

Natural History From a Learner's Perspective

Anne Bell, York University, Canada

Abstract

This paper explores some of the benefits of, and approaches to, learning through natural history. When taken up as an opportunity for fully-embodied participation in the more-than-human world, natural history can offer an alternative to the fragmented, rationalistic, decontextualized experiences which characterize modern schooling.

Résumé

Cet article explore certains avantages et approches de l'apprentissage par l'histoire naturelle. Considérée comme un créneau de participation intégrale à la construction d'un monde-plus-qu'humain, l'histoire naturelle peut offrir une alternative aux expériences fragmentées, rationalistes et décontextualisées qui caractérisent l'école actuelle.

What I aim to do is not so much learn the names of the shreds of creation that flourish in this valley, but to keep myself open to their meanings, which is to try to impress myself at all times with the fullest possible force of their very reality.

(Annie Dillard, *Pilgrim at Tinker Creek*, 1988, p. 137)

The learner referred to in the title of this paper is me. A long-time student and teacher of language and literature, I had never heard the expression "natural history" until I started a graduate programme in environmental studies at the age of thirty-one. Now, as I strive happily to acquaint myself with the names, traits, haunts, and habits of the nonhuman beings that I encounter, I would like to reflect on the whys and hows of taking up natural history.

I am moved to write on this topic for a variety of reasons, not the least of which is my dismay at the widespread institutionalized disregard for out-of-doors nature experience and nature study in

mainstream education, even within environmental studies programmes. While many theorists and practitioners question the appropriateness and adequacy of the human-centred, technoscientific paradigm for environmental studies, few are openly advocating, like Mike Weilbacher (1993), that we “train a new generation of naturalists” (p. 4). Weilbacher laments the fact that since the 1970s, nature study has given way to the big-picture approach to environmental education (e.g., nutrient cycles, energy flow). As a result, he claims, students learn about such concepts as “community” without knowing who the community members are. How can we teach about food webs, adaptations, interdependence and diversity, he asks, if we have no intimacy with the particular species in question (see also Pepi, 1994)?

The tendency to deal increasingly in abstractions is symptomatic of modern industrial society’s alienation from the living, breathing “more-than-human” world.¹ Few can distinguish between a starling, a grackle and a cowbird, and few care. The significance of such details is lost, even on avowed environmentalists.² It seems to me, however, that educators need to pause for a moment to consider whether this stance is acceptable. What is the “hidden curriculum” when we provide opportunities for students to interact almost exclusively with humans and human artifacts (symbols, theories, books, computers, laboratory equipment, and so on)? How can we hope to recognize and reaffirm our deep interconnections with the rest of nature if we fail to venture beyond the classroom walls? The touch of a chickadee, the sweetness of a wild grape, the scent of a crushed sassafras leaf—such rich occasions for experiencing and understanding are systematically foregone.

Of course, it is possible to spend time outside with students, and to see, smell and touch all sorts of things without necessarily engaging in natural history. Weilbacher (1993) explains that this is the approach of those involved, for example, in the Earth Education movement, and for whom the naming of species is treated as “irrelevant and tangential to the teaching of core concepts” (p. 6). Like Weilbacher, however, I am skeptical. The ability to call a maple “Norway” or “silver” is hardly inconsequential, at least in southern Ontario. The names themselves beckon for recognition, and not only draw our attention to distinguishing traits, but also

guide and enhance our understanding of human interactions with, and impacts, on the land.³

While not indispensable to meaningful encounter, names can help us cultivate attentiveness and so move towards acquaintance. They provide an entrée to, and can later resonate with, fully-embodied experiences of relationship. As Michael Quinn (1995) maintains, names allow us to address others and to speak of them. They delineate fields of experience, and so become infused with meaning. As we learn, for example, to recognize the migrant birds which return in the spring we are better able to mark and celebrate their homecoming. Similarly, as we learn of the decline of any one species, that knowledge takes on personal, albeit painful, significance.

Unfortunately, natural history has often been reduced to what Quinn (1995) aptly terms “the monomania of nomenclature” (p. 7), and this seems to be where misunderstandings and misgivings arise. Approached in this manner, the identification of species becomes a distraction that overwhelms and annoys the learner. “It is worse than useless,” claims Quinn, “it is pernicious in its ability to turn people away from nature study” (p. 7). When naming becomes the focus of natural history, that which can be most inspiring and delightful (the generous girth of an old beech tree, the astonishing yellow-on-black fanfare of a spotted salamander, the comforting familiarity of a monarch butterfly, the temptingly imitable song of a black-capped chickadee) is easily ignored. As Rachel Carson (1956) pointed out years ago, “it is possible to compile extensive lists of creatures seen and identified without ever once having caught a breath-taking glimpse of the wonder of life” (p. 83). The ability to name is no guarantee of caring or understanding, and those of us who engage in natural history need to challenge the social conventions which cast other living beings as an assortment of objects to be observed, named and classified.

John Livingston (1984) writes of the naturalist as a phenomenologist who, in the ideal sense, is neither “observing” nor even “perceiving,” but rather is “experiencing” (p. 66). It was he (1981) who first suggested to me that a naturalist experiences what others do not:

The joy is too great, too overwhelming, to contain, so it bubbles up. If you have not experienced it, you will have to take my word for it. If

the naturalist does not know something you don't, he most certainly *experiences* something you don't. He is not serene. He is excited. (p. 59)

Having spent countless hours the last few years, field guides in hand, trying to gain a naturalist's perspective on the world, I am now persuaded that Livingston is right. First of all, I notice things. Plants are not just plants anymore—their leaves are different shapes and textures, they flower at different times, they thrive in different places, they accommodate different animals, and they engage me in different ways. Goldenrod, for example, is more than just goldenrod. At least one species in my neighbourhood, the Canada goldenrod, plays midwife to the larva of the spotted-winged fly (future chickadee forage) in a large round gall on its stem. Throughout the summer this plant bears the promise of brilliant colour still to come. Yet because it blooms at the same time as ragweed, it is commonly blamed for the allergic reactions caused by this other less showy plant. Falsely maligned and consequently targeted for eradication, goldenrod's ability to thrive regardless is a reassuring reminder of the wild potential of untended landscapes and wind-borne seeds.

Natural history, for me, has been a transformative, healing journey.⁴ It has required a more open, patient, attentive bearing which in turn has led to previously undreamt of encounters and intimacies. Had I not aspired to experience the world as a naturalist, I would never have awoken to the song of a hermit thrush, or felt my heart pound as a basking shark nuzzled my sea kayak, or watched little brown bats come home to roost, or mistaken a snowy owl for a plastic bag in a farmer's field. Everywhere I go the fine threads of nature's living weave summon my attention. Why is that woodpecker by the river hammering away at a clam shell? Is there a snake lying under that piece of plywood? Where will those loons go in the winter? Are these wild berries edible? The familiar and unfamiliar alike call out to me so that I can no longer sleep walk through life.⁵

"I would like to know grasses and sedges—and care," writes Annie Dillard (1988). "Then my least journey into the world would be a field trip, a series of happy recognitions" (p. 15). Dillard's remark evokes in me a familiar yearning for broader acquaintance, itself an offshoot of the comfortable feeling of knowing at least some of my neighbours. The joy of recognition and also of anticipation is mine, because I am now able to distinguish who lives nearby, what

time of the year they will show up, and how they will change through the seasons.

And, as Michael Quinn once pointed out to me, this sense of familiarity and connection is surprisingly portable. I carry with me the curiosity and affinities previously cultivated; and, I am greeted, in turn, by shapes, sounds and patterns reminiscent of acquaintances elsewhere. Once I had learned to identify lupine (arctic lupine) in northern British Columbia, for example, I could not fail to recognize it (silvery lupine) in southern Alberta and feel upset by the fact that it was listed there as a noxious weed. Those encounters were a catalyst to my later appreciating and planting the lupine native to southern Ontario (wild lupine) in my backyard. I now know about lupine and care about it, and the knowing and caring go hand in hand.

“The lover can see, and the knowledgeable” (p. 18). So writes Dillard (1988), a comment which suggests that at least two paths are open to the budding naturalist. In my experience, these two paths have proven not just complementary, but so deeply interwoven as to be inseparable. The lover in me, longing for contact, has urged me to venture outdoors no matter how early the hour or how uninviting the weather and to look, listen and wait for tell-tale signs of my favourites. Such longings would seldom have been satisfied, however, had I not known when and where to seek encounter. Indeed, such longings could scarcely have existed. It would never have occurred to me, for example, to track down a long-eared owl by its droppings, or to uncover a salamander in a rotted tree stump, or to pick and taste fiddleheads, were it not for the example first set by knowledgeable companions. As a learner, I have relied heavily on such mentors to understand, validate, encourage and hone my yearnings. How they have managed to do so, and what their example might mean for educators, are the questions to which I now turn.

* * *

To clarify matters before proceeding, let me state plainly that the natural history I am advocating is not of the indoor, desk-top variety. Certainly one can read and write natural history and take it up in an orderly, book-centered fashion. Such endeavours, in fact,

have always comprised an important part of what naturalists do. With the advent of field guides particularly, the written word has come to play a large role and can be especially helpful to learners. Still, for my purposes here, the expression “natural history” is meant to denote far more than a cognitive engagement with facts and systems. It is intended to signify first and foremost fully-embodied participation in the more-than-human world.

When grounded in the sensual and the social (broadly construed to include relationships with nonhuman beings), natural history oversteps the epistemological boundaries set by conventional, unduly cerebral approaches to education. It represents an opportunity to experience, understand and value learning as something other than a diet of information. In so doing, it offers a means to respond to concerns raised about the fragmented, rationalistic, decontextualized, nature of mainstream schooling (Weiler & Mitchell, 1992; McKenna, 1991; Walsh, 1991; Bowers, 1993) through approaches that are more holistic, embodied, and situated.⁶

When in the company of a skilled naturalist, for example, the learner soon comes to realize that it is not simply identifying what one sees and hears that matters, but cultivating the sensitivity to see and hear in the first place. I recall many happy hours spent with a naturalist/biologist friend of mine who can distinguish and interpret bird songs that my ears cannot even detect. She is on intimate terms with those who live in the woods near her home, knows how they are faring, and is able to bring such knowledge to bear in her efforts to ensure their survival and well-being. Her senses, emotions, values, beliefs and actions are part and parcel of what she knows and what she is able to communicate to others.

Rachel Carson (1956) stressed the importance of nurturing the sensual and emotional dimensions of nature experience in her advice to parents wishing to explore nature with their children. She insisted on the primacy of arousing a sense of the beautiful, a sense of excitement for the new and unknown, and feelings of sympathy, pity, admiration and love for the beings encountered. Regardless of how much “nature lore” one has at one’s disposal, she maintained, there is much an adult can do for a child:

wherever you are and whatever your resources, you can still look up at the sky—its dawn and twilight beauties, its moving clouds, its

stars by night. You can listen to the wind, whether it blows with majestic voice through a forest or sings a many voiced chorus around the eaves of your house or the corners of your apartment building, and in the listening, you can gain magical release for your thoughts. You can still feel the rain on your face and think of its long journey, its many transmutations, from sea to air to earth. Even if you are a city dweller, you can find some place, perhaps a park or a golf course, where you can observe the mysterious migrations of the birds and the changing seasons. And with your child you can ponder the mystery of a growing seed, even if it be only one planted in a pot of earth in the kitchen window. (p. 49)

In light of the inadequacy that many feel at the prospect of teaching in and about nature, Carson chose to remind her readers of the sensory experiences readily available even to city dwellers, and of the beguiling conundrums which they can evoke. I reiterate her words to encourage the hesitant; for even if environmental educators support the notion of taking up natural history, societal expectations of expertise in our subject area can present a seemingly insurmountable hurdle when we step outdoors. Few of us are as confident there as we are in the classroom where mandated, testable curricular items predominate, and where our mastery over the material to be learned is assured. Our response, then, is often to orchestrate our time outside into neatly defined, well-controlled activities (Pivnick, 1996a), thus mimicking the pace and structure of indoor work. In so doing, however, we forgo the opportunity to settle into our senses, broaden our attention, and quietly receive what a place and its inhabitants have to offer. We unwittingly partake in the "hyperactivity" of schooling described and decried by David Jardine (1996) as "a relentless rush from activity to activity, all in the name of 'keeping the children's interest'" (p. 50).

Natural history requires of us a different approach, a deliberate and focussed one certainly, but one that allows time and space for digression, interaction, conversation and contemplation. Rather than shy away from the challenge that natural history presents, we might embrace it as a way of disrupting the dominating, didactic monologues of mainstream pedagogy (as characterized by Weston, 1996). We could begin by acknowledging the fact that natural history, like any other educational endeavour, is a deadly dull affair when led by pedants. The voice of authority tends to stifle

dialogue and deny mystery, both of which otherwise could help to spark and kindle significant occasions for learning.

Learning, on a natural history outing, depends far less on the leader's ability to recite the facts about every plant and animal encountered than on his or her readiness to model a curious, caring engagement with the rest of nature. "Our aim," writes Quinn (1995), "should be to share our sense of wonder and introduce our charges to a few of our friends" (p. 7). A sense of restraint and modesty with regard to the provision of information is in order—which is *not* to say, of course, that expertise is out of place. On the contrary, as Dillard (1988) points out, "specialists can find the most incredibly well-hidden things" (p. 17)—and learners, in my experience, are keen to be party to their secrets. Still, I remember fondly an autumn hike with a botanist who could answer all of my questions about trees and flowers but who was himself just learning about mushrooms. As we proceeded through the forest, fungi of myriad shapes and colours made their appearance, inviting us to pause, admire and touch them. The wonder and pleasure that the botanist expressed at their very presence solicited a similar response from me. His desire to know them better was inspiring—and infectious. His willingness to learn while he taught helped to validate my questioning stance, thereby lifting the burden of ignorance.

The passage from learner to teacher can never be made once and for all, contends Shoshana Felman (1982) and while her theoretical framework—Freudian psychoanalysis—is unfamiliar to me, her words touch home. They evoke and help to explain the tenuous, shifting, sometimes awkward pedagogical terrain that awaits me when I move outdoors with students. There, faced with the spontaneity, diversity and unfathomable strangeness of wild nature, I know that I am a learner still, and always will be. It is a humbling, yet stimulating situation, grounded as it is in the realization that learning has no term (see Felman, p. 37).

This realization runs against the grain of mainstream educational practices which equate teaching with the transmission of pre-existing knowledge and thus tend to be structured according to a strict divide between "teacher" and "learner" (see Shor 1992, 1993) and "knower" and "known" (see Klein & Merritt, 1994). It blurs the boundaries, suggesting that even though a teacher will bring a particular perspective to the educational moment, the others

involved (human and nonhuman) will likewise shape the experience.

Each of us moves differently through the land, writes Gary Paul Nabhan (1994): “It sings different songs to us, and what we hear changes in accordance with our years” (p. 3). Nabhan gratefully acknowledges the worlds that have opened up to him in the company of his own small children. While he and adult companions have been inclined to scan the horizon for picturesque panoramas, his children have explored on their hands and knees what was immediately before them. They were able, consequently, to introduce him to “Lilliputian landscapes” that he would otherwise have overlooked.

It is easy to forget how the experiences and viewpoints of those we teach can inform and enrich our endeavours. When faced with societal demands to test and evaluate student “performance” according to standardized criteria, we come to focus on what students need to “acquire,” and therefore on what they “lack.” The institutional framework thus leads us to take for granted our role as provider. Janet Pivnick (1996b) draws attention to the way that this dynamic finds expression in environmental education, where the teacher is commonly assumed to “instill,” “create,” and “produce” connections to nature. She counters, however, that students already feel a sense of connection—though it may indeed be “vaguely distant, obscured, misted over.” A “subtle repositioning” of the way we understand our task is therefore in order, and the guiding metaphors which Pivnick proffers include “remembering” and “reawakening” forgotten or dormant ties to nature:

we can turn their attention to the wisdom which already exists within each of them by pointing to the small incidents which are bursting with signs of connection.

Such small incidents are the very stuff of natural history, at least as I envision it and have described it here. Whether it involve tracking an animal, collecting leaves, monitoring a bird feeder or scattering seeds, natural history helps us attend to the immediate and the particular so that we can (re)acquaint ourselves with our nonhuman neighbours and live out an embodied sense of interdependence with them. We should freely indulge in such moments of relatedness and in the joy, sadness, surprise,

uncertainty, wonder, companionship and feelings of sheer aliveness to which they give rise.

Ultimately, the whys and the hows of natural history prove indistinguishable. Experience is the reason and the way. As we strive to learn, in our hearts, heads and every limb that we belong and participate in a more-than-human world, natural history can provide crucial, fundamental lessons and move us closer to understanding. It offers welcome alternatives to the abstract, fragmented, technical ways of knowing which currently predominate (Oliver, 1989) and can help us situate our interests, cares, and concerns in personally meaningful, lived experiences.

Notes

¹ See David Abram's (1996) use of the expression "more-than-human." Regarding the modern tendency towards abstraction, see Sean Kane (1994) who distinguishes between "hunter-gatherer specificity" and "modern vagueness" and comments on "the degree to which Western thinking has lost its reference points in the real, and so floats free in abstract space and abstract time" (p. 138).

² All three birds can be readily encountered in cities, and such encounters could serve as a starting point for discussions about human/nonhuman relationships. The European starling was released in New York City just over one hundred years ago and, assisted by human-induced changes to the landscape, has since spread across the continent. It is believed to displace such cavity nesters as eastern bluebirds and red-headed woodpeckers. The brown-headed cowbird is native to North America, but its range has expanded dramatically as forests have been cleared for agriculture. The cowbird parasitizes the nests of many birds, including warblers not adapted to defend themselves against this strategy, and has led to the decline of some species such as the endangered Kirtland's warbler. The common grackle is also a native bird. Because it congregates in large groups, it is often regarded as a nuisance, and so subjected to "control" measures (eg., baited with poisoned grain) in both urban and rural areas (Ehrlich, Dobkin, & Wheye, 1988, pp. 489-93, 495, 527-29, 618).

³ The Norway maple, as its name suggests, is non-native. Commonly planted and invasive, it may be more colourful and tidy than the native silver maple, yet it is troublesome to those involved in protecting and restoring natural communities.

⁴ Thanks to my friend and colleague, Leesa Fawcett, for this metaphor.

⁵ The sleep-walking metaphor comes from Henry David Thoreau (see Rezendes, 1992, p. 21).

Acknowledgments

Many thanks to Leesa Fawcett for her insightful comments on an earlier version of this paper, and to Janet Pivnick, Rachel Plotkin, and anonymous reviewers for their kind yet challenging editorial suggestions. The author also wishes to acknowledge the generous support of the Social Sciences and Humanities Research Council of Canada.

Notes on Contributor

Anne Bell is a graduate student in the Faculty of Environmental Studies, York University. Recent work appears/will appear in the *Journal of Environmental Education*, in K. Warren (Ed.) *Women's Voices in Experiential Education*, in J. Robertson (Ed.) *Elementary Voices: Issues in Teaching about Genocide and Intolerance*, and in A. Wellington, A. Greenbaum and W. Cragg (Ed.) *Canadian Issues in Environmental Ethics*.

References

- Abram, D. (1996). *The spell of the sensuous: Perception and language in a more-than-human world*. New York: Pantheon Books.
- Bowers, C. A. (1993). *Critical essays on education, modernity and the recovery of the ecological imperative*. New York: Teachers College Press.
- Carson, R. (1956). *The sense of wonder*. New York: Harper and Row.

- Dillard, A. (1988). *Pilgrim at Tinker Creek*. New York: Harper Perennial.
- Ehrlich, P. R., Dobkin, D. S., & Wheye, D. (1988). *The birder's handbook*. New York: Simon and Schuster Inc.
- Felman, S. (1982). Psycho-analysis and education: Teaching the terminable and interminable. *Yale French Studies*, 63, 21-44.
- Jardine, D. (1996). "Under the tough old stars": Meditations on pedagogical hyperactivity and the mood of environmental education. *Canadian Journal of Environmental Education*, 1, 47-55.
- Kane, S. (1994). *Wisdom of the mythtellers*. Peterborough: Broadview Press.
- Klein, E. S. & Merritt, E. (1994). Environmental education as a model for constructivist teaching. *Journal of Environmental Education*, 25(3), 14-21.
- Livingston, J. A. (1981). *The fallacy of wildlife conservation*. Toronto: McClelland and Stewart.
- Livingston, J. A. (1984). The dilemma of the deep ecologist. In N. Evernden (Ed.), *The paradox of environmentalism* (pp. 61-72). Downsview, Ontario: York University.
- McKenna, K. (1991). Subjects of discourse: Learning the language that counts. In H. Bannerji, L. Carty, K. Delhi, S. Heald, & K. McKenna (Eds.), *Unsettling relations: The university as a site of feminist struggles*. Toronto: The Women's Press.
- Nabhan, G. P. (1994). A child's sense of wildness. In G. P. Nabhan & S. Trimble (Eds.), *The geography of childhood: Why children need wild places* (pp. 3-14). Boston: Beacon Press.
- Oliver, D. W. (with K. W. Gershman.). (1989). *Education, modernity and fractured meaning: Toward a process theory of teaching and learning*. Albany: SUNY Press.
- Pepi, D. (1994). The mechanics of nature appreciation. *Journal of Environmental Education*, 25(3), 5-13.
- Pivnick, J. (1996a, April). *Activity, entertainment and pleasure in the environmental classroom*. A presentation at the Joint Conference of the Environmental and Outdoor Education Council and the Alberta Global Education Project, Calgary.
- Pivnick, J. (1996b). *A piece of forgotten song: Recalling environmental connections*. Unpublished manuscript, Graduate Division of Educational Research, University of Calgary.
- Quinn, M. (1995). Knowing your friends. *Pathways: The Ontario Journal of Outdoor Education*, 7(6), 5-8.
- Rezendes, P. (1992). *Tracking and the art of seeing*. Charlotte, Vermont: Camden House Publishing Inc.
- Shor, I. (1993). Education is politics: Paulo Freire's critical pedagogy. In P. McLaren & P. Leonard (Eds.), *Paulo Freire: A critical encounter*. London: Routledge.
- Shor, I. (1992). *Empowering education: Critical teaching for social change*. Chicago: The University of Chicago Press.
- Walsh, C. E. (1991). *Pedagogy and the struggle for voice*. Toronto: OISE Press.
- Weilbacher, M. (1993). The renaissance of the naturalist. *Journal of Environmental Education*, 25(1), 4-7.

- Weiler, K. & C. Mitchell. (Eds.). (1992). *What schools can do: Critical pedagogy and practice*. (Introduction). Albany: SUNY Press.
- Weston, A. (1996). Deschooling environmental education. *Canadian Journal of Environmental Education*, 1, 35-46.