DSV” especially satisfying, as does Evelyn, who speaks of a particularly rewarding experience in the New Woods, where a little spruce tree was engulfed in DSV. “I ripped it all off,” she says. “And this little tree was free again. It actually felt good to do that.”

Some of Evelyn’s good feelings about DSV removal stem from her sense of responsibility. “I ... in a way feel it as a duty,” she tells me, adding that it feels right to help restore something humans have damaged. Several volunteers – Audrey, Margaret, Robert, Theresa, Thomas – have taken a sense of responsibility and hope regarding invasive species beyond the FWG into their own neighbourhoods, where they pull up invasive plants, raise awareness

among neighbours, and organize community events to remove invasive species. Another volunteer's hope, interestingly, is rooted in the resilience of native species. Plants such as Goldenrods and shrubs such as the Wild Raspberries, she observes, seem to be holding their own against DSV – something she says inspires hope.

The positive and negative emotions and experiences volunteers associate with DSV reflect the ambiguity surrounding the plant. Cindy, for example, expresses frustration with DSV removal, but also admits to having mixed feelings about it. “We were all invasive at one point,” she tells me, adding that all species follow cycles of growth and decline, and that DSV is currently in a period of rapid growth. The persistence and survival strategies that enable the quick spread of DSV are something even Evelyn admits she admires in the plant. Marie tells me she is intrigued by the way DSV can be overwhelming in some parts of the FWG, yet in shaded places growing “in a balanced way” and looking beautiful.

Marie is not the only volunteer to find a certain beauty in DSV plants. “In the wintertime,” Sheila notes, “it [DSV] is beautiful, all silvery.” Christine agrees. In November 2010, she posted a photograph of frosted DSV pods with the following description: “Even the invasive DSV looks beautiful and ethereal with frost on the pods.”³⁵ Earlier that year, she sent an e-mail update with the following observation: “The ... hoar frost has made the most ordinary of objects magical. Even DSV looks rather splendid! Well, you may not agree, but there you are!” (Christine update, Jan. 14, 2010). The most intriguing statement on DSV beauty is made by anonymous and creative FWG visitors the week following Christine's update, when the FWG and Arboretum experienced what Christine calls “the invasion of the snow people”: a series of quirky snow figure she photographed, including one who was smiling and “sporting a lovely DSV necklace!” (Christine update, Jan. 21, 2010).

A wide range of wildlife responses

As satisfying as many volunteers find DSV removal, it presents a dilemma to individuals like Christine, who does not like to disturb the wildlife using the plants. She writes about taking her time cutting DSV so that she can spare the insects, frogs, birds, and “the myriad of other life that perches or clings or even builds a nest” (Christine update, June 18, 2011) among the leaves and stalks. In her e-mail updates, and in the photo-blog, Christine reports on snails, spiders, grasshoppers, butterflies, beetles, dragonflies, and small frogs perching and resting in the DSV vegetation. “Using a scythe or something worse (a mower),” she explains,

“would mean that a lot of these creatures would have no chance to escape” (Christine update, June 18, 2011).

Christine describes butterflies and moths laying eggs on the leaves, spiders and birds building nests among the plants, and wild animals using DSV materials for nest construction. “I’ve been intrigued by the use made of the very invasive Dog-strangling Vine in nest-building,” Christine writes in a 2009 update. “Some species have used small amounts of the stem fibre, others have included quantities of the seed ‘fluff’, and some have incorporated the dry seed pods into their nests.” She comments on bird ingenuity and adaptability in finding uses for this now-common plant. “One Baltimore Oriole nest made entirely of DSV fibres was unbelievably strong!” she exclaims (Hanrahan 2009b, 126). Christine also reports on watching a Red Squirrel collecting soft DSV seed fluff for its nest (Christine update, Nov. 3, 2010).

With the many insects using DSV plants for resting and egg laying, it is no wonder that wildlife also feeds among the vines. In May 2010, for example, Christine observes that almost all the spiders she saw that day were on DSV plants, including one that became a meal for another (Christine update, May 18, 2010). Christine has also watched Black-Capped Chickadees probing dried DSV vines in the winter, searching for overwintering insect larva to eat (Christine update, Feb. 5, 2010). Unfortunately no insect has developed an appetite for eating, and thereby helping to control, the DSV plant itself.

So much wildlife use of DSV brings us back to the dilemma of disturbing the wildlife during DSV removal. In a 2006 update, Christine addresses the issue directly. “We always seek to balance the biodiversity of the garden with the need to cut large areas of DSV,” she writes, pointing out that DSV removal removes more than just DSV, and always has an impact on wildlife. She describes Meadow Voles and American Toads scrambling to escape mowing operations on-site. “It is the perennial conundrum we face,” she writes, “whatever we do, or don’t do, is bound to impact something negatively” (Hanrahan 2006c, 2).

The native-invasive conundrum

Another conundrum involves questions concerning invasive, and by extension native, species. Two FWG volunteers raised the topic during our interviews, and I had a discussion about native plants with another volunteer one Friday morning at the FWG. Notions of

“invasive” and “native” raise complex questions, with answers anything but clear, and emotions strong and mixed.

Two of the FWG case study participants tell me we could spend a long time discussing invasives. E. points out that “invasion” – in this context essentially the movement of plants – is a natural process, one that occurs frequently, with new species entering a new area where they sometimes flourish at the expense of other plants. He adds that humans deliberately or inadvertently move plants around, and that we have done so for a long time. “A lot of people are surprised that the majority of wildflowers along roadsides are non-natives,” E. tells me. Sara Stein is not surprised. In her book *Noah's Garden: Restoring the ecology of our backyards* (1993)³⁶, she tells the story of European field weeds such as Dandelion, Chickweed and Nightshade – many now the bane of gardeners – migrating to the North American continent. She points out that many of these ‘weeds’ accidentally hitched rides in ship ballast and cattle feed, while others were deliberately imported for purposes such as medicine, livestock feed, and fabric dyes. These plants, Stein explains, had adapted over millennia to living with humans on disturbed agricultural soil in their lands of origin, giving them advantages over most native species when it came to growing in areas dominated by human activity such as mowing and ploughing (Stein 1993, 37).

So long have some of these “weeds” been present in North America that many people are surprised, as E. points out, that they come from elsewhere – which raises the question of what “native” actually means. Glenda and I had a discussion about that one Friday at the FWG when I asked her the name of a certain plant unfamiliar to me:

I asked if it was native, and she said she wasn't sure, but that it grew in many places. We then had a little discussion about what “native” is. We talked about the fact that things are constantly evolving and changing, and that if wildlife had adapted to certain plants, what's the harm in leaving them? I also mentioned what I had heard in a talk once: that certain native and non-native species have hybridized, or that non-native species have mutated to form totally new species ... so are they native? These are all good questions (June 4, 2010 field notes).

These “good questions” are topics of ongoing debate by people working in fields such as conservation biology and ecosystem restoration. The questions have also been addressed in a recent book by science author Emma Marris, who writes about the problematic aspects of preserving or restoring nature to a pristine, prehuman state, and about the need to adopt different perspectives and approaches to ensure the future of “nature.” The idea of determining a “natural” or “pristine” state is complicated, she points out, for several reasons, including the difficulty of establishing a particular historical baseline period for restoration.

She also notes that ecosystems are constantly changing, especially when they are considered in geological time. “[E]cosystems are in a constant dance,” Marris writes, “as their components compete, react, evolve, migrate, and form new communities” in response to processes such as evolution, climate changes, geological upheaval, fires, storms, and population dynamics – which makes it difficult to know what ecosystems of the past really looked like (Marris 2011, 4-5). With many introduced species present in their non-native environments for so long that they are widely believed to be native, the question is raised regarding the length of time required for an “immigrant” species to cease being out-of-place, to actually “belong”. The response remains elusive.

The introduced species are here to stay stresses G., who admits to having “mixed” and “perhaps a bit heretical” feelings about invasive species. G. also draws attention to the fact that things change, that plants move around, and that no one seems to agree on a baseline for determining “native” status. There has been a “wave” of new species moving around in the last century, sometimes deliberately transported by humans, G. tells me, with certain of these species posing genuine causes for concern, but not always. “We do tend to jump on the bandwagon of invasive species,” she declares, adding an expression of unease regarding the pitfalls of not stopping to question or think about it. “You can get a bit psychotic about it.... see everything as a threat,” she states. “I think we need to revise our opinions about all of it.” The “revisions” she suggests include taking into account cycles of peak and decline, considering native wildlife adaptation to the introduced species, and considering each introduced species individually, from different angles. “There’s so much we don’t know,” she says. “We’re working in the dark.”³⁷

The FWG may indeed be “working in the dark”, yet the project appears to follow a consistent course regarding native and introduced species. According to the project’s 2011 draft strategic plan, the FWG seeks to provide examples of wildlife-friendly habitats typical of the region, encourage the use of “native plants indigenous and common to our area”, control “invasives”, and maximize biodiversity (FWG SP, 2011). These objectives are consistent with my observations and impressions that the project focuses on maintaining biodiversity to meet various wildlife needs, concentrates on native plants yet accepts introduced species that benefit wildlife, and suppresses species (both introduced and native) that compromise biodiversity.

10.6 Nature connections at the FWG

Woven into the FWG's objectives, into its *raison d'être*, into its physical manifestation, is the human-nature relationship. Anyone who cares to join one of the FWG volunteer groups has the opportunity to initiate, develop, expand or otherwise cultivate relations with the natural world on-site. Randy reveals, interestingly, that his initial purpose in volunteering at the FWG was to get physical exercise, but that it has become "much more than that." Randy now values the FWG for the opportunities it provides to make a useful contribution to a group and to interact with nature. He appreciates opportunities to walk through the different habitats, to immerse himself in the natural world on-site, and to engage in outdoor activities he finds meaningful.

Randy's testimony is consistent with Bird's account of participants in a certain UK Green Gym project, who state that they joined the program with the objective of increasing their physical activity and improving their fitness. After six months of immersion and involvement in the natural environment, however, "being in the countryside" became the main factor motivating them to continue participating in the program. According to Bird, the tendency is widespread. "Organisers of the Green Gym schemes throughout the UK have noted this trend of people entering conservation with a 'health ticket', but continuing through a developing relationship with nature," he writes (Bird 2004, 51).

It would be safe to say that most FWG case study participants, likely also FWG volunteers in other groups, continue with the project in part because of their developing relationships with the natural world on-site. In keeping with their individual interests and expectations for contact with nature, all FWG volunteers derive relational benefit from opportunities to connect with plants, wild animals and other elements of the natural environment in the course of their volunteer work. These opportunities contribute to making the FWG project and site an effective locale, in terms of both context and setting, which encourages and mediates varying degrees and types of contact – from immersion and appreciation, to interaction, involvement, and intervention – with the natural world and its denizens.

All the possible relations at the FWG – varying degrees of contact with nature, along with the different types of social connections discussed in the previous chapter – weave together a web of FWG relationships unique to each individual volunteer. Many of them find personal meaning in these various relationships and in other aspects of working at the FWG, a place

which has become significant to all case study participants, its meanings rooted in different motivations, passions and values, as discussed in the following chapter.

Chapter 11 The meaningful Fletcher Wildlife Garden

At any time of the year, this Wildlife Garden has something to give to each of us.

(Bryant 2003)

According to an earlier version of the FWG brochure, “Wildlife gardening is not only valuable for wildlife, it helps us to relax, contributes to health, provides joy, pleasure and inspiration. It allows us to feel a sense of freedom and peace by quietly changing with time.” This succinct and comprehensive statement of meaning is followed by the invitation to “Come watch us grow through the seasons at the Fletcher Wildlife Garden and experience nature right in the heart of downtown!” (FWG Br2, n/d). Among those who have accepted the invitation to experience nature, and to grow in the process are the volunteers who work regularly at the FWG, where they benefit enormously from opportunities to be active outdoors, to engage socially with like-minded people, and to interact with the natural environment, as discussed in previous chapters.

The importance of these opportunities becomes magnified in the context of each individual volunteer’s sense of place associated with the FWG – with their subjective feelings about the place, the unique attachments they develop to the site, the personal meanings they attribute to their involvement in the project – all of which coalesce to intensify the synergistic benefits of working at the FWG. The FWG is, to borrow phrases from geographers writing about ‘place’, created and defined as a world of meaning and experience from the inside (Cresswell 2004, 11; Agnew 1993, 263) by the volunteers who work there, as this chapter reveals.

The significance of the FWG is undeniable. Randy tells me that volunteering at the FWG is overall “a meaningful activity”, while Cindy states that “all of it is one great experience”, a feeling reflected in Robert’s statement that “All of it is rewarding.” Bill talks about “a whole bunch of little things that make it worthwhile”, while Pauline encapsulates the meaning of the FWG in the following words: “Everything combined for me. It’s all meaningful.”

Long-time volunteer Kate speculates on the worlds of meaning and experience sought and cultivated by volunteers she has known over the years. “The volunteers who come to the Fletcher Wildlife Garden come from different backgrounds and for many different reasons,” she says. “Yet underlying these is perhaps a desire to reconnect with the earth, to find

meaning in existence, to find simplicity and quiet.” She feels that the FWG attracts people with a “common desire” to connect with the natural world and with other people. “Whether pulling weeds or laying stone,” she notes, “the experiences engaged in can be life-giving and nurturing to those who participate.” She says of herself that she goes to nearby woods and nature trails – places like the FWG – to reconnect with herself, nature, the earth, and the universe. “There I rediscover wonder, beauty and peace,” she tells me, adding that her love for nature and wildlife is “very deep and dear.”

Kate’s thoughts about the deep significance of nature and the FWG illustrate the richness of the larger tapestry of meaning woven from each individual volunteer’s interests, passions, motivations and values, interlaced with the threads of physical benefit and relational opportunity from previous chapters. This FWG tapestry of meaning is intense, its breadth and complexity beyond the scope of this chapter to describe in detail. Yet certain patterns did emerge and entwine to enrich the tapestry’s texture: the FWG as a place of stimulation and renewal, a place of enrichment, a place of kinship and revelation, and a place of inspiration.

11.1 A place of stimulation and renewal

Volunteering at the FWG can be both stimulating and calming, with a synergy that offers opportunities to experience beauty, sanctuary and peaceful rejuvenation.

11.1.1 A place of beauty

Many of the FWG case study participants spoke of the beauty of the gardens on-site – not surprising if we consider that gardens are typically aesthetically appealing places. What is somewhat surprising is the breadth of the sense of beauty that emerged. FWG volunteers spoke of creating beauty for the benefit of others, of enjoying the FWG’s beauty for personal benefit, of seeking beauty to share and inspire – a rich sense of beauty that could, in fact, be understood in view of Kellert’s description of aesthetic values associated with human-nature relations. Kellert explains that we tend to be aesthetically drawn to environmental features important to human survival – to clean, flowing water; to places that offer refuge and shelter; to bright colors that often indicate food. When we cultivate this aesthetic attraction to nature, he adds, we also enhance our capacity for imagination and creativity; for curiosity and discovery; for recognizing harmony, balance and order – all of which enable adaptation as we strive to “persist and thrive” (Kellert 2005, 54-5).

Perhaps the beauty of the FWG resonates so strongly with certain volunteers because of these adaptive qualities. Perhaps they instinctively sense significance in the pond waters, in the vibrant and biodiverse flowers, in the refuge and shelter offered by certain habitats. When Gail says that the FWG is “just a beautiful place to enjoy”, and that “people come to just enjoy its beauty”, she may be drawing attention to the important roles such green places play in the general well-being of people who seek them out.

Many FWG volunteers articulate their own sense of personal well-being associated with the picturesque FWG. Louise, for example, states that the FWG is a beautiful place she enjoys visiting, while Jo tells me repeatedly how beautiful she finds the FWG. She is particularly drawn to the Backyard Garden, “a beautiful place to sit when it is quiet”, and to the “meadowy, overgrown” habitats which she finds equally attractive. Some volunteers express a subtly more profound sense of personal well-being in relation to beauty at the FWG. Sheila, for example, tells me that it is a “huge privilege to spend time in such a beautiful environment.” She speaks of being “imbued with the beauty and solitude of the place” even in the winter. “It’s beautiful in the winter here,” she tells me, “with the different colours against the snow.” Glenda expresses the privilege of being involved with the picturesque FWG. “It’s a very beautiful garden,” she says. “I like to think I’m a part of it.”

One way volunteers become part of the beauty of the FWG is by working on-site. Margaret, for example, emphasizes how much she “absolutely” enjoys working at the FWG, “a beautiful place at a beautiful time of year.” Theresa likewise expresses appreciation for the FWG’s aesthetic appeal – “such a beautiful environment” – then draws attention to the fact that visitors are attracted to its beauty, and that she works hard to maintain that beauty for others to enjoy. Tracey also remarks on her participation in “creating a beautiful natural area that a lot of people enjoy visiting.” Many people unable to go to the FWG in person can experience the beauty of the place through photographs posted to the photo-blog³⁸; active volunteers can also visit the photo-blog and discover aspects of the FWG they may not be able to experience during their usual activities: crystallized winter wonderland scenes, elusive and eye-catching birds, a wide array of surprisingly attractive insects. The presence of birds, insects and other wildlife at the FWG calls to mind Kate’s remark that she volunteers on the project to create “a beautiful Eden” and “sanctuary of beauty and quiet” for both people and wildlife. Glenda confirms this dual objective when she describes her role as

“making it [FWG] as beautiful as it can be for whoever comes to visit”, including making it attractive to wildlife.

One of the attractions for wildlife and volunteers alike is the presence of native plants. Many FWG volunteers draw specific attention to the beauty of native plants, and to the role played by the FWG in sharing that beauty with others with a view to encouraging more people to plant native species in home gardens. Luke, for example, asserts that the FWG plays an important part in showing visitors “that we have a lot of native plants that are beautiful”. Gail mentions the beauty of native wildflowers, along with other qualities appealing to gardeners: versatility and resilience. Gordon observes that the FWG is, in fact, a “demonstration plot to show how you can have your own garden which is beautiful and rewarding without having to go to home depot or the garden centre” – another option gardeners might appreciate.

The FWG turns out to be a diversified place of beauty where gardeners can learn about the attractiveness and other qualities of native plants, where visitors can spend time in a picturesque natural setting, and where volunteers can enjoy quiet moments and feel good “imbued with the beauty and solitude of the place” to borrow Sheila’s elegant phrase. It is not surprising that many volunteers have developed a strong sense of beauty in relation to the FWG, and that that they are drawn to participate in creating something beautiful there.

11.1.2 A place of serenity and sanctuary

The sense of beauty and solitude that Sheila and other volunteers associate with the FWG contribute to the project’s strong appeal. If, in keeping with the aforementioned aesthetic value, people associate aspects FWG’s beauty with conscious or intuitive impressions of what Kellert puts in terms of refuge and shelter (Kellert 2005, 55), then it is not surprising that the FWG is also considered a place of serenity, sanctuary, and renewal.

Many volunteers, in fact, speak of the FWG as peaceful. “I like the peacefulness of the place,” Randy tells me, adding, “I’m comfortable here. I like being here.” Marie says that the FWG is a “calming, soothing place”, while Kate speaks of the FWG as a place to “go and be quiet ... to find yourself and peace.” A factor contributing to the calm, Glenda points out, is the lack of noise. “You can’t hear cars going by, or loud music. Very relaxing and peaceful,” she states. The low level of human-generated sound is likely one characteristic that enables FWG volunteers to immerse themselves deeply in the natural environment there. “Frogs

sunning themselves give a sense of serenity,” Robert notes – a serenity Pauline echoes with her statement, “I feel content when I’m here. I can come here, sit outside and watch the birds. I feel comfortable here.”

The comfort, serenity and contentment reported by FWG volunteers promote a certain peace of mind and mental health. Sheila, for example, observes that “you negate all that traffic” by working at the FWG. “You get here and all that anxiety just peels away,” she says. One of the younger volunteers reveals that when she has had a stressful week running around and juggling various responsibilities, volunteering at the FWG on Friday morning is just what she needs to calm down, tune out the rest of the world, and connect with something real. Kate puts her personal peace of mind in terms of knowing that the FWG exists and is accessible to people and wildlife. “It has provided a sense of comfort,” she tells me, “knowing that there are other persons who appreciate nature and want to give it a chance to survive in our midst.” She tells me she feels happy knowing that other species “grow and live in safety in our little sanctuary.” Kate includes humans as beneficiaries of the FWG’s natural environment. She notes that the FWG provides “an oasis of tranquility for ... insects, animals, reptiles and humans, and the environment.” Cindy agrees, describing the FWG as a “positive green environment” for visitors, volunteers and wildlife.

Marie makes the interesting point that people gravitate to the FWG “to get away from the city without leaving the city” – an idea not lost on regional media. “Let’s leave the nine-to-five stresses behind and head for the wilds – without leaving the city,” writes a local journalist in an *Ottawa Citizen* article titled “Wildlife Garden Lets You Unwind in the City.” He goes on to portray the FWG as “an oasis for workaholics and a refuge for walkers” where “you can shed the stresses of work life if you stop, look and listen to the chirping birds, the hopping toads or buzzing insects in their natural habitats” (Johnson 1998). FWG volunteers confirm these observations. Audrey, for example, tells me she enjoys going to the FWG and getting “back to the soil when you get tired of asphalt.” Gordon says that the FWG creates the feeling of “a rural environment in the centre of the city.” Being at the FWG, he observes, feels the same as being out in the country 100 kilometres away.

A series of images posted by Christine in the February 2011 photo-blog illustrates these impressions. The photograph of a red barn at the end of a snowy, treed lane cutting through the FWG is accompanied by the following description: “It looks like a rural scene from far

outside the city, doesn't it? Who'd think that this is in the heart of a big city!" Another photograph, of the Interpretive Centre from the other side of the ravine, creates a similar feeling: "Under some softly falling snow, the Interpretive centre looks well nestled into its surroundings. Like a little cottage in the woods."³⁹ Some FWG volunteers are enthusiastic about having access to a rural-cottage getaway so close to home. "I love it, I really do," Joyce exclaims. "It's a place to get away ... and I'm happy to come." Tracey tells me that when she was younger, she used to drive out into the country, but that now she doesn't have to. "To have a space that's this close to home is like heaven," she says. "It's really relaxing to come over here and sit. It's such a break ... I can breathe."

Tracey's relaxing and breathing are no doubt rejuvenating, although she does not say so specifically. Other volunteers make the revitalizing qualities of the FWG clear. Evelyn, for example, tells me that she becomes "refreshed" by working in the flower beds of home and the FWG. Marie says she finds the natural environment in general refreshing. "I've always felt good in nature," she states. "It's like a tonic. It rejuvenates me, my whole being, body and soul." Cindy expresses a similar sentiment in her statement that nature helps her find "peace, stability, rejuvenation."

The sense of serenity, sanctuary and renewal associated with the FWG, along with its capacity to relax and reduce stress, reflect similar results of other research which has found volunteering in nature to foster peace of mind and feelings of aliveness; to offer a sense of escape and relief from pressure and stress; to be relaxing, therapeutic, mind-clearing, revitalizing and replenishing; (Guiney and Oberhauser 2009; Maller et al. 2009; Mind 2007b; Ryan and Grese 2005; Miles, Sullivan and Kuo 2000).

11.2 A place of enrichment

In the context of beauty and serenity at the FWG, where volunteers find comfort, contentment and rejuvenation, they also find themselves opening to experiences of discovery, learning and greater enrichment.

11.2.1 A place of discovery and anticipation

The relaxing and revitalizing environment of the FWG recalls the potential, previously discussed, for time spent in natural places to restore and replenish human attentional capacity. At the FWG, the restorative characteristics of the green surroundings, along with

immersion in the natural world on-site, appear to foster broad awareness and curiosity among volunteers without necessarily enlisting ongoing full attentional capacity – circumstances which can help to renew the ability to direct attention and concentrate, as researchers reveal in other contexts (Ottosson and Grahn 2005, 26). Thus refreshed, FWG volunteers are open to follow their curiosity, respond to their surroundings, and be absorbed in the wonders of the natural environment at the FWG. As Christine writes, “the garden is so compelling that those of us who spend a lot of time there find simply being around the site has its own rewards” (Hanrahan 1999, 13). One significant reward for being around the FWG is the opportunity for discovery, exploration, and associated anticipation.

I experienced this opportunity, and the openness and responses of other volunteers, on two occasions when I ended up leading impromptu FWG discovery walks. One such outing took place on a Friday morning at the beginning of July 2010, when I arrived at the Interpretive Centre at the same time as some other volunteers. One of them was new, and when I offered to take her on a tour of the FWG habitats, the others decided to come along too. One volunteer brought a Bill Holland Trail map so that she could orient herself and figure out where the different habitats were. It was a pleasant, meandering outing, and we went places the group had never been. The following excerpts, taken from field notes describing the entire tour, reveal intense curiosity, fascination and absorption:

Along the way, they had lots of questions about plants etc. We identified Russian Comfrey, which is quite present all around the pond and into the hedgerow. There were also Qs about trees and shrubs, and we IDd hawthorn, high-bush cranberry, red osier dogwood, red-berried elder, and more. We talked a little bit about hedgerows, but not much, because they kept having Qs, and D. kept making crazy comments. And so we just meandered along and played things by ear....

We stopped to look at the pond. E. then pointed out a shape at the surface of the pond (on a rock or log, it looked like), and said it looked like a turtle. It did indeed, and it was relatively large. We figured it was most likely a painted turtle. Snappers would have a rougher shell, I offered. F. came along at that point, with a bag slung around his shoulder, and I asked if he might have binoculars. He pulled some out, wrapped in plastic, and handed them to us. We all took turns looking at the turtle, including him. He added that it wouldn't be a snapping turtle because this turtle's shell was more domed. But he did say that this turtle's carapace looked a little funny around the bottom. He added that we have had Blanding's Turtles there. G. said she had never heard of them, and I said they were a species at risk and had bright yellow throats (July 2, 2010 field notes).

We also took leaf samples from plants we couldn't identify along the way, and G. and I looked them up when we returned to the Interpretive Centre. The others rushed out to the Backyard Garden; our meandering, curiosity-driven tour had taken longer than expected, and they were anxious to get to work.

The work they were anxious to return to offers further opportunities for discovery – for what has been described as “a new way to explore nature in a more hands-on manner than the traditional naturalist-led nature walk” (Ryan and Grese 2005, 178), a point Audrey supports with her statement, “you don’t get as much out of it just walking around.” Audrey is one of the volunteers who likes to dig in the soil, a hands-on sort of exploration that Kellert puts in terms of “deep participatory involvement” which turns wildlife and habitats into “a magic well of imagination and discovery, where the more one explores the more one is likely to uncover boundless sources of stimulation and understanding” (Kellert 2005, 52-3). Audrey describes her most memorable experience as just one such jewel in a magic well of discovery. It was, she tells me, “that time I discovered the Canada Lily without knowing what it was.” This exquisite and uncommon native Lily was blooming in an overgrown back corner of the Backyard Garden, and Audrey did not know it was there until she stumbled upon it. She describes the flower, in a tone of wonder, as a “hidden glory” surrounded by other tall-growing plants.

This sort of “on-the-job” discovery and awareness is a frequent occurrence at the FWG, where individual volunteers discover and come to understand the natural world in their own distinct ways while going about their tasks. Sheila, for example, tells me that she is always looking out for insects on the plants she works with. She also speaks of gaining a greater general awareness and sensitivity regarding native wildflowers and shrubs as a result of her work at the FWG. “It’s enormously enriching,” she tells me. Audrey expresses a similar sense of awareness, discovery and enrichment in relation to the company of fellow volunteers who draw attention to things she might otherwise miss while she is working. “If they don’t keep pointing things out, we wouldn’t notice as much,” she says. Yet her most memorable discovery, interestingly, was a solitary one. Kate also speaks of solitary on-the-job discoveries – of working with seeds and seedlings, and appreciating the importance of soil mixture, moisture, temperature, and light; of realizing the intricate connections between the presence of trees and soil composition, between particle matter size in soil and water absorption and loss, between the slope of certain Backyard Garden beds and the movement of rainwater. “There’s more than just the end product,” she tells me.

Other volunteers look forward to simply being at the FWG and engaging in whatever experiences and adventures the day might offer. Jo, for example, speaks of the anticipation

she feels in coming to the FWG and touring the different habitats. “Around the corner always something different,” she tells me. Louise likes to spend time on-site taking photos and identifying the species captured in her images. “I like to learn what is out there,” she says. One long-time volunteer tells me she often comes to the FWG alone and with a “sense of anticipation.” “There’s always that sense of adventure,” she reveals. “I never come without it.” She speaks of wondering what she will discover each time she comes, what wildlife species and activities she will observe. She adds that every year she finds something new. “I never know what will turn up,” she remarks. “I guess that’s one of the things that keeps me interested.” Another long-time volunteer also likes to visit the FWG alone to go “exploring, finding new things, taking photos” and learning about plants and wildlife. “There’s always something to see and learn,” she says. “This place is full of constant surprises.” In one visit, she tells me, she can make enough notes to spend days conducting related research. “There are so many mysteries ...” she muses, adding that since becoming involved in the project, she has realized how much we still don’t know about the natural world.

The discovery experiences and adventures shared by these FWG volunteers lend credence to Kellert’s statement that the natural environment is likely “the most information-rich environment people will ever encounter” (Kellert 2005, 53). The diverse habitats at the FWG are indeed information-rich, fostering curiosity and fascination, exploration and discovery, sensitivity and understanding – often also prompting volunteers to go further and learn more about their discoveries.

11.2.2 A place of learning

FWG volunteers often take a step beyond exploration and discovery to learn about the things they have experienced, as demonstrated by the group I led on the impromptu exploration of the FWG habitats. While out on the trails, we had observed features of certain plants that inspired our curiosity, noted where they were growing, and collected leaf samples. When we returned to the Interpretive Centre, we looked them up in the resources offered on-site. One of the plants, we learned, was Tartarian Honeysuckle, an introduced species from Eurasia, commonly planted as an ornamental shrub, potentially invasive. The other was Queen of the Prairie, an attractive plant with fluffy pink flowers, normally found in Pennsylvania and further south and west. It was well-visited by pollinators at the FWG.

This is a typical learning experience at the FWG, where volunteers are immersed in not only an information-rich natural environment, but also in a group where people exchange ideas and knowledge, thereby benefiting from each other's presence and experience. The pink flower had, for example, triggered "Queen of the Prairie" in my mind when I saw the plant in the Butterfly Meadow; research with G. at the Interpretive Centre confirmed its identity. Similarly, out on the trail G. had remarked that the shrub we were scrutinizing looked like a honeysuckle; research again confirmed her intuition and taught us more.

For many volunteers, these opportunities to learn are an important part of their FWG experience. All FWG case study participants, in fact, spoke about some aspect of learning on-the-job. "You know what, I'm always learning," Glenda tells me. "Always, always, always. Just working here is a learning experience." Other volunteers concur. Mark reveals that he learns something new every time he comes, and that learning is the most enjoyable part of his volunteer experience. Tracey likewise observes that learning is the most meaningful aspect of volunteering at the FWG, and that she learns through listening, talking to people, and just being there. "When I started, I didn't know anything," she says, adding that she has learned "tons and tons and tons of new things" over the years and that it is exciting to be constantly learning something new. Audrey finds volunteering at the FWG similarly rewarding because of what it teaches. "They are important things," she stresses, adding that if she were no longer volunteering at the FWG, she would have to find another way of getting outside and learning.

Some of the important things volunteers learn about are the people and plants they work with on-site. Gail shares that she has come to understand and value native plants more since working at the FWG, while Robert says he has gained considerable knowledge about native plants and invasive species in the area. He tells me, in a frank statement, that he is surprised at "how much there is to learn and how interesting the subject is."

Thomas also speaks of gaining knowledge about native plants and invasive species, but he draws more attention to how much he has learned about "co-operative working". Bill and Lisa likewise reveal that they have learned about working in a group of volunteers and getting along with people. Certain FWG case study participants, interestingly, portray the group of volunteers as a learning community of sorts. Gordon, for example, speaks about community involvement and learning at the FWG, while Pauline and Theresa both praise the

helpfulness of the other volunteers, particularly in terms of answering questions and sharing information. Audrey describes the project as “full of learning experiences because of the group that’s there.”

Certain FWG learning experiences turn out to be very personal for individual volunteers. Sheila, for example, speaks about her lack of confidence when she first started volunteering at the FWG; gardening was new to her at the time, and she felt that everyone else knew more than she did. “I was extremely nervous of pulling anything up,” she says, adding that she now feels more confident, yet knows she still has much to learn. Two other volunteers speak of confidence they have gained through FWG-related knowledge and experiences, including the ability to speak in public. “I feel confident in sufficient enough knowledge to be worth something,” one long-time volunteer tells me, adding that she now feels she can make a contribution – including helping others learn. Other FWG volunteers echo her sentiments, sharing the meaningful contributions they feel they make by raising awareness and teaching others, both formally and informally. Thomas, for example, reveals that he makes efforts to engage people in conversation as he works at the FWG, while Gail tells me she is learning about native plants and encouraging others around her home and cottage to grow them too.

Other volunteers express how much they enjoy working with groups on-site and giving tours. “It’s exhausting, but also satisfying,” says one long-time volunteer who feels she can make an important contribution by sharing what she has learned. “It’s fantastic to be a source of information,” she declares, telling me about the schools and community groups who come to the FWG for information. “It’s really great to be able to work with these groups,” she says. “It makes all our work worthwhile” – a point reflected in Michael’s observation that “urban society is getting so divorced from its environment as a whole, that anything we can do to help ... make the general population aware of the environment and wildlife needs will be of benefit.” These testimonies are consistent with results of a study in Minnesota which discovered that nature volunteers find meaning in both teaching and learning (Guiney and Oberhauser 2009). Other research reveals that learning overall is a significant aspect of the nature volunteering experience (Maller et al. 2009; Mind 2007b; Townsend 2006; Ryan and Grese 2005; Miles, Sullivan and Kuo 2000).

All these findings indicate the power of green places such as the FWG to fulfill educational and scientific needs for nature – needs which Kellert associates with the human

tendency to identify, categorize, and explain different aspects of the natural environment, which stem from the human desire to know and understand the world (Kellert 2005, 53). The need and desire to identify and understand fuels many activities at the FWG – activities which join other aspects of the volunteer experience in inspiring a certain sense of fulfillment among volunteers involved in the project.

11.2.3 A place of fulfillment

All FWG case study participants express a personal sense of fulfillment relating to their volunteer experiences at the FWG. Some find satisfaction in learning, while others find fulfillment in contributing to group accomplishments, and still others feel gratification from personal effort and achievement. Many volunteers express satisfaction in a combination of collective and individual accomplishments. Lisa, for example, tells me it is rewarding to have “some kind of responsibility”, as well as “contribute to something worthwhile.” Gordon describes the FWG as a “non-threatening environment to achieve fulfillment” in retirement, as well as a critical link to a community where he can share experiences with like-minded people. Lisa and Gordon’s statements reinforce findings shared by other researchers who discovered that people volunteering in green spaces appreciate opportunities to take meaningful action and make socially valued contributions (Townsend 2006, 112; Miles, Sullivan and Kuo 2000, 222).

The collective aspect of the FWG resonates strongly with many volunteers, for different reasons. Randy, for example, tells me he finds it rewarding to be recognized as someone who can make a contribution to the group, while Margaret expresses satisfaction in belonging to a group of interesting people “working together for a common cause.” Thomas finds the co-operation among FWG volunteers “working together with a purpose” particularly gratifying. “The FWG is a worthwhile project which all of the volunteers contribute to,” he tells me. Marie agrees that the project is worthwhile. She articulates its merit in terms of “a group trying to heal some small part of the earth”, adding that it is the group effort that is succeeding, and that she likes to feel she is a part of it. Theresa feels the same way. “Success is collective,” she says. “It’s teamwork.” Then Theresa turns Marie’s last phrase around to assert, “That wildlife garden is part of all of us.”

The FWG is indeed very much a part of many volunteers. Gordon, for example, shares that he feels comfortable and satisfied there, “generically participating” with other

“interested and interesting” people. “I guess in part it’s a function of learning to be productively engaged in retirement,” he tells me, adding that it makes him feel useful. “If you cross the threshold to feeling useless,” he states, “there’s nothing worse.” Productive engagement and usefulness through meaningful activity is something many FWG volunteers value, whether or not they are retired. Pauline, for example, states, “I feel good when I come here. My morning isn’t wasted.” Louise says she feels a sense of accomplishment by helping out in different habitats. “I feel that I can contribute and make a difference,” she tells me. Evelyn shares the feeling that she is doing something valuable with her time by volunteering at the FWG. “It’s a worthwhile activity,” she states. “I actually believe in the value of it. Doing something I believe in makes me feel good.” Kate expresses a similar feeling, telling me that she feels good every time she leaves the FWG. “I feel that my effort has been worthwhile and fruitful,” she declares. Audrey, interestingly, puts her productive engagement in terms of belonging. Volunteering at the FWG “gives you an ownership, an imagined ownership,” she says. “You feel you belong there.”

Still other volunteers find fulfillment in more specific activities. Paul, for example, reveals that his favourite activity is removing invasive species. “I can see that I have accomplished something” he says, adding that it is gratifying to “feel you’ve helped Mother Nature a bit.” Thomas also enjoys removing invasive species – in his case because of the “instant gratification” and results that are “visible and rewarding.” Cindy, on the other hand, tells me that she finds planting the most meaningful, “because planting is starting something new.” Robert finds particular fulfillment in the way the natural environment at the FWG “responds to care.” He tells me he looks forward to the personal satisfaction he gains from his efforts to provide habitat for “birds, butterflies, amphibians and small animals.”

Cindy’s delight in planting, and Robert’s satisfaction in the natural environment’s response to attention, call to mind Lewis’ reflections on the responsibility that gardeners take for the well-being of the living botanical entities in their care. “People have an innate need for purpose,” he points out, “and this is addressed as gardeners assume the role of providing for their plants.” Lewis describes gardeners (we could add tree planters) observing the growth of their plants, and seeing in the unfolding of buds, leaves, stems and flowers a measure of success. “Like markings on a ruler,” he writes, “this sequence of events denotes

levels of successful gardening achievement” (Lewis 1996, 62-4), yielding a certain pride in making “positive change that is visible to all” (Lewis 1996, 73).

Lewis’ observations shed light on the fulfillment that particular volunteers find in adopting individual responsibility for specific gardening achievement and visible positive change at the FWG. Lisa, for example, tells me she feels good having a responsibility and contributing to something “constructive for betterment of society.” Glenda puts her personal sense of fulfillment in terms of creativity. She talks about “setting up the garden to grow a certain way” and witnessing its development. “It’s a creative thing to do,” she states. Sheila appreciates the familiarity she has with her area of responsibility because it enables her to work quickly and effectively, which gives her a sense of achievement. “You also feel you are contributing something,” she says. “It’s not just aimless gardening.” She adds that it is wonderful to get so much enjoyment out of something she takes so seriously. Margaret speaks with particular passion about her area of responsibility. She tells me she finds it meaningful to have “a particular responsibility” because it allows her to focus, learn, and have a feeling of accomplishment. She says it makes her feel useful in a direct way, as contributing substantially rather than simply showing up and helping out where needed.

The various aspects of volunteer fulfillment at the FWG – making a difference, doing something useful, contributing to something worthwhile and valuable, working toward shared goals, see tangible results – reflect the findings of other research on volunteering in nature (Guiney and Oberhauser 2009; Mind 2007b; Townsend 2006; Ryan and Grese 2005; Miles, Sullivan and Kuo 2000). Participation in community ecological restoration projects, for example, has been found to be particularly fulfilling. “People experience deep pleasure and release from sweating together,” writes ecopsychologist Elan Shapiro, “feeling the elements of soil and water, rock and plant, while doing a common task with a visible positive outcome” (Shapiro 1995, 226). Planner-landscape architects Robert Ryan and Robert Grese also stress the satisfaction of achieving visible results from volunteer efforts to “heal the environment” through ecological restoration work, as well as the added value of developing deep connections with nature (Ryan and Grese 2005, 185-6).

11.3 A place of kinship and revelation

Many FWG volunteers find their involvement in the project to be particularly enriching because of the opportunities it affords to develop deep connections with the natural world and greater life forces and rhythms.

11.3.1 A place of interconnection and oneness

Deep connections with the natural world – relations which go beyond the interaction, involvement and intervention discussed in the previous chapter – are something many FWG case study participants express in relation to their volunteering experience. Margaret, for example, speaks about the appreciation she has gained for the ways in which people are connected to nature and the ways in which they can be “cut off from it” in an urban environment. Working at the FWG, she points out, helps to re-establish those connections – an outcome facilitated by something Glenda’s observes: that “here [at the FWG] you see the environment from a whole different perspective.”

That perspective, Glenda stresses, is constantly evolving, along with her relationship to the FWG. “The longer you’re here, it grows on you,” she notes, adding that the FWG is an important part of her life. “I think if for some reason it collapsed, I would miss it, deeply miss it,” she says. Valerie feels a similar attachment to the land at the FWG, a relationship she puts in terms of “being an aid ... aiding the land to carry on blossoming, blooming, seeding for wildlife.” She reveals that she also feels very protective of the FWG, a sentiment echoed by Robert and Thomas.

Feelings of protectiveness and attachment are perhaps rooted in the nurturing bond many volunteers tell me they have developed with the FWG. Kate, for example, considers herself to be a “caregiver” nurturing the land and the gardens; she also finds a certain contentment in simply being at the FWG. “It feeds me and my desire to connect with nature,” she observes. Marie’s nurturing relationship emerges in terms of a broader combination of care, respect and partnership with the land at the FWG. “I respect it,” she tells me. “I just approach it with the respect it deserves.” She also speaks of “caring for the land” and “being a partner with it.” The deceptively simple statement – “I care about it [the FWG]. That’s why I’m there” – embodies her deep connection to the FWG.

Marie is quick to point out that her relationship with the land at the FWG is based on notions of interconnectedness. “Everything is interconnected,” she tells me. “Bugs, spiders, bees – things people don’t like.” All of nature is important, she stresses, adding that it is vital to provide a place for nature in its fullness, as well as a place for people to go and become aware of the interconnections. Sheila and Margaret agree. They both note that a green place like the FWG plays a significant role in making natural interconnections visible – a statement Valerie supports when she tells me that she has learned about interconnectedness at the FWG. “Being here, seeing day-to-day changes has reinforced it in a hands-on way,” she observes, adding that a “long-term connection to place” is valuable because of the opportunities it provides to develop a sense of place.

Margaret links her sense of place and connection with nature largely to plants. “Plants are at the base of interconnectedness,” she tells me, pointing out that they provide resources for insects, birds and other animals, and that they play critical roles in natural habitats and the human environment – things she has learned since she started to volunteer at the FWG. Theresa also feels a connection to plants. She speaks of the “circle of life between people and plants”, adding in a statement of kinship: “we are in there.” Theresa’s sense of interconnection and kinship with plants reflects Lewis’ assertion that “[T]hrough digging in the soil and cooperating with green nature, we learn to better understand our place in the world. We find our centers, loci in which we belong and can be at home” (Lewis 1996, 73).

Sheila confirms Lewis’ statement of interconnectedness and belonging when she tells me that volunteering at the FWG evokes childhood feelings of “oneness with nature” – a feeling she illustrates with the experience of going into the water and feeling a part of it. “I ... get that here,” she tells me. The strongest statement of interconnection, oneness and belonging is made by a long-time volunteer who tells me, “I think I want to die here. Bill Holland did.” She chuckles and projects that she will be found with DSV around her neck. She also shares a mock epitaph: “She tried to pull it out, but it got her in the end.” We both giggle at the statement, but I do believe the FWG might be a place she would select to spend her final moments if she had a choice. In jesting there is often a grain of truth.

Kate makes another powerful statement on interconnection, oneness and kinship when she reflects on what draws people to the specific act of planting. Whatever and wherever people grow plants, she notes – be it vegetables, fruit trees, or flowers cultivated in the home, on the

balcony, or in shared garden plots – the act helps people “connect with the earth from which we draw life and sustenance.” She adds that planting enables people to play a role in the “creation process” and the cycle of growth. “Everything is living and interconnected,” she declares. “It’s like a wonderful miracle.” The sorts of roles described by Kate are articulated by Kellert as participating in “ancient rhythms” (Kellert 1996, 12), and by Lewis as working in harmony with rhythms that “transcend human boundaries” and with “nonhuman forces that regulate the planet” (Lewis 1996, 73).

FWG volunteers reveal that they feel these rhythms and forces, and that they appreciate opportunities to learn from them and work with them. Gordon explains, for example, that his work at the FWG has made him aware of variations in plant flowering sequences in response to changing conditions, climate change, “or just evolution.” Glenda expresses a connection to natural forces and rhythms more directly related to gardening roles. She talks about the rewards of putting plants in and taking plants out, of seeing changes from year to year, of observing evolution over time. This connection to changes and rhythms, she notes, is one of the things that keeps her coming back to volunteer at the FWG. Marie also finds it meaningful to participate in the growth and evolution of the FWG gardens. She tells me that is it a powerful experience for her to witness the progress of plants and flowers from spring emergence through “the peak of summer” to “the fading away” in the fall. “It never ceases to amaze me,” she exclaims. Pauline also speaks of “the growth, and all of the changes” she loves to watch each season. She notes, interestingly, the pleasure she finds in going away for two to three weeks, and returning to find that the garden is “different, matured.”

Growth, maturation and other changes are most readily visible in the FWG’s Backyard Garden which, as Christine writes, “changes from year to year, as some plants thrive, others die, some are taken out because they are not doing well, others are planted. A garden is a constantly changing entity which is why it is so interesting to revisit over the different seasons and over the years” (Hanrahan 2010a, 1). Gail reflects this interest in her portrayal of the constantly changing FWG as a symphony. A garden, she explains, has seasonal ups and downs, loudness and softness, fast movements “with everything coming up madly”, and quiet, dormant periods. She likes to volunteer at the FWG because of the “miracles” of plants coming back year after year. “That’s my symphony,” she says.

The wonder of Gail's garden symphony, the pleasure and rewards of witnessing and working with the cycles and miracles of seasonal growth and greater natural rhythms could be explained by Lewis' statement that plants link gardeners to "the cosmic forces of life." Plants, he points out, do not follow a "human timetable. They must submit to larger rhythms that dictate when the seed will germinate, the flower bloom, or the fruit ripen" (Lewis 1996, 63) – an echo of the "botanical time" mentioned in the previous chapter. Involvement in these larger rhythms, Lewis adds, raises awareness of "being one strand in nature's web", while knowledge of the enduring nature of the patterns brings "a different perspective to issues of everyday existence" (Lewis 1996, 63). The difference in perspective could be understood in the context of what Australian researchers describe as a divergence of "mechanical time" and "biological time." City life, they point out, is dominated by deadlines and expectations of punctuality associated with mechanical time, whereas our minds and bodies are dominated by biological time. "Conflicts between mechanical and biological time," they write, "can result in a variety of unpleasant psychosomatic symptoms, including irritability, restlessness, depression, insomnia, tension and headaches, and indigestion", with the potential to develop into more serious illnesses. Access to nature, they note, can help restore a certain balance (Maller et al. 2009, 63).

It could be argued that volunteering in nature, particularly active participation in larger natural cycles functioning according to biological time, is particularly restorative to the volunteers who find in their FWG work and the natural environment a certain serenity, sanctuary, rejuvenation, fulfillment and deep connection. Participation in larger natural cycles and greater rhythms of life also has spiritual meaning for many FWG volunteers.

11.3.2 A place of spirit and transcendence

If, as Chapter 5 reveals, spirituality can be understood in broad terms as a "sense of wonder" (Louv 2011, 243), a "sense of reverence before the deep mystery of things" (Berry 1991, 6), and the experience of contact with an 'other' larger or greater than one's individual self (Schroeder 1992, 25), then the testimonies of FWG volunteers demonstrate the actual and potential spirituality of working within the natural environment of an urban green space. Spirituality being the intangible and inclusive notion that it is, hints of it have slipped occasionally into previous sections; the patterns of meaning associated with volunteering at the FWG are indeed interconnected and entwined. This section, while it does not pretend to

draw conclusions regarding the spiritual significance of volunteering in nature, does offer insight into wonder, reverence, amazement, awe and transcendence reported by volunteers working on the FWG project.

Spiritual aspects of contact with nature at the FWG do not, interestingly, escape the local media. The author of a 2003 article about the FWG, for example, draws attention to the marvel of the changing seasons. “A few months ago I was there when the freshness of spring with robins, early flowers and new leaves were a wonder,” she writes. “I returned in mid-October. Robins again, beautiful leaves and still much to wonder about” (Bryant 2003).

Christine also writes about the sense of wonder inspired by the FWG:

For me, the Fletcher Garden is a miraculous place. In these few acres so much goes on that it would take a lifetime of watching and studying just to gain a degree of familiarity with all the creatures that call this place home. There is always something wonderful to see, and I mean that word in its fullest sense – there is much that is full of wonder here. Even casual visitors are struck by the abundant life, whether plant or animal” (Hanrahan 2004a, 5-6).

One FWG habitat especially filled with wonder and life is the Amphibian Pond. “There is something about all this life happening just on or beneath the water’s surface that acts as a magnet,” Christine writes, “and many times I came across people sitting mesmerized by the pond’s edge, seemingly enthralled by what they saw.” She describes a girl who came frequently with her father, dog and dip-net, spending hours “staring at all the life in the pond, occasionally very gently removing something for a closer look, always replacing it carefully in the same spot.” They told Christine that they lived nearby and found “the wilds of the Fletcher Garden” a joy and wonder (Hanrahan 1999, 18-19).

Volunteers also describe the FWG’s natural environment in terms of joy and wonder, as well as amazement and reverence. Marie, for example, marvels each spring at the emergence of little plant sprouts. “It never fails to amaze me to watch that,” she says, adding that she has a deep love and respect for nature, and that she has always been drawn to plants, animals, trees, the sky, clouds and stars. Spending time in the presence of these natural elements, she stresses, is good for her soul. Christine is another volunteer who expresses an enduring sense of joy and wonder at the natural world, and who demonstrates soulful benefits of spending time immersed in the wilds of the FWG. “The squirrels are fun to watch,” she writes.

They are either stashing food in tree branches or piling up cones ... (red squirrels), or industriously and determinedly burying all sorts of things all over the place (grey squirrels). No matter how often I see this sort of thing, and I have seen it countless hundreds of times, it still makes me smile and feel privileged to have a glimpse into the lives of another species (Christine e-mail update, November 3, 2009).

The opportunity to feel amazement at natural processes, to gain a privileged glimpse into the life of an “other” species, to connect deeply with the natural world as discussed in the previous section, add to the FWG’s allure, and to its value.

As Margaret points out, the FWG is a treasure to be cherished. “We have to become aware of its value,” she exclaims – some of which is undeniably spiritual, as Kate directly reveals when she tells me, “Most of all, spiritually, I derive great happiness and satisfaction knowing that this little sanctuary for wildlife and the environment exists and is being maintained.” Marie derives great happiness and satisfaction in maintaining the FWG sanctuary – rewards that are rooted in her notion of working in partnership with the spirit of the land. “Everything has a spirit,” she tells me, “even land, waters, plants.” She speaks of working with the spirit of the land and the plants to “heal”, “bring things into balance”, and create something that is “better, something whole ... holistic.” Marie notes that in the context of environmental destruction, she feels good about “trying to do something positive” to counterbalance the degradation, even if it is at a very small scale. “It makes me feel that at least I am doing something to try to improve life on Earth,” she states. Her assertion reflects an aspect of the moralistic value Kellert associates with human-nature relations. “People obtain purpose and spiritual significance in their lives by developing feelings of connection with creation,” he writes (Kellert 2005, 57) – feelings that develop particular depth through immersion and purposeful involvement with the natural world, as Marie describes.

Gordon raises another dimension of spirituality fostered by immersion and purposeful involvement with nature at the FWG: the cultivation of harmony with the natural environment. “It’s what world peace is all about,” he says. “Just being at peace with one’s surroundings in a non-threatening way.” Notions of harmony and peace, along with the balance and holism described by Marie, call to mind an incident involving a Backyard Garden task and the removal and impending disposal of False Dragonhead plants that were in the way. As I write in my field notes:

I ended up bundling together the False Dragonhead we dug out to salvage. I said I would take it home to plant in my biodiversity project, and that E. was also interested in plants like that. D. was going to get some sort of equipment, so she brought back a bucket with some water [for the salvaged plants].

D. thought our salvaging was good – she talked about that sort of activity as promoting peace in the garden. “So that there is peace in the garden” were her exact words, I think (Aug. 14, 2009 field notes).

Salvaging and transplanting plants dug up and discarded in the course of tending the Backyard Garden is one way in which I and certain other volunteers negotiate the tangled relationship among plants that are in-place, plants that are out-of-place, and volunteers who diligently remove the latter. The peace we may be seeking to promote in the garden, as D. observes, could arise from an attempt to balance out what Kellert posits as another aspect of the moralistic value associated with nature: a sense of the “right and wrong conduct toward the nonhuman world” flowing from awareness of a “basic kinship” binding all life together (Kellert 1996, 23).

A sense of basic kinship, and of right and wrong conduct implies respect for the natural world and other life forms – a respect manifested among some FWG volunteers as awe. Theresa provides a clear demonstration of awe in her search for words to express her relationship with the FWG. “When I get there sometimes ... I see something huge,” she tells me. “I feel like I’m in a land I’ve been ... though it’s so small as a space, I feel like a little insect in a huge garden.” The image Theresa paints is a strong and graphic illustration of respect in the presence of an ‘other’ larger than her individual self. Robert has similar difficulty expressing his wonder and respect at a natural environment which, as Lewis puts it, transcends human boundaries (Lewis 1996, 73). “Nature is such a massive force,” Robert says slowly, “something my mind can’t comprehend ... so many mysteries.”

Mysteries relating to a specific part of the FWG’s natural environment – soil – bring out Kate’s sense of awe as she attempts to articulate the significance of that natural element. “When I actually think about it, it’s a miracle” she says. “It has existed for eons. It’s built up, broken down, mixed together, built up, broken down, mixed together ... and, I don’t know, it’s years and years of history in your fingers, or before you. All mixed up and ...” She searches for words. “I don’t know, that’s it,” she says. “I mean, it’s ... I don’t know, it’s too big for me.” She nevertheless goes on to speak of soil as “millions of years of decay” that is “constantly breaking down, changing form, providing a nursery for life”, including “microbes by the billion per square inch.” One of her final statements about soil – “all of this going on that you can’t see, so it’s hard to believe it” – tops off a sweeping statement of reverence for a natural element larger than her own self.

The respect and awe expressed by Theresa, Robert and Kate are the sorts of responses Kellert discusses, interestingly, in the context of the negativistic value associated with

human-nature relations. He points out that positive emotions such as awe and respect can be triggered by fear of the natural world. “By recognizing a power greater than ourselves – forces that can defeat and destroy us,” he writes, “we can cultivate feelings of deference and respect.” He adds that awe indicates “reverence mingled with fear” along with recognition of a “power and strength beyond oneself” (Kellert 2005, 56). The recognition of greater power and strength, and feelings of participating in larger processes and cycles are part of the transcendent experience of volunteering at the FWG. Theresa’s impression of being a little insect in a huge garden is the most graphic articulation of transcendence, although statements by other volunteers also capture its feeling. Joyce, for example, says, “it [FWG] has expanded things for me” while Thomas states, “I feel good after being there. I feel elevated.”

Another expression of spirituality and elevation, of the deep significance of nature, was published as a poem by a FWG case study participant in the Ottawa Field-Naturalists Club’s *Trail & Landscape* newsletter. While not necessarily inspired directly by the FWG (although volunteering there may very well have been a contributing factor), the poem nonetheless demonstrates the depth of connection, feeling and meaning that access to, and immersion in, green places like the FWG can inspire.

There Have Been Times

*There have been times when I have stood in awe
before a mystical majesty,
not of wealth nor power, not of human beauty
nor any human-created thing.*

*There have been times when my pent-up inner heart
nearly burst with joy, and a torrent of thankfulness
surged from deep within me yearning to cry aloud
“thank you, thank you.”*

*Not to any god or gods was it aimed, nor to any singular
thing. It was before the spirits of “Life” and “Nature.”*

*Beneath the stretch of an endless blue sky or sheets of rain,
before emerald forest or crystal wonderland
sometimes I have sighed deeply, and silently whispered
“I adore and salute you O beautiful blue marble, my home.”*

*O mother earth, from your cosmic substance was I made
and one day to you I will return.
Nothing is lost, simply changed.*

*O life-giving sun and water I thank you.
 Life-giving air without you I become as nothing.
 At times like these I feel the urge to fall to my knees
 in heartfelt gratefulness, and give thanks for the “gift of the
 present moment.” (Clark 2010)*

11.4 A place of transformation and inspiration

Active volunteering in green places such as the FWG can, as previous sections show, inspire poetry, kinship, fulfillment, discovery, learning, serenity, respect, awe, transcendence – in the process magnifying connections and deepening the meaning of collective action to the point of being, as other researchers describe it, life-changing and transformative (Ryan and Grese 2005, 180; Miles, Sullivan and Kuo 1998, 33; 2000, 222). An ecological restoration volunteer in Michigan, for example, is quoted as saying that volunteering opened up a whole new world for him and his family (Ryan and Grese 2005, 180), while a Green Gym project in England reports on the changes to one volunteer’s life as a result of environmental volunteering:

One volunteer in the Meanwhile Wildlife Garden project, run by the mental health charity Mind to conserve a small wildlife habitat in inner London, described his experience: ‘Initially it was something that I would do as I recovered from my illness, but now it has become the main focus of my energies.’ Conservation led him to a recognised qualification and paid employment in urban gardening (Burls and Caan 2005, 1222).

While FWG volunteers do not report personal transformations as dramatic as the Green Gym volunteer’s, many do speak about the FWG’s transformative impacts, and the different ways the project inspires.

Margaret, for example, finds the FWG to be an overall “inspired and inspiring project”, while Evelyn feels its main purpose to be “an example, or inspiration” to others. One of the most inspiring transformations at the FWG is the dramatic physical change in the land since the beginnings of the project. Kate, for example, describes the physical transformation of the FWG “from a barren wasteland into a garden of Eden” as “awe-inspiring.” Christine, involved in the project since its beginnings and writing at different points in time, describes the changes as “eye-opening to say the least!” (Hanrahan 2006d, 1), and “striking ... in some cases, dramatically so” (Hanrahan 2009b, 121). To commemorate the 20th anniversary of the FWG in 2010, she offers the following account of the project’s remarkable evolution:

The site of the newly planted trees, 20 years ago, was a mowed meadow. Now it is a woodlot (The New Woods), dense with trees and shrubs and many birds nest there, and many small animals find cover and denning sites. Where our Amphibian Pond now sits, was once a grassy dip in the land, mowed regularly. Now it supports turtles, frogs, aquatic insects, nesting Red-winged Blackbirds, muskrats, the occasional beaver, waterfowl, etc. Our Old Field habitat was once a cornfield. The Ash Woodlot, 20 years ago, was more reminiscent of Capability Brown's version of a grand garden, lots of scattered trees with mowed grass, no understory or herbaceous cover. The Butterfly Meadow was also once a slice of mowed grass. And the Backyard Garden, was a flat site covered only with grass, not a flower in sight (Hanrahan 2010e, 163).

Christine encourages readers to look back occasionally at old photographs and archival material as a reminder of the physical transformation of the FWG, and of shifts in “philosophy, planning and approach to the garden” (Hanrahan 2006d, 2). One place to see old photographs is through a FWG photo-blog gallery portraying the history of the project. As Christine writes when she announces the new gallery in 2010: “Most astonishing are the before photos of the Amphibian Pond and the New Woods. Although I have seen the photos a zillion times it seems, they never fail to amaze me. Who'd have thought that the grassy mowed area of then, would be the pond of now with all the creatures who live, visit, feed, and nest there” (Christine e-mail update, Jan. 21, 2010).

Other volunteers have similar responses to the FWG's transformation. Robert states that the garden has “improved dramatically” in the years since he began volunteering, while Paul describes the changes at the FWG in terms of volunteers having “done wonders.” Kate's portrayal of the original site – “desolate ... flat, lifeless ... open, monocolour, blah” – hints at her initial scepticism. “I thought it was insane,” she says, “I never thought it would succeed.” She says that she looks at the FWG now and feels “utterly amazed beyond belief, at the transformation that has occurred since the conception of the idea of the wildlife garden.”

It is indeed astonishing to view photographs of the project's beginnings and to compare them with the site today. The images never fail to amaze me when I see them, although at another level, I am not surprised by the changes that have transpired at the FWG. The transformation of the site is a tribute to various factors which have become clear since the beginning of the study: nature's vitality, the originating vision for the wildlife garden, and the ongoing efforts of volunteers who make the vision a reality. The ongoing volunteer efforts, sometimes struggles, are themselves inspiring – “a reminder that humanity has the power to create something beautiful as an alternative to something sterile and unliving”, as Kate observes. Mark reveals that he has become more optimistic about civic action based on

his experiences at the FWG, while Evelyn tells me that she has changed her views on what she feels “a group of dedicated people can actually do”, adding that she is encouraged by the fact that the FWG has been created by volunteers. Margaret finds inspiration of a more personal nature. “Even I can make a difference, who knew nothing beforehand,” she tells me.

Others who knew nothing beforehand have also made a difference – to the natural environment at the FWG, to themselves, and to FWG volunteers – as demonstrated in Cindy’s story, told in Chapter 7, of a reluctant outside group transformed by physical work at the FWG. Cindy speaks of the “dramatic change” the group achieved in the habitat where they were working, along with a transformation in the dynamics of the group and the attitudes of individual team members toward their physical tasks and accomplishments. Cindy herself was affected by the experience, which she describes as rewarding and a privilege to have shared with the group. Mark tells a similar story of working with a group to remove an invasive species at the FWG. The members of the group ended up being enthusiastic about “ripping things out of the ground”, as he puts it, and getting to know each other in a non-workplace setting. Mark adds that he also found the experience rewarding.

I myself participated in such a social transformation experience at the FWG, although I did not know it at the time. I discovered it, to my surprise, during my search for literature relating to the FWG, in an article about the transformative experiences of a group engaged in “encounter activities” at the site. I was named as the “graduate assistant” from the University of Ottawa who worked in “human-earth relationships” and had “practice in bringing learners into the natural environment and engaging them in a variety of encounter activities.” The author of the article, a professor from St. Paul University who had contracted me to facilitate a “retreat day” for a course she was teaching, writes that she and I “shared our expertise to form a wonderful partnership, working together to provide the learners with a rich experience” offering “pivotal learning moments for the class.” She describes the encounter activities that day as changing the “learning energy of the classroom” and transforming a group of individual learners into a “learning community” whose members subsequently felt much freer to interact during class (Martin 2010, 106-109).⁴⁰

We could say that volunteering at the FWG similarly transforms individuals with an interest in the natural world into members of a cohesive group working together for the common cause of creating habitat for wildlife in an urban environment and encouraging

others to do the same – a cause which has spread beyond the FWG to inspire physical transformations in other parts of the city. Various regional groups and projects, as already mentioned, have obtained ideas, advice and plants from the FWG; so have individual visitors. “So many people come here and say ‘wow, it’s fantastic’,” says Glenda. “People come here and get ideas from us.” Individual volunteers have themselves benefited from ideas generated by their FWG volunteer work, and by plants offered through the annual plant sale. “One of the reasons for volunteering there was to find out what to plant in our garden,” Audrey reveals, adding that their home garden was designed by someone associated with the project, and that they have obtained many plants from the FWG. Joyce, Marie and Michael tell me they have been inspired to incorporate more native plants into their home gardens, while Gail says she plants mainly native species at home.

Other volunteers share less tangible and more deeply personal inspirations relating to the FWG. One older volunteer tells me, for example, that he decided to stay in Ottawa for retirement because of his association with the project. A younger volunteer, Cindy, shares her intentions of “helping to inspire others” and becoming more involved with native plants herself. “I just want to have a positive impact on the environment,” she says, adding that the influence of the FWG has been “almost indescribable.” Still other volunteers speak of various philosophical transformations inspired by their work with the FWG. “It has changed the way I think about things,” Robert says. “I appreciate the environment and am much more protective of it.” Margaret describes an increased awareness and appreciation for the interconnections of life on the planet, while Thomas reveals that he has become “much more sensitive” to the implications of his actions. Randy tells me that the FWG has provided an opportunity to think about things – “about different things than I would if I weren’t here” – thus revealing the worlds of opportunity the project offers for transformation and inspiration.

All the transformations discussed in this section – physical, social, personal, philosophical – are likely the culmination of all the previous threads of meaning generated by the FWG. The meaningful place it has become, for all the reasons discussed in the previous pages, inspires a web of interwoven meanings.

11.5 A rich tapestry of meaning at the FWG

The rich tapestry of meaning experienced and cultivated by the community of FWG volunteers – each of whom has developed personal and often intimate attachments to the site, attributed unique meanings to his or her involvement in the project, and cultivated a unique sense of place in relation to the wildlife garden – attests to the significance of green places like the FWG, especially in urban environments. These places of “ordinary nature” – conceptualized by Kellert as green spaces commonly encountered, experienced and valued as a matter of routine – are, as he points out, integral to life (Kellert 2005, 9-10). In these places people can, “free from the constraints of excessive formality” (Kellert 2005, 53), immerse themselves in the natural world, connect with nature and with other people, and find and cultivate personal meaning through direct experience. As the FWG case study reveals, it is important for people to have access to places like the FWG, as well as opportunities to become immersed and involved for many profound and personal reasons relating to beauty, serenity, discovery, learning, fulfillment, kinship, spirituality, and inspiration. These reasons, along with opportunities to be active outdoors and to connect socially with like-minded people, constitute the synergistic appeal, benefit, and significance of ordinary green places like the FWG.

For these reasons alone, nearby green places like the FWG are important in the lives of people who have access to them. Yet over the course of the FWG case study, an additional element of synergy and significance emerged – an element underlying the FWG’s very *raison d’être* and fuelling both its present and its future. This element of synergy, interconnected and entwined with the physical, relational and meaningful aspects of volunteering in nature, draws together those varied threads and reaches across the human-nature divide to help overcome the human-nature estrangement discussed earlier.

PART IV

Human-nature reconciliation and reciprocity – R&R

It is time for us to signal the reconciliation of humankind with all living things on the planet.

(Hulot 2007, 109)

The rich tapestry of meaning and sense of place experienced and cultivated by Fletcher Wildlife Garden (FWG) volunteers, the benefits of outdoor activity gained through physical engagement with nature on-site, and the rewards of social and natural connections reaped through immersion in the project's natural environment – all attest to the synergistic significance that places of “ordinary nature” offer to people in urban environments. Opportunities to participate in projects such as the FWG can also open doors to further synergistic benefit, including a relationship with nature that is healthier, more balanced, and mutually beneficial – a need described in Chapter 5 and acknowledged in diverse disciplines ranging from theology (Berry 1999; Hamma 1999), history (White 1967, 1206), psychology (Conn 1995), and law (Cullinan 2008, 2003; Burdon 2010), to the biological and ecological sciences (Tallamy 2007; Rosenzweig 2000, 2001, 2003a, 2003b). Cultural historian and ecotheologian Thomas Berry stresses that the future of our species depends on developing a more intimate relationship with the natural world (Berry 1999, x), a concern reflected in psychologist Sarah A. Conn's assertion that we need “direct experience of connectedness” and “passionate engagement” with the natural world to deal effectively with the ecological crisis we are experiencing (Conn 1995, 163). Over 40 years ago, historian Lynn White Jr. raised a similar point – that we must change our ideas about our relationship with nature if we truly wish to reverse the global environmental crisis (White 1967, 1206). In the intervening decades, the need has become more urgent.

The need for changing our ideas about relating to the natural environment, for intimacy with the world around us, is not lost on geographers such as Douglas Porteous who, in response to the rapid development of remote sensing technologies, drew attention to the decline of “intimate sensing”: the capacity to be present on the land “at ground level”, to “see, smell, hear, taste and touch its infinite variety”, ultimately developing understanding in addition to knowledge (Porteous 1986, 250). Douglas Pocock stresses, more recently, the benefit of (re)engaging with our senses and rediscovering the “sensory-rich world of wonder

and enchantment” we knew as children as well as a more harmonious and unified relationship with the world (Pocock 1993, 11 and 15).

Geographers writing about the history of geography point out that a more harmonious and unified relationship with the world, particularly the natural environment, stretches far back in time. Noel Castree points out that it harks back to pre-Enlightenment Western intellectual notions of the Great Chain of Being linking lowly creatures to God in an organic whole (Castree 2000, 538), while William Norton notes that the scholarly tradition viewing humans as a part of nature – described by Michael Watts as a “counter-community ... that spoke the language of relations and relational worldviews” (Watts 2005, 152) – is long, but that it was never as dominant as the one which separates humans from nature (Norton 2000, 56). Norton traces this counter-community from the ancient Greeks and early Christians – Herodotus, Plato, St. Augustine – to the early geographers, pointing out that Alexander von Humboldt and Carl Ritter made the most significant contributions to the holistic theme through their shared commitment to a vision of the earth as “an organic whole”, and to the notion of the interrelatedness of “all things on the earth’s surface” (Norton 2000, 56-7).

Paul Vidal de la Blache notes that the discipline offers “a new conception of the interrelationships between earth and man” (Vidal de la Blache 1996/1926, 182), a relationship grounded in unity. “De vieilles habitudes de langage, nous font souvent considérer la Nature et l’Homme comme deux termes opposés, deux adversaires en duel,” he writes. “L’homme cependant n’est pas ‘comme un empire dans un empire’; il fait partie de la création vivante, il en est le collaborateur le plus actif. Il n’agit sur la nature qu’en elle et par elle” (Vidal de la Blache, 1903, 222). Arild Holt-Jensen adds that according to Vidal de la Blache, boundaries should not be drawn between natural and cultural phenomena – they should be considered inseparable and united (Holt-Jensen 1999, 46).

Involvement in green places such as the FWG helps to reduce the separation between the natural and the cultural, and to unite the human and the nonhuman in mutual well-being. The FWG provides opportunities for volunteers to develop significant personal understandings of nature through their participation in the project, attribute profound personal meaning to their involvement with the land on-site, and cultivate unique bonds with the natural world they engage with in their work – connections which can foster a reconciliation with nature and evolve into an enriched relationship with reciprocal benefit. “This [FWG] is a great place to

learn,” says Mark, a relatively new FWG volunteer who values the project for what it has taught him, “and there are new things to learn about new relationships.”

Some of those new things involve reconciliation and reciprocity, relational elements which add another dimension of significance and synergy to volunteering in green places such as the FWG. These elements have been in evidence since the project’s beginnings, and have been developing since then, as the following chapter reveals. The final chapter offers closing reflections on the FWG case study.

Chapter 12 R&R – places for people and nature

An early draft of the FWG's general brochure shares the following observation: "Mother Nature often feels a stranger in modern cities. There is little room left for our wildlife companions on this planet. But this doesn't have to be. In recent years there has been an encouraging increase in efforts to make private gardens and public green spaces more wildlife friendly" (FWG D3, Brochures – General, n/d). The Fletcher Wildlife Garden is a public green space which has made the effort to attract and accommodate both humans and wildlife, and to inspire and encourage wildlife-friendly gardening practices. The same brochure draft describes the FWG's work as "knitting back together the fabric of natural life that we all depend on" (FWG D3, Brochures – General, n/d) – a fabric of life that is increasingly unravelling and jeopardizing the future of life on this planet, as discussed in the pages to come.

Homo sapiens is a part of this fabric of life, and as environmental thinkers have asserted, solutions to the current global ecological crisis and the future of our own species depend on re-thinking our relationship with the natural world, and developing a healthier one (Berry 1999, x; White 1967, 1206). The volunteers who work at the Fletcher Wildlife Garden agree with the need to develop more harmonious relationships with nature. "We and our ancestors have so altered the natural environment, and habitat for the creatures here," says Evelyn, "that it feels right to be able in some way ... be helping to restore it." Implied in her statement is responsibility that people can take to make human-dominated places more hospitable to wild animals – a commitment Robert supports. He acknowledges the need to take responsibility for nature, and to convince and encourage people to do so. "They just look after their own lives," he notes.

Looking after lives other than our own is at the root of the FWG project, where volunteers create and maintain wildlife habitat and biodiversity, at the same time restoring and enhancing their relationship with the natural world, and reconciling with nature in both tangible and intangible terms, as discussed in this chapter. Human-nature reconciliation is one way to understand the deep motivation and commitment of FWG volunteers such as Evelyn and Robert from a perspective which reaches beyond personal benefit to include broader philosophical and ethical considerations. The notion of human-nature reconciliation also

illuminates the powerful synergy of the physical, relational and meaningful benefits experienced by volunteers involved in the FWG project – a synergy which enhances the wellbeing of both people and the natural world in what turns out to be an additional dimension: human-nature reciprocity, discussed in the second half of this chapter.

12.1 Making sense of human-nature reconciliation

Human-nature reconciliation is at the heart of many human efforts to (re)connect with the natural world. As Richard Louv points out, reconciliatory endeavours are ultimately about “restoring nature while we restore ourselves; about creating new natural habitats where they once were or never were, in our homes, workplaces, schools, neighborhoods, cities, suburbs, and farms” (Louv 2011, 6). Volunteering in natural areas such as the Fletcher Wildlife Garden (FWG) is one way for people to restore themselves physically, relationally, and meaningfully in the natural environment, as previous chapters reveal. The powerful synergy of these physical, relational and meaningful benefits of nature volunteering is further intensified by elements of reconciliation, as discussed in the following sections.

12.1.1 The need for reconciliation

*This planet is our mirror image: if it is wounded, then we are wounded;
if it is mutilated, humankind is mutilated as well.*

(Matsuura 2007, xii)

The need to reconcile with nature is not difficult to imagine on the human side, specifically in the context of the needs for nature discussed in Chapter 5, and of the testimonies of Fletcher Wildlife Garden volunteers who express strong physical, relational, and meaningful benefits relating to their involvement in the project. Of late the natural world has also been expressing, so to speak, a need for reconciliation through scientists who have published results of their research. The need for reconciliation on the side of the natural world is most evident with respect to other life forms such as animals and plants, and the need is becoming increasingly urgent, convincing and critical to the survival of life on this planet.

Recently published research reinforces the dramatic extent of human impact on the greater interdependent web of life on Earth, specifically on biodiversity and the survival of other species (Estes et al. 2011, Isbell et al. 2011, Mora and Sales 2011), resulting in associated loss of ecosystem functions and services (Cardinale 2012; Cardinale et al. 2012; Reich et al. 2012). Contemporary biodiversity decline is closely associated with the ways in which

humans use, organize and transform space and places, and with the ways in which human activities dominate the surface of the planet – to the extent that 90 to 95 % of the earth's terrestrial surface has been appropriated by our species to serve our purposes (Miller 2008, 118).

The loss of biodiversity – described by biologist and theoretical ecologist Michel Loreau as “the diversity of life in all its forms,” from the diversity of genes, physiologies and associated behaviour, to the number of species and complexities of ecological interactions, to the diversity of ecosystems created by the species and interactions (Loreau 2007, 57) – has actually been described as a “silent epidemic” (Suzuki and Moola 2010). It is considered silent because it does not prompt the same reactions and attention as the spectacular and devastating events of climate change – severe storms, intense forest fires, extended heat waves and drought, collapsing ice shelves. Biodiversity, by contrast is being eroded in what is described as “a mostly silent, local and anonymous fashion”, which may help to explain why it triggers fewer alarm bells than climate change (Jouanno and Ranganathan 2010).

One way to prevent the loss of biodiversity is to conserve it in protected areas. Yet, as revealed by a recent comprehensive assessment of literature and varied global data, biodiversity loss at current rates cannot possibly be prevented through the establishment of protected areas alone. The authors conclude that although efforts to improve and increase protected areas must continue, the need to develop additional approaches to stemming biodiversity loss is “clear and urgent” (Mora and Sale 2011, 251). Other scholars concur, pointing out that despite increasing conservation endeavours, species populations continue to decline in many different environments (Loreau 2007, 59), that nature reserves are too few and too isolated to curb biodiversity loss, and that other approaches are needed to complement protected area strategies (Miller 2008, 114 and 118). These “other approaches” include habitat creation and broader human-nature reconciliation in cities and other human-dominated environments.

12.1.2 Human-nature reconciliation conceptualised

We need ... to become benevolent sharers of our world.

(Rosenzweig 2003b, 51)

Reconciliation, broadly defined⁴¹, means to restore peace, unity or friendly relations between estranged parties. It also carries nuances of compatibility and harmony, as well as acceptance, co-existence, and resolution. With regard to human-nature relations, I propose that we consider reconciliation to involve the following:

- reuniting or re-connecting people and the natural world in a friendly, peaceable, harmonious manner,
- restoring positive relationships and resolving differences between people and the natural environment, including individual humans and individual components and inhabitants of the natural world,
- working toward the harmonious co-existence of people and the natural world, which would entail creating suitable and compatible conditions that meet the needs of both parties⁴².

These aspects of reconciliation between humans and the natural world can manifest themselves along both tangible and intangible lines.

Intangible dimensions of human-nature reconciliation include philosophical and emotional-evocative shifts in the way we think and feel about nature (and its diverse components and inhabitants), about the place of the natural environment in our lives, and about our relationship with the natural world. These philosophical and emotional shifts influence our values, attitudes and worldviews, which in turn influence our behaviours and activities, which have an impact on the physical world around us, including the ways in which we organize, alter, and manage places.

Tangible physical and behavioural dimensions of human-nature reconciliation grow out of the aforementioned ways in which we think and feel about the natural world. Physical reconciliation includes deliberate hands-on action we take, individually and collectively, with respect to the natural environment, and the results of that action. Physical reconciliation activities change the physical environment in some way, by arranging elements, removing obstacles, restoring features, and more. Behavioural aspects of reconciliation involve the ways in which we conduct ourselves, individually and collectively, with respect to the natural

world. These behaviours can range from deliberate hands-on action and changes to the physical environment, to regular activities and habits, professional endeavour, and cultural practice. Behavioural aspects of reconciliation can also entail education and exploration activities pursued with a view to learning more about the natural world for the purpose of restoring positive relations and co-existing more harmoniously. Reconciliation-related behaviours can be informal (solitary and independent discovery, study and action; or activities and learning in the company of family, community, and friends) or formal (education and action via organised groups, educational institutions, or professional functions).

Human-nature reconciliation can likewise take place for diverse reasons, at different scales, and in various contexts and settings – from individual home environments, to university campuses, to agricultural or industrial settings – any place that is dominated by human activity. The Fletcher Wildlife Garden, located in the middle of Ottawa and originally mowed and manicured in keeping with North America's dominant lawn-oriented landscaping tradition, is one such place.

12.2 Human-nature reconciliation at the FWG

Human-nature reconciliation manifests itself along the following tangible and intangible lines at the FWG:

- reuniting and (re)connecting visitors and nature, volunteers and the natural world in as peaceable and harmonious a manner as possible,
- restoring positive relationships and resolving differences between visitors and nature, and between volunteers and the natural environment, including its various components, at the project site,
- working toward the harmonious co-existence of visitors, volunteers and nature on-site, and of people and the natural world in general, by both creating and demonstrating how to create suitable and compatible conditions for both nature and humans⁴³.

Reconciliation between humans and the natural world at the FWG, particularly between volunteers and the natural environment, comes to light in both abstract and concrete terms – philosophically, physically, emotionally and behaviourally – as discussed in the following pages.

12.2.1 Philosophical reconciliation at the FWG

Let's put Ottawa on the map as the 'wildest' city in Canada.

(FWG 1987, 181)

Reconciliation, it turns out, is the whole idea behind the FWG project – an idea which encompasses reconciliation in its full range, including

- the physical sense of creating an actual place where wildlife can find refuge in a human-dominated environment,
- the philosophical sense of raising awareness among FWG visitors and volunteers regarding the need and benefit of making room for nature in an urban setting,
- the emotional-evocative sense of fostering appreciation and esteem for the natural world among visitors and volunteers, as well as pleasure and meaning in the project,
- the behavioural sense of inspiring and encouraging others to create and enhance wildlife habitat on their own lands.

The original idea was a tall order at the time, a dream of sorts in response to the loss of habitat and wildlife in urban and modern agricultural settings. As one long-time FWG volunteer points out, the FWG project was “in the vanguard” of the movement to create gardens and urban sanctuaries with wildlife in mind. She reveals that the individuals who conceived the idea of the project were concerned about the ongoing loss of green space in Ottawa. “They thought that if you planted stuff wildlife wanted, it would come,” she says. And it did. “We have created habitat for wildlife – and life has returned!” the 2005 FWG brochure declares (FWG Br1, 2005) with obvious delight at the success of the original concept and objective.

The success of the FWG in attracting wildlife provides a springboard for the project's parallel objective to be a model and catalyst inspiring urban and rural landowners with ideas for creating and enhancing wildlife habitat in their own spaces (FWG D2, Project description, 1989 and 1991: 1) and in raising broader environmental awareness. Presentations to interested groups in the early days of the project identify the following “intended side effects” of habitat creation outside the FWG: understanding among landowners and others regarding the ecological sterility of urban environments, appreciation for the impact gardening practices can have on wildlife, and recognition that humans are “part of nature, not above it” (FWG D3, Presentations 1991). Early strategic planning documentation adds the hope that by actively re-creating nearby wildlife habitat, people would gain gradual insight into the

complexity of the natural world, realize “how difficult it is to recreate what we have lost”, and view their own actions and attitudes as fundamental to environmental change (FWG D2, Strategic Plan, 1994).

The FWG has been successful in achieving these “intended side effects”, if the testimonies of inspiration, transformation, kinship and deep connection with the natural world described in Chapter 11 are any indication. Those outcomes confirm what researchers have discovered elsewhere – that volunteering in nature gives participants the opportunity to reflect on the natural world and their relationships with it, in the process initiating the beginnings of a personal environmental ethic (Ryan and Grese 2005, 177). Glimpses into personal environmental ethics emerged in conversation with some FWG volunteers. Robert, for example, shares that his work at the FWG has changed the way he thinks about nature, inspiring changes in his actions at home, and a new appreciation for the natural world in general. Many FWG volunteers talk about being inspired by the FWG to accommodate wildlife and native vegetation around their homes – in the process undergoing shifts in their perspectives on desirable garden plants. Cindy points out that the FWG has important contributions to make in this regard, particularly in “overcoming the idea of wildflowers being weeds.” Tracey adds that the FWG helps to overcome the notion that nature doesn’t belong in the city.

The FWG has been successful in triggering some of these changes in perspective among both volunteers and the public. “As the FWG becomes better known,” Christine observes, “we are increasingly being asked for information and advice by others wishing to set up native plant gardens, or wildlife friendly gardens.” She lists projects in various settings – educational institutions, public green spaces, a housing coop, wastewater management site, health care facility – inspired and supported by the FWG (Hanrahan 2010a, 3 and 2009a, 3). Other volunteers make the point that people also come to the FWG to simply enjoy the natural surroundings there, and that those visits have the potential philosophical impact of inspiring understanding and esteem for nature. Thomas is more direct about the FWG’s potential philosophical impact. “We try to get others to see the way we do,” he says.

Cindy expresses a wish that the FWG could have even broader influence. “I wish there were more places like this in cities,” she tells me, pointing out that new developments typically destroy habitat and install concrete. “It’s like a wall goes up and keeps nature out,”

she says. Cindy believes it should be mandatory for developers to fit new projects into the natural environment. “There needs to be more integration,” she says. “We are animals too. We can’t segregate ourselves from nature.” Cindy’s wish for wider FWG influence on land use has not yet come true, although the FWG was peripherally involved in the story of a Constance Bay couple, Hank and Vera Jones, who sought to reconcile with nature by making their yard, which they call the “Allbirch Pollinator Garden”, more wildlife-friendly. Their objective to “fulfill a dream of a new kind of backyard, one that is an oasis of nature” (Dare 2009) was opposed, however, by neighbours and the City of Ottawa. The couple was accused of violating a municipal bylaw because they failed to remove long grass and weeds from their lawn. The issue seethed for much of the summer of 2009, with the FWG donating 140 native plants to the Allbirch Pollinator Garden (Dare 2009), and the issue eventually resulting in more nuanced and informed by-law investigations (Cockburn 2010).

Although the FWG’s influence in the Jones case was minimal, the project has nevertheless contributed to changing ideas about and fostering appreciation for the natural world in wide circles – an achievement which has not gone unrecognized. The FWG has received praise and awards from the City of Ottawa, the National Capital Wildlife Festival, the Canadian Wildlife Federation, the Canadian Society of Landscape Architects, and the Ontario Association of Landscape Architects. The latter organization, for example, honoured the FWG in 2006 for service to the environment. The citation read at the awards ceremony draws attention to the project’s many accomplishments, including outreach efforts, and “the vision and hard work of devoted community volunteers” who have “transformed a part of the city, and the perception of residents, to create an urban home for wildlife among us” (FWG D2, Awards – Certificates). The citation confirms the message and hope of reconciliation articulated in an *Ottawa Citizen* column published during the early stages of the project: “Out of understanding comes a sense of stewardship about our environment, and a heightened awareness of how important it is to live in harmony with nature. The sponsors involved with the wildlife garden hope that it will be a place of refuge and delight for both people and wildlife” (Dickenson and Harrison 1990).

12.2.2 Physical reconciliation at the FWG

The “place of refuge and delight for both people and wildlife” that the FWG has become is the outcome of decades of planned and dedicated physical reconciliation intended to

accommodate the needs of the wild at the site. As Christine writes several years after the launch of the project, “Accounts of habitat loss are too frequent these days, and we know the negative impact this is having ... throughout the Americas (and indeed, the world).” The FWG, she points out, is one place in the city that seeks to restore and re-create habitat rather than destroy it (Hanrahan 1997b, 125). Christine’s statement is, in fact, a declaration of reconciliation consistent with a concept known as reconciliation ecology.

Reconciliation ecology

Reconciliation ecology is a conservation approach conceived by University of Arizona ecologist and evolutionary biologist Michael Rosenzweig. In his book *Win-Win Ecology: How the earth's species can survive in the midst of human enterprise* (2003) he describes reconciliation ecology as “inventing, establishing, and maintaining new habitats to conserve species diversity in places where people live, work, or play” (Rosenzweig 2003a, 7). In articles and interviews, he acknowledges that while we definitely need to continue preserving remaining wild areas (Rosenzweig 2003a, 143), those spaces are dealing with “a smaller and smaller fraction of the Earth” when we really need to be working on “a larger and larger fraction” (Rosenzweig quoted in Nyberg 2001) – specifically human-dominated environments that cover most of the planet’s terrestrial surface (Rosenzweig 2003b, 194).

Rosenzweig further explains his notion of reconciliation ecology as learning how to “reconcile our own use of the land with that of many other species” (Rosenzweig 2003a, 7). In that light, reconciliation ecology fills two gaps: (1) the need for an additional solution to stemming biodiversity loss, and (2) a way of meeting the needs of humans and other species in unlikely settings. Rosenzweig envisions reconciliation ecology as “redesigning anthropogenic habitats so that their use is compatible with use by a broad array of other species” (Rosenzweig 2003b, 194), and developing management techniques that allow us to share our extensive geographical range with wild species (Rosenzweig 2001, 5404). He is quoted as saying that we can avoid mass extinctions only if we take notice of habitats we have overlooked, places that are usually not even called habitats (Rosenzweig quoted in Keim 2010). Geographer Robert Francis adds that reconciliation ecology should operate without causing human space to be lost or human use to be substantially compromised; it should strive to find a balance between managing for biodiversity and managing for human resources (Francis 2009, 2-4).

The FWG and physical reconciliation

The FWG is a place which has struck a certain dynamic balance between wildlife and human needs and uses. It has become place where wild species can breed, feed, grow and thrive in safety, while at the same time providing opportunities for recreation and nature connection to both visitors and volunteers. Ensuring that the FWG can meet the physical needs of other species was the main factor motivating the project from the beginning. A 1995 project description, for example, makes the following statement: “By developing a series of distinct but interconnected habitats, the biodiversity of the area will greatly increase. Benefits to wildlife will be in the form of living and breeding space made available through natural habitat and man-made enhancements, as well as providing food sources in the form of native vegetation” (FWG D2, Project description, 1995: 4).

To prepare the land for habitat creation, volunteers embarked on an early and onerous act of physical reconciliation: cleaning up the unused site and removing unsightly signs of human activity and disrespect for the land. It was a substantial initial task. As a 1990 *Trail & Landscape* article reports, “On April 29, about 20 members [of the Ottawa Field-Naturalists’ Club] carried out a half-day clean-up of the site. It resulted in about 25 full garbage bags ... as well as a large pile of metal and wood. Only the insides of a washing machine gave members trouble, but these parts were eventually hauled away by employees of the Farm” (Hall 1990, 128-9). Subsequent physical reconciliation work to provide habitat basics – food, shelter, and water (Garland 1999b, 2; Hanrahan 1998b, 1-2) – is summarized in the 2011 draft strategic plan as follows:

Work began in 1991 to create new habitat areas. A dam across the upper end of the ravine created a pond, which has since sheltered a variety of birds, frogs, turtles, fish, and numerous invertebrates. Trees were planted in an open field to create a New Woodlot. A stand of mature green ash and red oak formed the basis of another woodlot. Fallen leaves were spread under these trees to amend the soil and allow a forest understory to develop in place of mowed grass. Suitable trees, shrubs and woodland flowers were planted to assist the process. Other shrubs were used to create a “hedgerow” on one side of the New Woodlot, similar to fencerows found on farms prior to mechanization. A Backyard Garden was created by the Ottawa Chapter of Landscape Ontario. The garden features plants, particularly native plants, that are noted for their attractiveness to animals in general (particularly insects) and includes a pond as a water feature. A number of bird boxes and two bird feeders were set up on the FWG, and a 1.5-km nature trail was created to wind through the various habitat areas (FWG SP, 2011).

These habitats are now maintained on an ongoing basis, and their use by wildlife appreciated and monitored by different volunteer teams and individuals as described in previous chapters. The result of all this physical reconciliation work is the striking

transformation of the FWG from its beginnings as a mostly grass environment into a series of different, interconnected habitats supporting a wide diversity of wildlife. As Bill observes, the FWG is “as good a natural environment as you’ll get in an urban environment.”

Still, not everything at the FWG appears totally natural. Something referred to early in the project as “artificial enhancements” (FWG D3, Presentations 1995; FWG Br2, n/d) are noticeable and significant features. As a 1995 *Ottawa Citizen* column notes, these enhancements – bird baths, birdhouses, and roosting boxes, along with rock and bush piles for small mammals, reptiles, amphibians and insects – can provide important resources when natural features are still developing, or when they don’t exist at all (Dickenson and Harrison 1995a). An earlier version of the FWG brochure adds the point that these sorts of physical structures are a “quick and easy” means of providing for the basic needs of the wild – for example, the Backyard Garden pond which offers a place for various species to live, bathe and drink (FWG Br2, n/d).

Interestingly, the wildlife response to these physical features is not always predictable. Species who accept the invitation, in the words of Rosenzweig, to “come in and join us in our use of the land” (Rosenzweig quoted in Franklin 2007) are not always the ones for whom the structures were intended – an indication that the human initiators of reconciliation are not necessarily in control of the process. Christine, for example, describes checking a bird nesting box where a mouse had started building a nest of DSV fibres – another example of wildlife making use of this invasive plant. “It is now a nice big cosy DSV nest,” Christine writes, “and when I opened the box, FIVE little mice all in a row clung to the top. I quickly shut the box before they could throw themselves out” (Christine e-mail update, Oct. 25, 2009). She also observes tree frogs using empty nesting boxes where, as she writes, “they could often be seen leaning out of the entrance holes, seemingly surveying the world” (Hanrahan 2004a, 8). Another popular artificial enhancement is the turtle raft installed in the Amphibian Pond in 2009. This structure is intended as a place for turtles to leave the water and bask in the sun, or for other aquatic species such as frogs, insects and birds to use for their purposes; this raft is often occupied by preening ducks, as revealed by images posted to the FWG photo-blog.

On the human side of the reconciliation equation, enhancements have been added to facilitate human use of the FWG and enable people to experience and connect with the natural world on-site. The Bill Holland Trail, for example, was established as a self-guided

tour of the FWG habitats; it is mowed in some sections, delineated by wood chips in others, and maintained as a well-trodden path by regular use in yet other parts. The new bridge at the Amphibian Pond allows people to cross the dam safely and enjoy the scene of the pond in one direction, and the ravine in the other. The benches installed at strategic locations in the Backyard Garden and the Butterfly Meadow offer visitors opportunities to rest and enjoy views of those habitats.

The ongoing improvement and maintenance of these various physical enhancements, along with the different FWG habitats, offer volunteers the added benefit of outdoor activity involved in the work – an aspect of physical habitat restoration and reconciliation work not to be overlooked. As ecopsychologist Elan Shapiro observes, through ecological restoration “people are coming back to Earth with their bodies ... learning, through their hands and their hearts” to connect and identify with the natural environment (Shapiro 1995, 225); the benefits he goes on to describe are the synergistic facets of FWG volunteering discussed in previous chapters. One long-time volunteer with the project notes that fellow volunteers who participate in physical reconciliation are themselves physically immersed in the FWG’s natural environment where they hear and see wildlife, and feel the sun and the breeze on their skin as they work and walk outdoors – additional subtle experiences which can enhance their overall appreciation for the natural world, potentially resulting in more willingness to understand and value nature.

12.2.3 Emotional-evocative reconciliation at the FWG

The appreciation, understanding and valuing of the natural world associated with physical volunteering at the FWG is closely related to reconciled feelings about the natural environment. Emotional-evocative reconciliation could, in fact, be viewed in terms of making room for nature in our emotional world, just as physical reconciliation involves making room for nature in the physical world. Emotional and evocative aspects of human-nature reconciliation are important considerations – something Stephen Kellert suggested over 25 years ago. He noted that personal and spiritual connections to nature, along with empathetic concern and a personal conservation ethic, will be critical to finding a long-term solution to what he referred to then already as the “global extinction crisis” (Kellert 1985, 535). “Extinction would be regarded not just as a reduction in biological options for coping with an uncertain future,” he writes, “but, more importantly, as a reduction in the aesthetic, cultural,

and spiritual opportunities humans crave in their quest to make life more meaningful and worthwhile” (Kellert 1985, 536).

The meaningfulness of making physical room for nature at the FWG, and the many accompanying (some profound and compelling) emotions evoked through involvement with the natural world on-site have gradually come to light in previous chapters. This section puts emotional-evocative reconciliation in terms of the affective rewards associated with re-established human-nature connections, enhanced human-nature relationships, and resolved differences.

Previous chapters illustrate the extent to which involvement in the FWG project connects volunteers with the natural environment – from motivating individuals to join the teams working on-site, to immersing volunteers in the natural environment, to providing opportunities for experiencing and becoming absorbed by the natural world and its wonders. The emotional effects of those connections are implied, for example, in the appreciation voiced by many volunteers for the opportunity to work with and gain a deeper understanding of native vegetation. Some volunteers have grown to admire and respect native plants and their qualities – from their beauty and versatility, to their resilience and vital ecological roles – while certain individuals have become quite passionate about them. Margaret finds the ecological roles of native plants profoundly compelling, and working with the plants deeply rewarding. Cindy, who finds native plants irresistible, is broadly enthusiastic about them. “If there’s a field of wildflowers,” she exclaims, “there’s nothing more beautiful!”

Other volunteers are equally passionate about the greater natural environment at the FWG, including its diverse habitats and inhabitants. Still others feel the rewards of participating in the greater rhythms and forces of nature they witness and experience while working at the FWG – from variations in plant flowering sequences, to seasonal changes in the gardens, to the evolution of the habitats over time. The connection to these cycles of seasonal growth and the broader pulse of the natural world – “the cosmic forces of life” (Lewis 1996, 63) – is profoundly gratifying to many who volunteer at the FWG.

These deep connections might explain the calming effect the FWG has on the volunteers who find it a place of serenity and sanctuary, where they experience contentment and comfort – feelings certain individuals associate with the project’s reconciliatory goals. Several volunteers express happiness, for example, at the thought of all the wild species living their

lives in the safe haven of the FWG. Kate, interestingly, finds contentment and comfort in knowing that the FWG meets the needs of both wildlife and humans for tranquility.

In this place of tranquility and comfort, volunteers are able to interact and engage with components as diverse as birds, mammals, amphibians, insects, plants, and soil – in the process developing largely positive and rewarding relationships with the natural world. The relationships are rooted in an intriguing web of factors specific to each individual volunteer's experiences and personal interests and values – including, for example, the joy of nurturing growth and life, the satisfaction of fulfilled responsibility, and the intensity of deep attachment and long-term connection. Valerie, interestingly, talks about a reconciliatory shift in her relationship with the FWG. “I used to see it almost as a refuge for me,” she explains. “But now it’s more of a place I want to protect as a refuge for wildlife.” She tells me she now wants to see wildlife flourish and thrive there, to see the whole FWG grow and bloom.

As with all relationships, those that evolve between humans and the natural world sometimes also face conflict and the need to resolve differences. The FWG project is no exception. As positive as relationships with the natural world on-site may ultimately feel, they must at times be negotiated around ambiguity, tension and outright conflict involving wild animals, invasive species, and occasionally other people. Yet even those situations of discord can generate positive outcomes. The invasive and fiercely disliked Dog-strangling Vine (DSV) – despite intense frustration and dismay at its pervasiveness and persistence – can inspire, among some volunteers, admiration for the plant's survival strategies, appreciation for its strange beauty, and a certain satisfaction associated with its removal. The contentious presence of the Beavers overwintering in the Amphibian Pond two years in a row resulted in volunteers and visitors becoming enriched as they learned about the animals and each other from the experience. One of the most important lessons the FWG has to teach, according to some volunteers, lies in demonstrating that cities can be important spaces for wildlife, that it is possible for people and wildlife to co-exist (though not without potential conflict), and that it is important to learn how to do so as harmoniously as possible.

Reconciliation and biophilic design

The point regarding conflict and co-existence recalls Rosenzweig's recognition that the path leading to human-nature reconciliation is “hardly trouble free” and that people's attitudes and feelings will need to change (Rosenzweig 2003b, 203). Yet Rosenzweig misses

the opportunity to make further convincing arguments in favour of reconciliation – arguments which highlight the human benefits of reconciling with the natural world. This is not surprising, considering Rosenzweig's roots in the natural sciences. What is rather surprising is that suggestions to broaden reconciliation ecology's focus come from fellow natural scientist, James Miller, who recommends designing human habits with the dual objectives of improving conditions for biodiversity and enhancing human physical and mental health (Miller 2008, 119). Miller stresses the "tremendous potential" that built environments have for improving human health and conditions for biodiversity, and the importance of recognizing the "synergies that exist between biodiversity, environmental degradation, human well-being, social cohesion and sense of place." He adds that the potential reciprocal benefits are "too great to continue to ignore" (Miller 2005, 433).

Stephen Kellert puts forward a reconciliatory design approach – called restorative environmental design, recently updated to "biophilic design" – focused on human needs to make positive contact with nature as an integral part of their everyday lives and places, especially in increasingly urban environments (Kellert 2005, 9 and 89). An important concept behind biophilic design is what Kellert calls "the spirit of place", which he describes as a satisfying and secure connection to the places where people live and work (Kellert 2005, 57). Places of enduring significance, he observes, are characterized by the unique and "creative fusion" of nature and human culture coming together (Kellert 2005, 59 and 169).

Contemporary building and landscape design and construction, Kellert points out, have ignored the "interdependency of culture, nature, and place" (Kellert 2005, 170), resulting in increased isolation of people from the benefits of experiencing the natural world and its processes (Kellert 2005, 123). This isolation, he stresses, occurs most markedly in urban settings, where the prevailing paradigm of urban development – "converting natural diversity into largely homogenous landscapes of impervious surface, consuming enormous amounts of resources and materials, and generating huge quantities of waste and pollutants" – is essentially a deficiency in design (Kellert 2005, 2) which gives rise to environment impoverishment and social and psychological alienation (Kellert 2005, 175). Biophilic design aspires to diminish the isolation and impoverishment, to facilitate the coming together of nature and culture, and generally to "repair the relationship between nature and humanity" (Kellert 2005, 175). Kellert's design approach fosters human-nature connections and

incorporates the following complementary goals: to minimize harm and damage to natural systems and human health, and to enrich the human body, mind, and spirit through positive experiences of nature in the built environment (Kellert 2005, 5) – thereby helping people reconcile with nature in various ways, including the emotions.

12.2.4 Behavioural reconciliation at the FWG

Kellert's biophilic design approach implies a shift in behaviour relating to the ways in which we shape our everyday places – of dwelling, work and play, in our neighbourhoods and communities. Behavioural aspects of human-nature reconciliation can involve a wide range of individual and collective, formal and informal actions, activities, habits and practices regarding the ways in which we conduct ourselves with respect to the natural world – a broad range of factors beyond the scope of the current context. In this section, we will focus on behavioural considerations that apply directly to the FWG and the reconciliatory experiences of volunteers working on the project.

Behavioural human-nature reconciliation is, not surprisingly, yet another important objective of the FWG endeavour. According to a pre-project article in *Trail & Landscape*, “The garden, to be set up and maintained by OFNC members, would illustrate in a practical way how Ottawa residents can plant and arrange their own backyards to bring wildlife into the city” (FWG 1988, 3). Involved in this new gardening approach is a shift from the dominant North American gardening tradition revolving around homogenous lawns and exotic ornamental plants, to new practices creating wildlife-friendly places of biodiversity rooted in native vegetation – a shift in behaviour demonstrated by Ottawa's Hank and Vera when they stopped mowing their lawn and began planting native vegetation, albeit not without opposition. The culture of the lawn in North America, and the extent to which it is embedded economically and socially in our society, came up in conversation with Cindy. She pointed out that what she calls a “natural yard” can look as tended and aesthetically pleasing as a more traditionally landscaped yard. She also made the point that the FWG is a place which teaches people how to go about making the shift from lawn to wildlife habitat. “Here's a place [FWG],” she says, “that encourages and teaches people how not to conform to what society has deemed as acceptable.”

The goal of non-conformity and habitat creation is acknowledged by the local media. An *Ottawa Citizen* article published when the FWG was just being launched observes the

contrast between the project and other land use trends in the city. “While the rest of Ottawa is being built on,” writes Tom Spears, “the Experimental Farm wants to build a little piece of wilderness” (Spears 1990). In an article published a few months later, Nicole Baer adds that the little piece of FWG wilderness is intended to become an “outdoor classroom that will teach homeowners how to let their carefully-manicured gardens run amok for the betterment of the environment.” FWG volunteers would be quick to point out that urban wildlife habitat creation and maintenance involves much more effort than simply letting gardens run amok. But Baer’s point is clear. She stresses that the FWG will demonstrate alternatives to conventional gardening practices. “The idea is to encourage people to rethink their horticultural habits,” she writes, “which often include heavy pesticide and herbicide use to keep lawns green and flowers blooming.” She adds that the FWG seeks to encourage biodiversity to deal with undesirable species on-site (Baer 1990).

Maximizing biodiversity and eliminating the need for “herbicides, pesticides, and other artificial additives” are, in fact, two principles of operation listed in the FWG’s 2011 draft strategic plan. The same document also articulates a broader goal of having a “positive, reversing impact on the ever-increasing habitat loss that is leading to the decline of many plant and animal species” – a goal achieved by increasing awareness of the importance of protecting wildlife habitat, and encouraging a behavioural shift toward wildlife gardening (FWG SP, 2011). The 2005 version of the FWG brochure expresses these goals directly and vividly. “We want to inspire you to create your own urban oasis,” it declares. “Even small changes – such as increasing the use of native plants in your garden or setting up a bird feeder – will produce a major benefit for wildlife and will bring butterflies and birds fluttering into your yard” (FWG Br1, 2005).

FWG volunteers support these goals. Most feel that the FWG’s most important role is to educate and motivate different gardening and landscaping behaviour. Audrey feels the education should start with raising awareness of the importance of nature. Robert goes a little farther, insisting that people be encouraged to take responsibility for protecting the natural environment. Many volunteers believe that the FWG’s main objective is to motivate people to make a shift toward land shaping practices which will accommodate wildlife. “Wildlife is losing out because there is so much housing development going on,” says Glenda. “We’re losing so much plant diversity.” She points out that the FWG Backyard Garden shows people

what they can do in their own backyards using native wildflowers. Evelyn adds that the Backyard Garden beds are set up in a way that provides good examples for what is possible in small spaces. One long-time volunteer has kept an eye on gardening and land use trends since the beginning of the project. “Gardening with native plants and attracting wildlife are things that seem right to a lot of people,” she says, adding that members of the community appear ready to make the shift from conventional gardening to wildlife gardening.

A willingness to make the shift toward more wildlife-friendly gardening practices is an important step toward human-nature reconciliation. The FWG contributes to the process by providing examples of alternative gardening and landscaping approaches on-site, and by offering information, educational events, and outreach activities. Valerie and Lisa both point out that the FWG is a great source of information on regional natural history and wildlife gardening. The Interpretive Centre provides access to a resource library filled with natural history books, identification guides, wildlife gardening manuals and more. Publications distributed by other organisations and agencies – the Canadian Wildlife Federation, Ontario Nature, the Ontario Ministry of Natural Resources, Environment Canada, and Natural Resources Canada – are also available. At the Interpretive Centre and through its website, the FWG also offers specific information on a wide range of habitat creation topics including gardening for butterflies, attracting bats, feeding birds, composting in the backyard, creating a hedgerow, building a backyard pond, and selecting native plants for different conditions such as sunny meadows and shady yards. Some of this information is also shared through guided tours of the FWG, talks in the community, and various workshops – native plants, birdwatching, schoolyard greening, wildlife gardening, butterfly gardening, building bird feeders – offered since the Interpretive Centre opened in 1995.

FWG brochures and newsletters also encourage readers and visitors to make a shift toward gardening practices that help to create wildlife habitat. “Don’t throw your small trees and branches away!” declares a 1998 Backyard Garden brochure draft. “Cut them into lengths and layer them to create shelter and overwintering sites for small mammals, toads and a wide variety of insects.” The same brochure draft recommends letting fall leaves stay in the garden to provide mulch and shelter for insects (FWG D3, Brochures – Model BYG). Shelter is a thread that also runs through a recent newsletter article titled “Getting your wildlife garden ready for winter.” In the article, Sandy Garland explains that the wild animals we welcome to

our gardens in the summer need shelter in the winter to help survive the cold and the wind. “At the FWG, we leave seed pods on the plants as the seeds might be important winter food for birds and other creatures,” she writes, adding that people should not make major changes to their gardens late in the season. “Many creatures are already bedded down for the winter, sometimes in the leaf litter,” she writes. “Disturbances can mean the difference between life and death if they are already in their dormant state” (Garland 2011c, 2).

Arguably the most influential FWG event for encouraging a shift to wildlife gardening is the annual native plant sale held on the first Saturday in June. Luke describes it as “stroke of genius”, while Christine portrays it as an established, “must-attend” event eagerly awaited by local gardeners (Hanrahan 2010a, 2; Hanrahan 2003b, 2-3). Well-attended even in inclement weather (Hanrahan 2007c, 2; 2006c, 1-2), the FWG’s native plant sale is a major fundraiser for the project and an opportunity for gardeners interested in creating wildlife habitat with native vegetation to obtain information, visit the demonstration garden, and purchase native plants. The event is also emotionally rewarding for the FWG volunteers who help out on the day of the sale. As one volunteer writes in a recent FWG newsletter article, “at the end of the day, seeing all these wonderful plants ready to go out and create new native habitat is heartening!” (FWG NL 2011b, 3). Theresa agrees. “We hope more and more people will buy plants and grow native plants,” she declares.

Many FWG volunteers benefit from more than just the positive experience of the plant sale. They also obtain native species to plant in their home gardens – a behavioural shift inspired by their work at the FWG. Joyce tells me she has picked up many plants, mainly native perennials, since working at the FWG. “I’m using knowledge from here to do my own property,” she says. Michael reveals that he manages to sneak native plants past his wife, who “tends to want the most exotic she can get.” Gordon doesn’t have that problem. He and his wife wanted a maintenance-free garden with plants that “look after themselves all summer.” He says that their garden blends in with the natural landscape. “You wouldn’t know it had been planted,” he tells me proudly.

Not only are volunteers planting more native plants in their gardens. They are also changing wider behaviours. Glenda, for example, tells me that her ways of thinking and acting have changed because of new things she has learned at the FWG. She reveals, for example, that she likes to tidy up and keep garden spaces looking neat, but that the FWG has

taught her to leave plant seed heads through the winter to provide food for wildlife. Robert says his work at the FWG has made him more appreciative and protective of the natural world in general. He describes particularly reconciliatory behaviour at his home. “I let the groundhogs in the garden at home,” he says, adding that he places chicken wire around the flowers. Robert also tells me the groundhogs have been chased out of their burrow by skunks, who are raising three offspring this season. “We’re careful coming around corners of the house,” he explains.

I experienced a reconciliatory gesture myself while interviewing Gordon in his home. My interview notes describe the following incident: “At one point during the interview, [Gordon] suddenly looks hard at me, then comes right at me and swipes his hand through the air over my head. It was a spider. He took it away to a plant on the other side of the room, telling it to build its nest there.” I cannot state with certainty that FWG volunteering influenced Gordon’s actions that day; perhaps he has always saved spiders. Yet Gordon does not strike me as particularly sentimental. He is a rational man. He takes time to ponder questions and formulate responses. He chooses his words carefully. It is possible that Gordon’s FWG work has made him more aware of, sensitive to, and protective toward wildlife of all shapes and sizes – including spiders who find refuge in his home.

Robert and Gordon’s reconciliatory behaviours are not atypical of people who volunteer in nature. As other research reveals, people who participate in ecological restoration work tend to develop a greater appreciation for local natural areas than they held previously, along with a much stronger interest in visiting and protecting those places. The majority of ecological restoration volunteers are also more likely to make a shift toward planting native vegetation and creating wildlife habitat on their own properties (Ryan and Grese 2005, 178-9). One of the FWG’s aims, as already discussed, is to encourage reconciliatory behaviour among the community at large, mainly by demonstrating and providing information about wildlife-friendly gardening and native vegetation. The FWG also responds to the desires of people wishing to simply visit a place where they can (re)connect with nature and learn about the natural world – an important initial behaviour and first step toward physical and ongoing behavioural reconciliation.

The FWG could, in fact, be described as a place of wide impact along the physical, philosophical, emotional-evocative and behavioural reconciliation lines discussed so far.

These reconciliatory nuances expand the synergy of the physical, relational and meaningful benefits experienced by the volunteers involved in the FWG project; together, the nuances and benefits expand the overall significance of the place.

12.3 Making sense of human-nature reciprocity

The broad synergy of human-nature reconciliation combined with physical, relational and meaningful benefits of volunteering at the FWG, is further amplified by yet another element: reciprocity, an ingredient some may argue is an essential element of a healthier, more balanced relationship with the natural world.

The notion of reciprocity has been specifically conceptualized in different realms of inquiry, including social psychology, cultural anthropology and social and political philosophy. In the context of this case study, I propose that we start by considering reciprocity in its basic sense as mutual giving and taking, dependence, influence, or action; as a back and forth movement or exchange of help, advantage and privilege between parties⁴⁴. In the case of human-nature relations, notions of reciprocity turn reconciliation into a two-way endeavour.

12.3.1 Human-nature reciprocity conceptualised

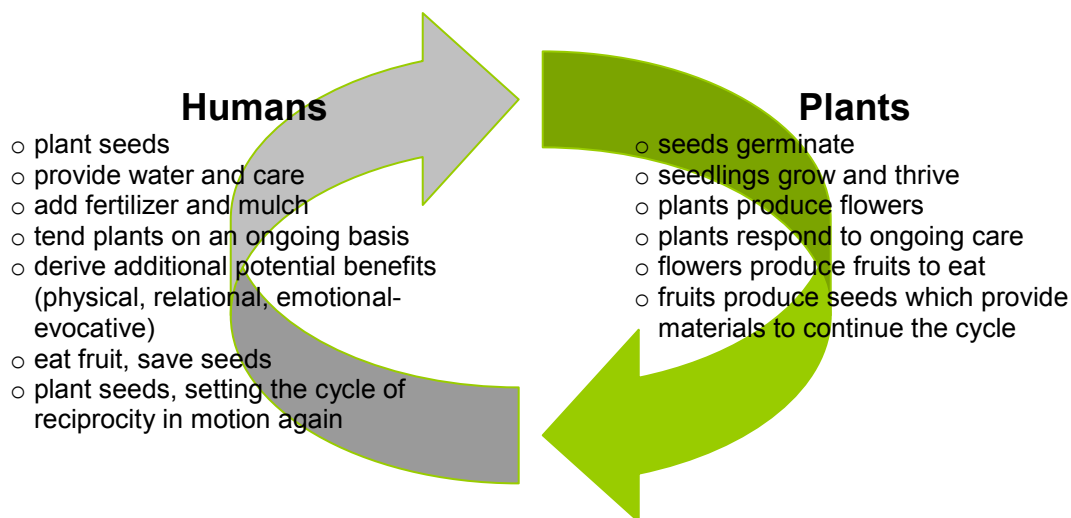
While it is not difficult to envision the intentional human side of the equation – e.g. planting berry-producing shrubs in the backyard to draw and feed birds who bring us pleasure, adding native wildflowers to a school garden to attract butterflies and enhance opportunities for teaching and learning – it may be more challenging to imagine the natural environment as reciprocating human help and action. Yet if we consider human-nature reciprocity in terms of mutual influence and the back and forth exchange of action or advantages, then individual elements of nature, even entire ecosystems, can be seen as responding to human action and care by growing and thriving.

Reciprocity is, in fact, implied in human-nature reconciliation. People take physical and behavioural reconciliation measures to create natural habitat which will attract and meet the needs of wild species. They know they are successful when wild species respond by arriving and making use of the habitat. The response on the part of the natural world provides the potential for humans to experience meaningful, relational and physical benefits as discussed in previous chapters, potentially motivating additional human action and care, which can

promote increasing response in nature, followed by more human care and natural response in a continuing back and forth movement of attention, response and exchange of advantages: a cycle of reciprocity.

Flowering plants are a good example of human-nature reciprocity, as depicted in Figure 12.1. When tomato seeds are planted in favourable conditions and watered, they may respond by germinating, which can encourage additional watering and tending on the part of humans, with the result that the seedlings may grow and thrive, producing flowers and fruit (if they are pollinated) for humans to eat, in the process motivating ongoing watering and care (perhaps also fertilization and mulch) on the human side. The fruits also produce seeds which can be planted, thereby continuing the cycle of reciprocity.

Figure 12.1: Cycle of human-nature reciprocity – tomato plant example

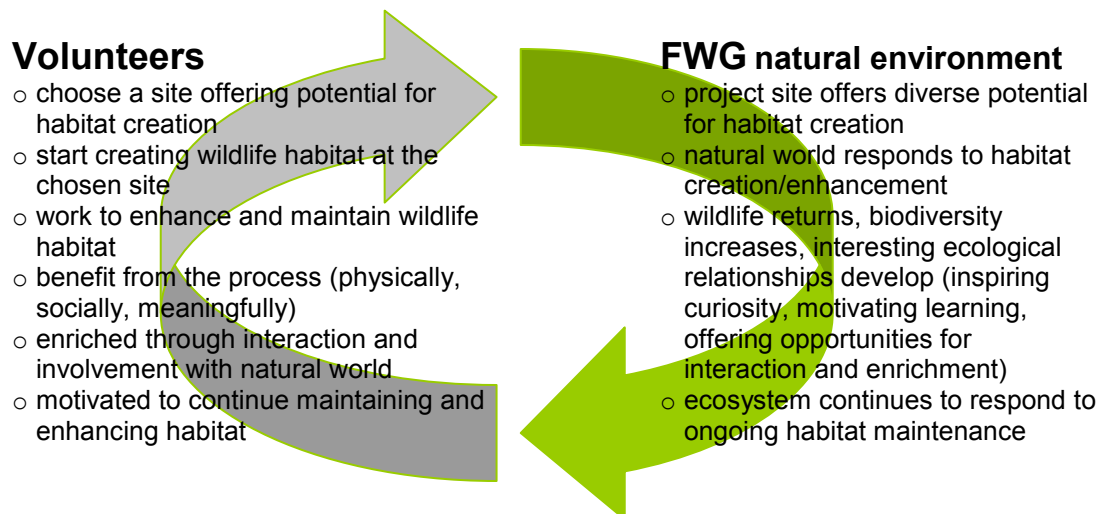


The fruit produced by the tomato plants offers nourishment, as well as future sustenance in the form of seeds which can be planted, thereby contributing to ongoing physical human wellbeing and survival. Many plants do not offer the direct benefit of food for humans, but they nonetheless present possibilities for a wide range of interaction and involvement as previous chapters reveal. Plants tended in the context of projects such as the FWG offer further opportunities to engage in physical activity, develop social connections, and cultivate personal meaning, thereby rounding out their contribution to holistic human health and wellbeing. All plants, moreover, play ecological roles which enable the survival of life on this planet, thereby contributing to greater ecological health and wellbeing.

In the context of ecological and holistic human health and wellbeing, we may wish to take a step back and consider reciprocity as initiated, in a manner of speaking, by the natural world which provides not only conditions for physical survival on this planet, but also, as Kellert points out, opportunities to make life more aesthetically, culturally, and spiritually worthwhile and meaningful (Kellert 1985, 536). In an attempt to stem the erosion of the physical, aesthetic, cultural and spiritual benefits offered by nature, humans may take action to protect natural areas, to restore wildlife habitat, to cultivate plants – essentially to reconcile with nature – and the natural environment may respond, thereby continuing the cycle of reciprocity. Those who sense the growing urgency of curbing biodiversity loss may feel a particularly strong need to participate in this cycle.

12.4 Human-nature reciprocity at the FWG

The FWG's originators are among those people who feel an urgent need to stem the loss of biodiversity and natural areas, particularly in urban settings. At a site carefully chosen for its potential to create wildlife habitat, they set in motion a cycle of reciprocity which started over twenty years ago when volunteers began working at the site. The cycle continued with wildlife arriving and settling in; volunteers maintaining and enhancing the habitats; biodiversity increasing and ecological relationships developing; volunteers finding reward and enrichment through their work, feeling motivated to continue maintaining and enhancing the habitats; and the FWG ecosystem continuing to respond in an ongoing mutual exchange of benefit and advantage (see Figure 12.2).

Figure 12.2: Cycle of human-nature reciprocity at the FWG

Personal cycles of reciprocity incorporating the FWG also emerged over the course of the case study. Cindy's story is particularly powerful. She talks about "giving to the earth", and becomes emotional as she speaks. "I think it's probably the most important thing in my life," she says, her eyes brimming with tears. "I know it is ... see, I'm starting to cry ... I feel I've gotten so much comfort and peace from nature." Cindy talks about having a traumatic experience as a child and not wanting to share it with anyone she knew. She turned to nature instead, and continued to do so whenever she experienced difficulties. Cindy tells me how she would walk to the stream at the end of the street where her family lived, cross a little bridge to a tree-ringed field, and immediately find refuge and peace. "I owe my life in a way to giving back to nature," she says with feeling.

Cindy now reciprocates by volunteering in nature as much as possible. At the FWG, she enjoys planting trees which will provide homes and food for wildlife. "I think it's incredible that in such a short period of time, I can give so much to the earth," she exclaims. Cindy continues to find peace, stability and renewal in nature. She reveals that volunteering at the FWG was the weekly activity she looked forward to most at a particularly stressful time in her life. It was important, she says, because it provided routine and inspired self-confidence, and because she feels grounded working with the soil. "It helps put things in perspective," she observes. "All my worries are not that bad." Cindy is inspired by her work at the FWG to encourage others to plant native vegetation and create wildlife habitat. "I just want to have a

positive impact on the environment,” she declares in a statement of ongoing reciprocity. “The best part isn’t what’s you’re getting, it’s what you’re giving,” she adds.

Kate’s cycle of reciprocity also started in childhood. As an only child growing up in a tense and unhappy household, she similarly withdrew to nature as an escape. “I sought a place of quiet sanctuary,” she says, “where I could unwind, draw strength and continue believing that the world was a hospitable place to live in and life was worth fighting for.” She considers nature a deep treasure, one which is very dear to her and also worth fighting for. Helping to provide a place where other species can “grow and live in safety” is one of the reasons she began volunteering at the FWG, where she toils to, in her words, “pull weeds, trim bushes ... and sometimes do heavy labour” while neglecting her home garden.

Kate tells me that still today, “many years later”, she goes to the natural world to find inner strength, peace and rejuvenation. She continues to volunteer at the FWG and finds satisfaction in knowing that the project’s nature sanctuary exists and is being maintained in the middle of the city – for both wildlife and people. “Aware that there are many people who have not the luxury of leaving the city to find a quiet sanctuary outside it,” she says, “I volunteer at the Fletcher Wildlife Garden.” She hopes that the FWG will continue to be set aside for many years as a “sanctuary of beauty and quiet” for the benefit of people and wildlife. The benefits are diverse and reciprocal, as the following sections reveal.

12.4.1 Reciprocal health and wellbeing at the FWG

“Nature and green space can be seen as a great outpatient department whose therapeutic value is yet to be fully realised.”

(William Bird, quoted in RSPB n/d)

“We seriously underestimate the health benefits of contact with nature” (RSPB n/d, 4). This statement, published in a British report titled *Natural Health*, is reinforced by Richard Louv and Howard Frumkin who assert that since people derive so much benefit from contact with nature, it should be considered a vital component of a “healthy, wholesome life” and a potentially powerful form of preventive medicine. They call for a new vision of public health, for a “public health strategy” that includes protecting natural areas and designing and creating “healthy, wholesome places” that offer access to nearby parks and green spaces (Frumkin and Louv 2007, 1-3). The *Natural Health* report similarly proposes that care for the natural environment be considered a “long-term investment” in the nation’s health. The report recommends that outdoor exercise and contact with nature be included in tools used to

prevent and treat health problems, and that human health be managed in coordination with the restoration and maintenance of the natural world, including “its richness of wildlife” (RSPB n/d, 4), or its biodiversity.

The coordinated management of human and environmental health implies care for nature in return for the human health benefits it offers – a reciprocal implication reflected in Louv and Frumkin’s assertion that healthy, wholesome places with access to natural areas will ultimately “promote our health, enhance our wellbeing, nourish our spirits” and also “steward the beauty and resources of the natural world” (Frumkin and Louv 2007, 4). This broad range of human health and wellbeing benefits reflects the synergistic physical-relational-meaningful effects experienced by FWG volunteers, as well as the physical, mental, spiritual, social and environmental health advantages other researchers associate with access to green spaces (Maller et al. 2009, 57).

Kate interestingly puts her FWG volunteer work into a similarly broad health context. “I see my efforts contributing to a healthier Ottawa,” she tells me. When asked to elaborate, she replies that her efforts help to maintain and foster a place that is “more natural”, “more welcoming” and “pleasing to the senses”. She describes the FWG as a place which offers “a sanctuary for wildlife and human beings” as well as various physical ecosystem services. “I understand that it physically contributes to healthier air quality,” she says, “filtering CO₂, adding more biological lungs to the atmosphere.” Kate notes that the FWG also provides an opportunity for people to connect physically and mentally with the natural world – “with what I would call our roots, our past, which was life in the wild before urbanisation took hold,” she explains. “Mentally ... it [FWG] is providing a place to stop and explore a wild beyond something that we create. Nature on its own without being cultivated – wild nature.”

The uncultivated, wild qualities Kate associates with the FWG suggest the health of the natural environment there, an ecosystem deliberately created to be rich and complex, as local journalist Tom Spears points out the early days of the project. “Human creation will mimic nature,” he notes (Spears 1991), a point reinforced by Valerie’s statement that the FWG is “not entirely natural, but healthy” as an ecosystem where a diversity of habitats attracts a diversity of wildlife species. Her reference to ecosystem health is fitting, yet according to natural resource ecologist Robert Lackey, the concept is difficult to pinpoint. In the context of this study, let us consider ecosystem health to be, in Lackey’s words, “the *preferred* state of

ecosystems modified by human activity (e.g., farm land, urban environments, airports, managed forests)” (Lackey 2001, 437-8, original emphasis). *Preferred*, in the case of most FWG habitats, would mean as biodiverse and wild as possible, with human activity serving mainly to boost biodiversity and keep invasive species at bay – with the exception of the Backyard Garden, maintained as a more manicured wildlife gardening demonstration site. The FWG’s 2011 draft strategic plan outlines the project’s principles of operation which include, among others, to provide examples of wildlife-friendly habitats typical of the Ottawa region, to encourage the use of native plants common and native to the area, and to maximize biodiversity. It follows that the presence of native vegetation and biodiversity flourishing in replicas of typical regional habitats could be considered among the FWG’s determinants of ecosystem health – with ecosystem ill-health evidenced signalled by the proliferation of invasive species such as DSV, which must be removed to maintain biodiversity.

The draft strategic plan illustrates the biodiversity which ensures the health and functioning of the ecosystem on-site: “The FWG species lists include approximately 150 species of birds (about 25% nest on the site), about the same number of wildflowers (and additional ones in the backyard garden), about 40 butterflies, and smaller numbers of other groups. Red foxes, beavers, raccoons, and white-tailed deer have been seen” (FWG SP, 2011). The 2007 Backyard Garden brochure draws attention to biodiversity and the relationships it fosters as key concepts in wildlife gardening. “The more than 300 species of native, naturalized, and horticultural varieties of plants in our garden”, it notes,

... ensure a panorama of colour from spring through fall. We have deliberately chosen plants that are attractive to wildlife. The nectar of Joe-pye weed and Black-eyed Susans attract important pollinators, such as bees, wasps, ants, and butterflies. Queen Anne’s lace, daisies, and asters are favoured by some of the wasps and flies that prey on other ‘pest’ insects. Seeds from sunflowers and cosmos feed birds and small mammals.

... Varying the height of plant material increases the amount of shelter for birds, animals, and insects. The greater the diversity of plant and animal life, the stronger the links and interactions among the various species, and the less the likelihood of pest or disease problems.

A diversity of plants in a garden is more likely to promote “a natural ecosystem of checks and balances, where plants and wildlife can live together in harmony” the brochure concludes (FWG BYG Br1, 2007).

The diversity, harmony and overall health of the ecosystem being created at the FWG is acknowledged early in the project’s history by regional media. In the *Ottawa Citizen*, for example, Nancy Baer writes about the FWG’s capacity to demonstrate nature’s own

techniques of checks and balances (Baer 1990), while Tom Spears hints at reciprocity with the idea that the biodiversity attracted to the FWG – “birds, butterflies and other creatures” – could respond by helping to control insects who damage trees in the Arboretum and harm delicate plants in the ornamental gardens (Spears 1991 and 1990). Catherine Presley Seward likewise notes the bird nesting boxes – signs of physical reconciliation – located throughout the FWG and their capacity to stimulate beneficial wildlife responses. “The box on the edge of the hill is most likely to attract tree swallows,” she writes, “which eat huge numbers of insects, making them a welcome addition to any backyard” (Presley Seward 1999).

The cycle of reciprocal health, initiated by human physical reconciliation measures to create wildlife habitat and foster ecosystem health at the FWG, continues as biodiversity and ecological relations increase, and as volunteers continue to engage physically with the natural environment on-site, in the process also experiencing social, mental and spiritual wellbeing. This back and forth exchange of advantages and benefits between FWG volunteers and the natural world on-site is not addressed directly by the case study participants, but their ongoing pleasure and satisfaction in contributing to the FWG’s development toward increasing biodiversity and ecological health is clear.

Valerie, for example, reveals that the aspect of the FWG project she finds most rewarding is the evolution of the land from a “barren wasteland” into a flourishing wildlife garden, and seeing wildlife come to breed and nest on-site. Other volunteers speak of similar satisfaction, along with surprise at the diversity of wildlife that lives or passes through the urban site. Jo tells me how surprised and delighted she is to experience “just how much biodiversity there is in a very small area relatively close to the city centre”. Luke is also thrilled, but not so amazed. He understands nature and the ways that wild species respond to favourable conditions. “If you make a suitable environment for them, they thrive,” he says matter-of-factly.

The continuing responses of the natural world and wildlife to the conditions created for their wellbeing at the FWG motivate the volunteers to carry on with their work on-site, thereby contributing to their own holistic health and keeping the cycle of reciprocity in motion. The motivation is strong. Audrey, for example, tells me she would like to volunteer as long as she is able, while Tracey states that she is in it “for the long haul”. Valerie declares that she is committed to seeing the project continue for another 20 years.

12.4.2 Reciprocal enrichment and development at the FWG

Over the “long haul” that certain FWG volunteers hope to remain involved in the project, the environment on-site will continue to thrive and evolve, as it has in the decades since the project began. The project itself will keep attracting visitors and volunteers, the latter enriched in their work through related outdoor physical activity, social relationships, connections with nature, and personal meanings associated with their experiences on-site. Both the natural and human sides will gain from the ongoing back and forth movement of attention, response and exchange of benefits. It has been happening since the early days of the project.

The enrichment and development of the natural environment at the FWG is strong and unmistakable evidence of this beneficial exchange. Its transformation from the mowed-grass environment of the initial site to a collection of diverse habitats connected by the Bill Holland Trail is tangible and clear. One has only to view the “before” images in the FWG photo-blog gallery portraying the history of the project⁴⁵, then walk the Bill Holland Trail around the contemporary habitats to experience the change.

Less tangible and clear – though more noticeable during migration season and the full blush of summer – is the diversity of wildlife increasingly attracted to the different habitats. Inventories conducted over the course of the project’s history and published on the website⁴⁶ reveal the biodiversity that has developed over time. FWG wildflowers, for example, were inventoried by members of the Ottawa Field-Naturalists' Club in 1992, before habitat creation work began. The inventory concentrated on certain parts of the FWG and yielded 68 species, both native and non-native. The number of wildflower species counted six years later rose to 118, not including plants deliberately cultivated in the Backyard Garden and Butterfly Meadow. The last count of FWG wildflower species totalled 207 – an illustration, one long-time volunteer notes, of two things: the way that biodiversity tends to increase as a site matures, and a demonstration of the important roles places like the FWG play as wild refuges.

Biodiversity is similarly rich in other realms. Tree and shrubs at the FWG – some invasive, others deliberately planted, many left over from the original botanical garden project – number over 110 species. Birds observed at the FWG – in the garden itself, in the area immediately adjacent to the site, and flying overhead – number over 150 species. Insects recorded at the FWG – excluding butterflies and moths, but including springtails, dragonflies,

damselflies, grasshoppers, crickets, bees, wasps, beetles, flies, ants, and more – number over 200. As the website notes, this is a “mere fraction of the multitude of species” at the FWG. Interestingly, FWG moths alone number over 130 species! These numbers attest to the wealth of biodiversity at the FWG.

This rich biodiversity is enabled by human volunteers who maintain the habitats, keep invasive species in check, and add biodiversity (mainly through planting) according to the needs of each habitat. These activities in turn enrich the volunteers in the physical, relational, and affective-evocative ways discussed in previous chapters – particularly through opportunities for discovery and learning. Many of the volunteers pay close attention to the natural world while they go about their various tasks at the FWG. They often make use of the resources available at the Interpretive Centre to follow up on observations, answer questions, and generally deepen their understanding of the natural world. Some volunteers apply the knowledge and understanding gained through volunteering to their lives outside the FWG. Sheila is one such individual. “We’ve become so sensitive to wildflowers and bushes,” she tells me. “It’s enormously enriching.” She adds that her work in the FWG gardens has increased her knowledge and capacity regarding, as she puts it, “what we have to do to keep it [nature] healthy.” Many volunteers find the opportunities for learning to be the most enriching aspect of their FWG experience.

Many volunteers also find great satisfaction and reward in more social and collective aspects of volunteering at the FWG, particularly in working with others toward a common purpose, and being immersed not only in the natural environment but also in a group where members share knowledge, exchange ideas, and benefit from each other’s experience and competencies – all opportunities to learn and grow. The knowledge and experience volunteers gain at the FWG often give them the confidence to help others learn and grow. Some volunteers engage visitors in conversation as they work on-site, while others raise awareness of native plants and invasive species in their home neighbourhoods. Still other volunteers give tours of the FWG, or work with groups who come on-site to help with particular tasks – all the while sharing what they know. All these activities make working at the FWG worthwhile says one long-time volunteer.

Still other volunteers feel their work is worthwhile and enriching because of the common purpose they share in maintaining ecosystem health at the FWG – a purpose articulated by

Marie as “trying to heal some small part of the earth.” The tangibility of their success – visible in the diversity of trees, plants and wild animals observed and experienced on-site – is particularly rewarding. Evelyn, for example, tells me that the variety of native insects, birds and plants she saw at the FWG during her first season of volunteering was greater than she had seen in many years. Glenda makes the connection between success and the wealth of ecological relations that play out at the FWG. “It’s an interactive place,” she says. “The plants produce abundantly, and the wildlife takes advantage of it.”

Wildlife at the FWG takes advantage of the opportunities provided by the enriched environment in general, including the wide diversity of native plants established and cultivated by volunteers in habitats such as the Backyard Garden and the Butterfly Meadow, and the artificial enhancements assembled and installed by volunteers and other groups throughout the FWG – all contributing to the ongoing cycle of reciprocal enrichment played out at the site. As the natural world there evolves and matures, volunteers are challenged to develop broader and deeper understanding and knowledge to meet the existing and future needs of wildlife – a challenge of human-nature reciprocity recognised in early FWG documentation. According to the 1994 strategic plan, wildlife gardening out of necessity involves learning more about wild species, their interactions, and their needs for food and habitat (FWG D2, Strategic Plan, 1994). A 1995 project description stresses the importance of “hands-on experience” that offers insight into the complexities and needs of the natural world (FWG D2, Project description, 1995: 4) – complexities and needs which are changing in the face of climate change and other future uncertainties. These and other changes (many human-caused) are placing increasing pressure on wildlife and natural systems to develop in ways which will enable them to adapt and survive, knowledge of which prompts ongoing attention and effort on the part of human stewards and caretakers, all of which fuels the continuing cycle of human-nature reciprocity at the heart of projects such as the FWG.

12.5 Human-nature futures

The challenges confronting FWG volunteers as they seek to develop broader and deeper understanding to meet the existing and future needs of wildlife – critical in view of the maturing and evolving natural environment on-site, which faces climate change and other uncertainties – parallel the challenges facing human society as we struggle to make sense of

an increasingly entangled and pressing array of environmental and societal changes and issues.

Certain FWG volunteers are concerned about the vulnerability of the planet and its inhabitants in the face of future uncertainties. Sheila, for example, expresses unease at being alive at a time when the planet is so vulnerable, while Michael muses on the social and economic world around him, the destructive human footprint, and ultimately his concern for the wild and human society. “The human species has gone out of control,” he says. “The problem is going to come back and haunt us at some stage, and technology won’t solve it.” Michael does not elaborate on his thoughts, but another long-time volunteer speculates that a diminished natural world will weaken our life support system. She points out that diversity of life is the key to the survival of life on the planet, including the continued existence of our own species – something we tend to take very for granted. In the same breath she voices relief that nature is so irrepressible, returning and growing back time and again despite human obstacles and abuse. If nature were not so persistent, she stresses, we would be in big trouble.

Big trouble is what many scientists and thinkers predict for humans and the planet at large unless our species manages to develop relationships with nature that are healthier, more balanced, and mutually beneficial. Richard Louv is optimistic. “The twenty-first century will be the century of human restoration in the natural world,” he writes, predicting that we will restore ourselves along with nature. “It’s about the power of living in nature,” he stresses, “not *with* it, but *in* it” (Louv 2011, 6, original emphasis).

The FWG is one place where people have restored themselves in the natural world, in the process learning to live in nature. The FWG is a place people have worked hard to restore to a more naturally functioning ecosystem where wildlife can find refuge and thrive, a place where people immerse themselves meaningfully in the natural environment and restore their connection to nature, in the process reconciling with the natural world and learning how to develop new relationships that are more reciprocal, more mutually sustaining and enriching. As Mark points out, the FWG has much to teach about new relationships. “Potentially,” he notes, “this place can be extremely useful to North American society.” Just how useful remains to be seen. The potential of small green places like the FWG has yet to be discovered. Their full value has yet to be realized. Their power has yet to be acknowledged and supported, nurtured and cultivated to the reciprocal benefit of people and the natural

world. Our shared future may depend on how willing we are to understand what they have to teach, and how prepared and capable we are of translating the lessons into constructive action.

Chapter 13 Final reflections on the Fletcher Wildlife Garden case study

In seeking, through this research project, to gain as broad and deep an understanding as possible into human-nature relations at the FWG, along with insight into the significance of the place as a whole, I followed many threads leading in different directions. As a result, the research endeavour grew beyond the original intentions; it became more surprising, more complex, more challenging, and ultimately more rewarding.

13.1 Reflections on autoethnography

First I would like to offer reflections on a specific aspect of my methodology: autoethnography. Through this process, researchers make explicit use of their involvements and experiences as an essential part of the research project, thereby rendering explicit the ways in which they are situated in relation to the people and phenomena they are studying (Butz and Besio 2009, 1666; Butz and Besio 2004, 353).

When I chose the FWG as the focus of my study, I did not realize how entangling an ethnographic study can be. As I worked alongside other volunteers at the site, it gradually became evident that I was playing different, yet complementary and overlapping roles as (1) a contributing member of the human volunteer groups cultivating the FWG, (2) an ecological element actively involved in shaping the space, (3) a researcher focused on exploring the relationships with and within the FWG, and (4) a writer producing a written work based on all of the above.

An autoethnographical approach enabled me to negotiate these identities by writing them into the case study and making open use of my own involvement and experiences. I wrote my different selves into the text as transparently as possible, referring to myself in the first person “I” (the narrator), identifying personal experiences clearly, and quoting field notes frequently. The result of incorporating the different autoethnographical articulations – the narrator’s observations and encounters, the field note excerpts – is a dissertation enriched by added insight, textual diversity, and the exploration, through narrative, of my own complex positionality as a volunteer. The process also helped me untangle the different roles and identities I was playing in the research project.

13.2 Research limitations

As much as the research process was enriched by the autoethnographical approach, it was restricted in other ways. A project focused on a place as small as the FWG is understandably limited – to the dimensions of the place under study, to the size of the group active in the place, to the numbers of possible perspectives on the issue or phenomenon being studied, and more, as this section reveals.

13.2.1 Limitations of case study research

Case study research is, by its very nature, limited – particularly a project focused on a place as little as the FWG, with a small number of people involved. As such, the FWG case study cannot presume to draw a statistically representative sample; this is a criticism typically aimed at case study research. The FWG case study is only able, by strategically considering different variables (physical, relational and affective-evocative aspects of place), to produce diversity within the limitations of the phenomenon being studied. Diversity – more than expected – did emerge from the FWG case study, as did a significant depth of understanding regarding the importance of the place and the human-nature relationships which develop there. What the FWG lacks in scope, therefore, it makes up in depth – in the profound and surprisingly broad (physical, relational, affective-evocative, reconciliatory and reciprocal) significance of volunteer involvement in the FWG project.

These findings, conceptually significant as they may be, are not easily generalizable; lack of generalizability is another typical criticism of case study research. Yet case study results can be viewed from alternative perspectives. “Fittingness”, for example, is the degree to which the research situation can match other situations of interest, while “comparability” is the extent to which components of the study are well enough described and defined for other researchers to use the results as a basis for comparison (Shofield 2002, 178-9). Case study results can also be considered in terms of their “transferability”, meaning the capacity for knowledge from the study to be passed on to others and used by them, with an emphasis not on prediction, but rather on anticipation of what can reasonably be expected in other contexts (Chow 2006, 3). The success of the anticipation, fit, comparison and transfer depends on how thoroughly the study and its findings are described – thick description – and how much contextual information is provided to enable readers to gain a thorough understanding of the

phenomenon under study (Shenton 2004, 69-70). Purely descriptive case studies have, interestingly, been identified as often contributing to scientific innovation (Flyvbjerg 2004, 424).

While scientific innovation per se is not the goal of this case study, I have done my best to establish a thorough context, and to describe the study and its findings as completely as possible. The thick and fine-grained description of the results substantiates the many significant ways a project such as the FWG can affect both people and the natural world. The knowledge gained and communicated as a result of the study – regarding the actual and potential significance of small green places in meeting human physical, relational and effective-evocative needs for nature, in providing a safe haven for the natural world in an urban environment, in helping people reconcile with nature in healthy, reciprocal ways – has the potential to inspire and be transferred to other situations. FWG-related insights can help to understand the meanings and implications of similar places, to inspire their protection and enhancement, to encourage the creation of places which offer the same sorts of benefits where none exist, and to motivate ongoing, related research.

13.2.2 Other limitations – my capacity as a researcher, study design

As mentioned previously, I had intended to work with two volunteer groups active at the FWG, but I was able to join only one: the Friday morning team. This group of volunteers represents people who are mostly retired, who have the time and means to engage in volunteer activities, and who are available to work at the FWG on Friday mornings. These individuals also have certain things in common, including exposure to nature and outdoor experiences early in life, which likely inspired a love for nature, a generally positive perception of the natural world, and a possible predisposition to volunteering in nature. While the Friday morning volunteers do represent a wide variety of professional backgrounds, they do not offer much diversity in terms of ethnicity, class, or age. And while their insights into human-nature relationships at the FWG are surprisingly broad and deep, they do not represent the realities of other groups in society.

Other FWG volunteer teams may offer a more diverse cross-section. The Wednesday evening Butterfly Meadow group, for example, has been attracting younger volunteers who could offer different insights into the FWG volunteering experience and human-nature relations. Unfortunately, I was unable to join them for logistical reasons.

The seeming homogeneity of the Friday morning volunteer group, and by extension, my study participants, is linked to another limitation: the design of the research project. The interview guide in particular revolved mainly around open-ended questions in order to capture as many meanings as possible related to volunteering at the FWG, and as much depth as possible regarding the relationships that develop there. I did not deliberately seek information regarding differences within the group, or the positionality of individual members of the group. I did not strive to establish how the intersection of differences such as class, age, and gender, for example, influences a project such as the FWG. Those questions were not embedded in the research process. The goal of the study was not political. Nevertheless, I was sensitive to the aforementioned issues as I proceeded to interpret my empirical material. Some related content did emerge, but it was neither consistent nor significant to the meanings associated with volunteering at the FWG, or to the relationships that develop there.

One obvious difference among the eighteen women and nine men who participated in the case study, for example, is gender. Yet gender-related issues did not emerge with any significance from the data. The Backyard Garden is admittedly tended mainly by women who weed, water, edge garden beds, and thin and divide plants to keep the demonstration garden looking tidy and attractive. Yet one section is entirely the responsibility of a male volunteer, and other men are also active in the Backyard Garden, where they mow the lawn, prune trees and shrubs, distribute compost, and maintain the bench, bird feeder and garden pond. By the same token, certain female volunteers deliberately avoid the Backyard Garden; they prefer to work in other, less manicured habitats where they enjoy planting native species, removing invasive species, building brush piles for wildlife, and performing other habitat maintenance work. No discernible differences between male and female volunteers manifested themselves regarding the physical, relational and meaningful aspects of involvement in the FWG project, or the human-nature relationships that develop there. Follow-up research with a tighter focus on gender might reveal subtleties of gender differences among male and female volunteers participating in the FWG's various work teams.

13.3 Future research opportunities

The FWG case study opens a window through which to understand the significance of green places in human-dominated environments. But it is only one window. More tightly focused follow-up research could open other windows and yield information not captured in the wide net cast by this case study – a net deliberately designed to capture as broad a spectrum of meanings as possible regarding volunteering and human-nature relations at the FWG.

The focus of this research project, for example, on the experiences of FWG volunteers – who develop understandably rich and complex relationships with the natural world through their physical involvement with plants, wildlife and diverse habitats on-site – makes only peripheral mention of FWG visitors, some of whom use the site regularly and have likely also developed significant relationships there. Do regular FWG visitors derive similar physical, relational and meaningful benefits from their time spent at the FWG? What is the nature of their activities and involvement with the natural world on-site? What sorts of relationships do they develop with the FWG, and what is the significance of those relationships? What sorts of meanings do visitors attribute to the FWG, and what are the implications of those meanings? Do they experience human-nature reconciliation and reciprocity with the natural environment at the FWG? Similar questions could be asked of people participating in public work bees, or members of external groups coming to work on-site. Follow-up research based on results of the present FWG case study could yield interesting and important information regarding the impact of small green places on other people visiting or working at the FWG.

Follow-up research from more interdisciplinary perspectives could likewise concentrate and shed more specific light on certain aspects of FWG volunteering which emerged from this case study (e.g. physiological benefits, psychological aspects, spiritual connections), or on biological and ecological impacts of the project. Other follow-up research – ideally participatory, community-based and use-inspired – could also yield important and possibly vital information regarding green places and diverse vulnerable populations in contemporary society. As noted in previous chapters, vulnerable members of society may stand to gain the most from nearby nature, and may suffer the most from a lack of access. The following statement captures the situation neatly and compassionately: “we need to be especially mindful of the neediest among us – poor people, people of color, people with disabilities, and

others who may have the least access to natural settings, and who may need it the most” (Frumkin and Louv 2007, 4).

Volunteering in nature, involvement in small green places, and simple exposure to elements of the natural world have been identified as having potentially positive impacts on certain vulnerable groups in society, as indicated here and there in previous chapters. Children, for example, are recognized as a population segment suffering from a lack of contact with nature, or nature-deficit disorder, as described in Chapter 4. Other vulnerable groups include aging adults (O’Brien et al. 2011, , Mind 2007b , Moore et al. 2007, Groenewegen et al. 2006, Townsend 2006, Bird 2004), inner-city residents (Ryan and Grese 2005, Faber Taylor, Kuo and Sullivan 2002), new immigrants (Maller et al. 2006, St Leger 2003, Wong 1996), offenders in the criminal justice system (Mind 2007b, 11), and people suffering from mental illness (O’Brien et al. 2011, MIND 2007 a/b, Townsend 2006, Burls and Caan 2005) – the latter category possibly overlapping with other groups in the list.

Another vulnerable group, post-secondary students, may come as a surprise. While we may not consider them to be as vulnerable as the groups just listed, concerns are being expressed regarding rising rates of depression and suicide among students in post-secondary institutions (Gewin 2012, Lunau 2012). Based on findings that university students experience multiple benefits from direct and indirect contact with the natural world (Berman, Jonides and Kaplan 2008, Ryan and Grese 2005, Shapiro 1995, Tennesen and Cimprich 1995), we may wish to consider our university campuses as places which could offer access to nearby nature, and to study the effects.

13.4 Contributions

I knew, as I embarked on this doctoral research project, that the FWG is a positive and beneficial place. But just how positive and beneficial, and in how many different and subtle ways, I would not have been able to guess when the case study began. The FWG’s power to motivate, delight and inspire; its impact on people, wildlife, and the greater community; its deep and convincing lessons – these findings surprised and challenged me.

13.4.1 The power of a small green place – filling a knowledge gap

That involvement in such a small place – small in relation to its 100-acre Carleton University neighbour, and its 400-hectare Central Experimental Farm neighbour and landlord

– can meet so many nuanced human needs is surprising. Volunteering at the FWG encourages people to get out of the house, to spend time outdoors and be physically active. Working on-site provides opportunities to encounter FWG visitors, to work with external groups coming to help with FWG tasks, to engage in social activity and exchange with other volunteers, to develop friendships, and to contribute to a team of like-minded people working toward a common goal. Contact with wildlife and other elements of the natural environment is a factor motivating many volunteers to join the FWG team, and immersion in the natural world while working on-site encourages awareness and appreciation for nature, interaction and involvement (sometimes passionate) with plants and wildlife, and a deeper understanding of human-nature interconnections.

The synergy of the physical outdoor benefits, social contacts and nature connections involved in FWG work weaves together a web of personal meaning unique to each individual volunteer – intense and complex meanings which portray the FWG as a place of stimulation and renewal, a place of enrichment, a place of kinship and revelation, and a place of inspiration. A further element of synergy draws together the physical-relational-meaningful threads and offers lessons about human-nature reconciliation and broader reciprocal human-nature health and enrichment.

These findings do indeed contribute to filling the knowledge gap in geography identified in the first chapters of this dissertation: the “significant human-nature relationships that emerge when people work with the land” (Emily Brady, 2006), when people become actively involved with the natural world. The findings also reveal that more than just human-nature relations happen in places such as the FWG. The ethnographic methods of the case study allowed for deep personal feelings and insights regarding FWG volunteering to emerge, inspiring thick and fine-grained description of the project’s wide-ranging and deep impact on volunteers – all of which combine to give substance to the general wisdom that being active outdoors is “good for you.” The case study demonstrates, in intimate detail, the potential importance of green places in urban settings, in terms of the meanings they can hold for people, the significant roles they can play, and the reciprocal wellbeing they can promote.

13.4.2 The power of “place” – a potential research template

The geographical concept of place – with its rich and multi-layered characteristics ranging from the physical and the active, to the relational and the affective-evocative – provided a solid and dynamic framework for both

- (a) designing the FWG case study – particularly the interview guides (see themes and questions in Appendix A), and the information sought through observant participation and ancillary source research – which strove to understand the human-nature relationships that develop between volunteers and the land at the FWG, as well as the broader meanings associated with the place and the project,
- (b) interpreting the meanings of the empirical material gathered over the course of the study, and understanding the implications of the findings (see interpretive framework in Appendix B).

The resonance of the results described in the previous section – the physical benefits, social connections, nature contact, profound meanings, and reciprocal wellbeing associated with volunteering at the FWG – attest to the potential power of the wide-ranging place concept as a template for designing qualitative research projects. Studies guided by the geographical concept of place could, for example, seek to gain in-depth understanding of human-nature relationships in places similar to the FWG, or insight into general activities and relationships which contribute to defining specific places, or appreciation of the broader nature and significance of any individual place.

The FWG case study, focussed on a place which encourages contact with the natural environment, further demonstrates the effectiveness of place when it combines with another powerful concept: nature. The theoretical, empirical, and heuristic synergy of the place and nature concepts yielded deep and unexpected insight into the relationships and meanings associated with volunteering at the FWG. The synergy of the combined concepts set in motion a parallel synergy in the research results, where the physical outdoor benefits, social contacts, and nature connections knitted together a fabric of complex personal meaning unique to each individual volunteer, gradually generating momentum which carried the interpretation further into an expression of human-nature reconciliation, and broader reciprocal human-nature health and enrichment.

13.4.3 Human-nature futures

The FWG case study offers not only deep and nuanced insight into the impact and benefits of nature volunteering on people involved in projects such as the FWG, it also illustrates related needs and benefits associated with human-nature reconciliation and reciprocity – which brings to mind Mark’s statement that the FWG is a great place to learn new things about new relationships and new cycles. The FWG does indeed demonstrate that nature can have a place in the city, that it is possible for humans and wild species to occupy the same places, and that human-nature co-existence can unfold in cycles that are more harmonious, more reconciliatory, more reciprocal, and ultimately mutually enriching, as discussed in Chapter 12.

An interesting place to explore some of these new relationships – particularly in view of one of the vulnerable groups mentioned previously, university students – would be the university campus. With rates of depression and suicide rising in post-secondary institutions (Gewin 2012, Lunau 2012), universities are struggling to provide mental health support services to both undergraduate and graduate students. Workplace wellness, both physical and mental⁴⁷, is another growing trend on post-secondary campuses, where employees are encouraged to be healthy and active. Could access to nearby nature benefit both university students and campus employees? It may be worth exploring, for the benefit of both social and ecological campus communities.

University campuses are, after all, places which bring together a wide range of professional and academic resources which could develop, implement and evaluate places, programs and infrastructures with a view to encouraging varying degrees of contact with the natural world – from exposure to green elements such as indoor plants or views from a window, to outdoor exercise (e.g. walking) immersed in green settings, to active physical involvement in creating and maintaining green places such as community gardens, native plant patches, and mini urban woodlands. These opportunities could be offered to the entire campus community, including students, staff, faculty, and visitors. Related programs and infrastructures could be evaluated, improved, established in university policy, systematized with flexible, adaptable structures and components, and ultimately shared outside campus boundaries, where they could offer continuing opportunities for community-based research.

These possibilities represent a tall and admittedly idealistic order which cannot possibly be filled by one discipline alone. The work implied in the projects, programs and studies just described – particularly outreach and implementation beyond the university campus – calls for cooperation across disciplines, a necessity recognized by others working in related contexts (Frumkin and Louv 2007, Pretty at al. 2007, Barlett 2005b, Rosenzweig 2003a, Williams 1995). The establishment and maintenance of green places so that they flourish, endure, and remain accessible and beneficial, will require contributions of knowledge, time, energy and other resources from numerous areas of knowledge and practice identified by others: psychology, environmental health, ecology, horticulture, landscape planning, leisure, recreation, public health, and policy (Pretty at al. 2007, 211); landscape architecture, medicine, land development, pedestrian advocacy, and tree-related professions (Frumkin and Louv 2007, 4); landscaping, seed supply, nursery and gardening trades (Rosenzweig 2003a, 175). Knowledgeable and experienced volunteers involved in projects such as the Fletcher Wildlife Garden can also play potentially significant roles.

A discipline such as geography – which counts the concept of “place” and “nature” among its defining elements, and which draws together diverse perspectives from the social sciences, natural sciences, and even the humanities – could make important contributions with respect to the idealistic programs, projects and infrastructures discussed in the previous sections. But are they really so idealistic? Perhaps not if access to and contact with nature is considered essential to human well-being, particularly to vulnerable populations. Perhaps not if elements of nature are typically associated with “good”, “delightful”, and “successful” places (O’Brien 2006, Frumkin 2005). Perhaps not if small green places like the FWG have important roles to play in human and ecological wellbeing, and lessons to teach regarding mutually beneficial human-nature relations and healthier human-nature futures. As Mark points out, such places “can be extremely useful to North American society.” If all these things are true, then geography’s latest turn earthward is significant, with potentially important contributions to make toward the establishment and study of green places – places we can learn to nurture and enjoy, appraise and share, protect and value. Our shared human-nature futures may depend on it.

APPENDIX A – Interview guides, Part 1 and 2

A) Fletcher Wildlife Garden “Cultivating the land” research project – volunteer interview questions, Round 1 –

Thank you for your interest in the project, and for agreeing to participate. If at any point you have questions or concerns, please do not hesitate to contact me (rsand071@uottawa.ca OR 819-647-5549).

I would like to remind you of a few things at this point:

- *your responses will remain confidential, and your identity anonymous*
- *you are free to decline from discussing any particular question, or to withdraw from participating in the study at any time – just let me know*
- *I will make use of information gathered from your responses for my PhD research work, and for future publications and presentations*
- *I would be happy to share the results of the study with you if you wish – just let me know*
- *the results will also be shared with the Fletcher Wildlife Garden management committee*
- *please take as much time as you need to think about the questions and about your responses – there is no hurry.*

... a few quick questions for starters

How long have you been volunteering at the FWG (how many years/gardening seasons)?

Which work groups do you participate in (Friday morning, Wednesday evening)?

Do you come to the Fletcher Wildlife Garden at other times during the week?

When/how often do you come? For how long?

What do you do in the garden at those times?

How far do you live from the garden (driving time/km)?

Which age range do you fall into?

- under 20

- between 20 and 35
- between 36 and 50
- over 50

Do you bring any related background (profession, training, experience) to the work you do here at the Fletcher Wildlife Garden? Could you please tell me about it?

Are there any connections between the Fletcher Wildlife Garden and other interests or activities (e.g. birding, home gardening)? Could you please tell me about them?

... I am interested in knowing what brought you to the Fletcher Wildlife Garden

What originally drew you to volunteer at the Fletcher Wildlife Garden?

What keeps you coming back?

Do you have any particular responsibilities at the Fletcher Wildlife Garden?

... Could you tell me about your activities here at the Fletcher Wildlife Garden?

What are the different things you do/have done here at the Fletcher Wildlife Garden (planting, weeding, pruning, etc.)?

What are your favourite activities? Why?

Which activities do you find most meaningful? Why?

Are there any activities you don't like? Why?

What do you hope your activities are achieving with respect to the natural environment?

- Do you feel you are succeeding? Why or why not?

- What have been your major challenges and successes?

What contribution do you feel your activities are making to the natural environment?

- How does this make you feel?

Is there anything else you would like to add at this point?

Thank you for your participation in Round 1 of the questions. I appreciate the time and energy you are putting into this. If I have any questions, would like to know more, about your responses, I will get in touch with you about them. If not, I look forward to moving into Round 2!

B) Fletcher Wildlife Garden Semi-structured Interview Guide – volunteer interview questions, Round 2 –

(follow-up to Round 1 responses, plus the following questions, added after the first couple of interviews)

Did you play much outdoors as a child? Explain.

Did you have anyone in the family who farmed ... did you spend time on farms as a child? Explain.

... Let's talk about your relationship to the land here/at the Fletcher Wildlife Garden

(Refer back to their responsibilities, if applicable)

What role do you feel you are playing when you work here at the Fletcher Wildlife Garden?

What role does the land/natural environment play?

How would you describe your relationship with the land at the Fletcher Wildlife Garden?

Has the natural environment surprised you? How ... positive, negative? Explain.

Do you feel the plants, animals, etc. are co-operating? Explain.

How do you feel about the plants you work with?
Which plants do you work with most often? What do you do with them?

Which other plants or animals do you encounter?
Tell me about some of the encounters (memorable, funny, interesting, etc.)
How do the encounters affect you?

... I'd like to hear about what the Fletcher Wildlife Garden means to you

What do you look forward to most when you come to the Fletcher Wildlife Garden?

How important is the Fletcher Wildlife Garden to you?
What role does it play in your week, your life?

I'd like to know a little more about your experiences at the Fletcher Wildlife Garden

...

- the most memorable
- the most frustrating
- the funniest
- the most rewarding

How has volunteering here the Fletcher Wildlife Garden affected you?
How have you benefited from it?
Have you learned new things? Explain.
Has it changed the way you think about things? How?
Has it changed the way you do things outside the Fletcher Wildlife Garden?
How?

****** (if it has not yet come up) Do you have a garden elsewhere?
How is your home garden different from the FWG / similar to it?
What is your relationship to your home garden (in relation to the FWG)?

What do you feel are the most important lessons the Fletcher Wildlife Garden has to teach?

How would you describe the connection between the FWG and the greater environment?

Ottawa – what role does the FWG play?
Ontario, Canada, beyond ...?

Is there anything you would like to add?

Do you have any suggestions for the FWG at this point?

Do you have any comments or questions?

Would you like to see a copy of the transcript of the interview when I have finished working on it?

Would you like me to share the results of the study with you?

Thank you for your interest and your time.

Thank you for your participation in Round 2 of the questions. I appreciate all the time and energy you have put into this.

APPENDIX B – Interpretive framework

Place characteristic/ conceptualisation	Project application – question	Principal method(s)
PHYSICAL • materiality (Cresswell) & location (Agnew) • physical dimensions of place as: ○ geographical location ○ physical structure and features ○ physical activities ○ physical results of activities	• where is the cultivated space located? • what sorts of sub-locations characterise the site? • what/who is found on site? ○ what are its physical components and appearance? ○ what makes it stand out from other locations? ○ who are the cultivators active there? • what sorts of physical activities are involved in the act of cultivation carried out on-site? • what are the physical products of these activities? • what are the tangible/visible impacts of these activities on the land? • how does the location affect the activities?	• observant participation / participant observation • site observation
intersection = activity	↑ focus on physical aspects of activities ↓ explore the activity-intention-relationship interface	
RELATIONAL-PRACTICAL • practice (Cresswell) & locale (Agnew) • relational and practical dimensions of place ○ activities ○ interactions ○ relations	• how do the cultivators engage with the land? ○ how do they actively interact with the natural environment? • how do the cultivators interact with each other as they work at the cultivated site? • what motivates the activities and interactions? ○ what are the intentions behind the activities and interactions? • what is the overall purpose and vision for cultivating the Fletcher Wildlife Garden? ○ what long-term objectives and plans are being followed? • what are the goals for cultivating the various habitats? • what are the volunteers' personal reasons for working at the Fletcher Wildlife Garden? • what roles do the cultivators play as they participate physically with the land? • what roles does the land/the natural environment play? • to what extent are the intentions and objectives for cultivation fulfilled – or partially fulfilled, perhaps even thwarted or resisted? • what sorts of relationships develop between the cultivators and the land as a result of the cultivation intentions, activities, and interactions?	• observant participation • dialogue / interviews • ancillary source research

intersection = relations	↑ focus on relationships developing through interaction ↓ explore the meaning of the relationships	
AFFECTIVE- EVOCATIVE • meaning (Cresswell) & sense of place (Agnew) • subjective, experiential, relational dimensions of place ○ attachments ○ sentiments ○ relationships ○ implications	• what sorts of experiences take place as the intentions of cultivation are acted upon, as the cultivation activities are carried out? • how do the cultivators feel about the plants and the land/natural environment they are cultivating? • what sorts of attachments do the cultivators develop with the land/the natural environment in the process? • how do the act and relationship of cultivation affect the cultivators? • what do the act and relationship of cultivation mean to the cultivators? • how important is the Fletcher Wildlife Garden to the volunteers who work there? ○ what role does the space play in their lives? • how do these meanings affect the ongoing process of cultivation? • what are the ethical implications of the cultivation process – at the Fletcher Wildlife Garden and beyond? • does the relationship of cultivation at the Fletcher Wildlife Garden have something to teach us about ○ nurturing other spaces ○ cultivating a healthier relationship with the planet ○ creating healthier communities ○ and more?	• dialogue / interviews • ancillary source research

APPENDIX C – FWG case study thematic categorisation

The following categories emerged from FWG case study field notes and transcripts of semi-structured interviews conducted with FWG case study participants. Sets of categories similar to those listed under “Other topics/themes” below were developed for ancillary source material.

1) Questions, round 1 categories

- activities-contributions
- activities-favourite
- activities-meaningful
- activities-achieving
- activities at FWG
- age range
- comments-additions
- connections-other interests, activities
- live-distance from FWG
- other times
- related background
- other responsibilities
- volunteering-how long
- what drew to FWG
- what keeps you coming back
- work group

2) Questions, round 2 categories

- add anything-general comments
- benefits-volunteering
- change do-behaviour
- change thinking
- commitment to FWG
- cultivating at FWG
- encounters-plants, animals
- experiences-frustrating
- experiences-funniest
- experiences-memorable
- experiences-most rewarding
- farming exposure
- FWG connections
- garden elsewhere
- importance of FWG-role it plays
- important lessons
- learn new things
- look forward to most
- main purpose-FWG
- nature cooperating
- plants-feel about
- play outdoors
- role-environment/land at FWG
- role-you at FWG
- suggestions for FWG
- surprise environment

3) Other themes/topics

*** these are patterns which emerged (a) in subsequent rounds of categorisation, (b) over the course of interpretation and writing*

- 20th anniversary
- beaver
- Bill Holland Trail
- biodiversity
- birds & birding
- buckthorn
- changes over time
- chipmunks
- co-creation
- coffee break
- conflict-general
- constructions
- documentation
- dog walkers
- DSV
- experiential aspects of FWG
- gardening (background, need)
- habitats
- invasives (general)
- learning-education
- love for nature
- native plants
- natural area
- NDD
- nonhuman agency
- organisational (law)
- organisational (policies + organisation)
- other volunteer work
- outdoors
- physical activity-workout
- plant sale
- plants (general)
- pollinators
- professional background
- reconciliation
- satisfaction
- social
- soil-compost
- spiritual-internal
- trees
- vandalism + other threats
- visitors to FWG
- wildlife

APPENDIX D

Fletcher Wildlife Garden (FWG) photo gallery

For a visual feast of the FWG – and a closer look at its secret corners and diverse inhabitants – please visit the numerous galleries featured on the project's photo-blog at <http://www.pbase.com/fwg>.

All photos in this appendix by Renate Sander-Regier

Arriving at the FWG ... and heading down the trail



Approaching the Interpretive Centre from Prince of Wales Drive.



The Bill Holland Trail starts across from the Interpretive Centre.

Views of the Backyard Garden



The Backyard Garden Rockery.



The Backyard Garden Pond.

The Backyard Garden in bloom



Working and relaxing in the Butterfly Meadow



A corner of the Butterfly Meadow under renovation after DSV removal. See renovation results, right.



Renovation results.



Left, above: More renovation work: clearing and planting

Left, below: A newly planted area thriving.



The Butterfly Meadow bench – a place to take a break.



Dog-strangling Vine (DSV)



A FWG path lined with DSV.



DSV climbing into trees.

Tools of the trade



Buckthorn puller (orange) on the right.



One volunteer's Backyard Garden kit.

Inside the FWG Interpretive Centre



A view from the inside out.



The FWG resource centre.

Near the Interpretive Centre



Chipmunk at the Backyard Garden Bird Feeder.



Potted plants in the nursery before it was renovated.

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FWG files list**Drawer 1 files (FWG D1, “file label”):**

- Planning

Drawer 2 files (FWG D2, “file label”):

- Awards – Certificates
- Background Info
- Bill Holland
- Bill Holland clippings
- Botanical Garden 1967-1984
 - maps, plant lists
- CEF 1994-1998
- Friends of the Farm 1
- Friends of the Farm 2
 - includes clippings
- Goals 1995-1997
 - education and interpretation , 1997
 - goals doc
 - outline of previous events, June 1996
- Interpretive Centre
 - material re: building
- Interpretive Program
 - interpretive program
 - day camps
 - (brochures)
 - trail system
- Landscape Ontario
- Maps
- Memorandum of Understanding
 - proposed, drafts
- Model BYG certificates
- Preliminary negotiations, 1987-1990
 - letters, memos
- Proposal – Joint Wildlife Garden/Ecology Park
 - proposal, Yolande Henry
- Strategic Plan
 - 1992-1998
 - strategic planning docs
- Tomlinson Plan
- Wildlife Garden – Other Sites
 - site evaluations
 - letters: April 15, 1989; May 8, 1989; n/d, Harrison-Durrel
- funding files

Drawer 3 files (FWG D3, “filename”):

- Botanical Garden proposed
- Botanical Garden clippings
 - including letters in response
- Brochures – General
- Brochures – Interpretive
- Brochures – Model BYG
- Events
- Events – Press Releases
- Events – Publicity Posters
- Logos and Designs
- Logo
- Signs and Display
- Networking
 - list of groups
 - Ottawa Stewardship Council
- Display
 - animal flyers from display board
- New Display
- Newsletter – Correspondence
- Newsletter – Mailing List
- Newsletter
 - various issues
- Newsletter – Master Copies
- Old Field Garden
- Other Organisations
- Ottawa Field Naturalists’ Club/FWG website
- Plant Sale
- Presentations
- Wildlife Garden Description – Handout
 - misc contents
 - background brochure
 - Welcome to the wildlife garden (map inside)
 - FWG background and rationale (v. 1 09/91)
 - CEF wildlife garden (initial version) – background
- Project Description
 - FWG Ott – Def. project descr.
 - March, 1995
 - booklet, stapled
- Publicity – clippings
 - see original sources, Endnote
- Bird Boxes: locations + info

- Habitats
 - Ash Woodlot
 - BYG
 - BM
 - Hedgerow
 - New Woods
 - Pond
 - also habitat reports
- Information Sheets: free sheets, varia
- Invasive Species
- Swallowwort Project
- Buckthorn Project
- Inventories
 - birds
 - large mammals (sampling data sheets)
 - small mammals (sampling data sheets)
 - insects
 - butterflies
 - nursery stock & plant list
 - (general “inventories”) – mainly plants

NOTES

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- ¹ I am sad to report that Sara Stein lost her life to lung cancer in 2005, the year I was writing my MA thesis. She was 69.
- ² I use this word in full awareness that “nature” is an idea fraught with complexity, ambiguity and conflict, a discussion of which does not enter into the scope of this article. (will deal with it later, in Part II)
- ³ This is not to say that work in other spaces – cultivated for reasons ranging from subsistence, to commercial, to purely aesthetic, and more – is not significant. Research on different spaces of cultivation would undoubtedly reveal additional insight into the act itself, and deepen our understanding of the relationship that develops between humans and the land they tend. There is potential here for follow-up research projects.
- ⁴ <http://www.open.ac.uk/socialsciences/habitable-cities/introduction.php>, accessed July 31, 2008.
- ⁵ The website renovations potentially compromise certain internet addresses provided in these chapters.
- ⁶ A synthesis of “cultivate” and “cultivation” definitions from the following online databases Oxford English Dictionary (<http://dictionary.oed.com.proxy.bib.uottawa.ca/>), Cambridge Dictionaries (<http://dictionary.cambridge.org>), Webster’s Dictionary (<http://www.websters-online-dictionary.org>), and the Merriam-Webster Dictionary (<http://www.merriam-webster.com/dictionary>), all accessed March 2008.
- ⁷ Christine is also one of my research participants. In the interests of anonymity, she appears under a pseudonym in the parts of this document that do not refer to published documentation. The same applies to other research participants who have published material related to the FWG.
- ⁸ The virtual tour (http://www.ofnc.ca/trailguide/trailtour_e.php), is based on the 1998 trail guide – the version available when I began the research project, and the guide I have been most familiar with over the years.
- ⁹ She retired from writing the column in March 2013, at the age of 98.
- ¹⁰ Sources: chewed stems, http://www.pbase.com/fwg/fwg_photo-blog_feb_2010&page=3; mushrooms and apple, http://www.pbase.com/fwg/november_2008&page=3; nuts, http://www.pbase.com/fwg/fwg_photo-blog_nov_2009&page=3, accessed Nov. 8, 2011.
- ¹¹ Sources: oriole nest, http://www.pbase.com/fwg/november_2008&page=4; yellow warbler nest, http://www.pbase.com/fwg/oct_2011_photo-blog; red squirrel nest, http://www.pbase.com/fwg/fwg_photo-blog_december_2008&page=2; renovated cup nests, http://www.pbase.com/fwg/november_2008&page=4; paper wasps, http://www.pbase.com/fwg/oct_2011_photo-blog, accessed Nov. 8, 2011.
- ¹² Sources for vole tunnels and activity under the snow: http://www.pbase.com/fwg/fwg_photo-blog_march_2009&page=2, http://www.pbase.com/fwg/fwg_photo-blog_december_2008&page=2 and <http://www.ofnc.ca/fletcher/newsletter/Photo-blog/December2007.php>, accessed Nov. 8, 2011.
- ¹³ Source: http://www.pbase.com/fwg/fwg_blog_february&page=3, accessed Nov. 8, 2011.

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- ¹⁴ iCES recently became the “Essex Sustainability Institute” (<http://www.essex.ac.uk/ces/>)
- ¹⁵ Source: www.horttrades.com, accessed June 13, 2012.
- ¹⁶ Source: http://tisgatfwg.blogspot.ca/2011_07_01_archive.html, accessed May 13, 2012.
- ¹⁷ In case other FWG volunteers present that day remember not only the incident, but also the individuals involved and the roles they played, I am providing another layer of anonymity here by using simple letters instead of pseudonyms that could be used to potentially identify volunteers mentioned elsewhere in the document. I take the same approach in other situations that I feel might provide clues regarding a volunteer’s identity.
- ¹⁸ This outcome qualifies the act as cruelty to animals, an offence under the Criminal Code (source: http://www.pbase.com/fwg/jan_blog_2011&page=2, accessed Sept. 13, 2011).
- ¹⁹ Source: http://www.pbase.com/fwg/fwg_blog_nov_2009&page=1, accessed Nov. 12, 2011.
- ²⁰ Source: http://www.pbase.com/fwg/fwg_blog_march_2010&page=2, accessed Sept. 13, 2011.
- ²¹ Oxford English Dictionary: “agency,” <http://dictionary.oed.com>, accessed June 15, 2012.
- ²² Oxford English Dictionary: “agent,” <http://dictionary.oed.com>, accessed June 15, 2012.
- ²³ Merriam-Webster: “agency,” <http://www.m-w.com/dictionary/agency>, and “agent,” <http://www.m-w.com/dictionary/agent>, accessed June 15, 2012.
- ²⁴ Oxford English Dictionary: “materiality,” <http://dictionary.oed.com>, accessed June 15, 2012.
- ²⁵ Oxford English Dictionary: “action,” <http://dictionary.oed.com>, accessed June 15, 2012.
- ²⁶ Merriam-Webster: “action,” <http://www.m-w.com/dictionary/action>, accessed June 15, 2012.
- ²⁷ Merriam-Webster: “activity,” <http://www.m-w.com/dictionary/activity>, accessed June 15, 2012.
- ²⁸ Oxford English Dictionary: “intent,” <http://dictionary.oed.com>, accessed June 15, 2012.
- ²⁹ Oxford English Dictionary: “capacity,” <http://dictionary.oed.com>, accessed June 15, 2012.
- ³⁰ Merriam-Webster, s. v. “capacity,” <http://www.m-w.com/dictionary/capacity>, accessed June 15, 2012.
- ³¹ Source: <http://www.ofnc.ca/fletcher/newsletter/Blog/January2007.php>, accessed Oct. 16, 2011. In 2010, Christine confesses to having “well over 1,000” photos of Red Squirrels”, adding that since there is little hope now of her being able to end the “obsession”, we might as well enjoy some more Red Squirrel photographs (http://www.pbase.com/fwg/fwg_blog_feb_2010, Oct. 16, 2011).
- ³² Red Squirrel sources:
- burying walnut: http://www.pbase.com/fwg/fwg_blog_march_2009&page=4;
 - on stone wall: http://www.pbase.com/fwg/fwg_blog_nov_2010&page=3;
 - in tree: http://www.pbase.com/fwg/sept_2010_blog&page=2, accessed Nov. 8, 2011.
- ³³ Source: www.omafr.gov.on.ca/english/crops/ontweeds, accessed July 7, 2012.
- ³⁴ Source: <http://tisgatfwg.blogspot.com/>, accessed July 13, 2012.

³⁵ Source: http://www.pbase.com/fwg/fwg_blog_nov_2010&page=4, accessed November 15, 2011.

³⁶ This is one of the books I studied for my MA thesis.

³⁷ Another native-invasive entanglement concerns the language used to identify introduced species – known variously as “non-native”, “alien”, or “invasive”, depending on the species and circumstances. Geographers writing about human-plant relations have drawn attention to the implications of these “supposedly straightforward ecological categories” to social identity and inclusion-exclusion (Head and Atchison 2009, 240). Judy Ling Wong, Director of the Black Environment Network (working for ethnic environmental participation in the UK, <http://www.ben-network.co.uk>) points out that the issue of “native and alien plants” is an emotive one for ethnic communities because of its phrasing. “The mistaken symbolic message ... is that native plants are never problematic and that alien plants carry potential dangers,” she writes. She also points out that the resulting and “distorted” popular classification of plants into good native plants and bad non-native plants is too easily transferred to people, particularly when vocabulary reflects the language of immigration (Wong 1996, 7-8). This transfer is unfortunate in view of the potential that has been identified for contact with nature to help immigrants new to a country cope with “the transition of migration” (St Leger 2003, 174).

Wong also reports on the social and cultural benefits experienced by vulnerable groups within ethnic communities who are offered trips to the British countryside – some of them leaving the city for the first time. One salient benefit is a reunion with nature, particularly important for ethnic groups with rural origins, who feel the separation from nature as a “keen loss” in the “bleak concrete jungles of inner cities” where they tend to settle (Wong 1996, 5).

³⁸ The photo-blog contains a total of 141 online galleries and 3991 photographs; its pages have received over 800,000 visits according to www.pbase.com/fwg/profile, accessed September 7, 2012.

³⁹ Sources: red barn, http://www.pbase.com/fwg/feb_blog_2011&page=4; Interpretive Centre, http://www.pbase.com/fwg/feb_blog_2011&page=1, accessed October 17, 2011.

⁴⁰ I do not know why the professor did not inform me of the article – I would like to have known about it! Perhaps she thought I would not appreciate her description of the encounter activities I facilitated as “organized play”, “play activities” or “play pedagogy” (Martin 2010, 106-8) – which may indeed be the case, yet I find her descriptions interesting in the context of the play theory she discusses.

⁴¹ According to the following dictionaries: Oxford English Dictionary (<http://www.oed.com.proxy.bib.uottawa.ca>), Merriam-Webster Dictionary (<http://www.merriam-webster.com/dictionary/reconcile>) and Cambridge Dictionary (<http://dictionary.cambridge.org/dictionary/british/reconcile?q=reconcile>), accessed July 21, 2012; as well as a previous version of the Webster’s Dictionary (<http://www.websters-online-dictionary.org/definitions/reconcile>), accessed June 17, 2011, which includes important elements omitted in the shorter, and more recent, Merriam-Webster version.

⁴² As distinguished from other, specialized uses of “reconciliation” in other contexts such as accounting, family law, and theology.

⁴³ As distinguished from more specialized uses of “reconciliation” in other contexts such as accounting, family law, and theology.

⁴⁴ According to the following dictionaries: Oxford English Dictionary (<http://www.oed.com.proxy.bib.uottawa.ca>), Merriam-Webster Dictionary (<http://www.merriam-webster.com/dictionary/reconcile>)

[webster.com/dictionary/reciprocity](http://www.merriam-webster.com/dictionary/reciprocity) and <http://www.merriam-webster.com/dictionary/reciprocate>) and Cambridge Dictionary (<http://dictionary.cambridge.org/dictionary/british/reciprocity?q=reciprocity> and <http://dictionary.cambridge.org/dictionary/british/reciprocate?q=reciprocate>), accessed July 25, 2012.

⁴⁵ <http://www.pbase.com/fwg/history>

⁴⁶ http://www.ofnc.ca/fletcher/research/inventories_e.php

⁴⁷ For example, the University of Ottawa's "Healthy and Active Campus" program (<http://www.campusactif.uottawa.ca/en/>).