

Nature Laughs at Our Systems

Philip Henry Gosse's
The Canadian Naturalist

Seeing Like a Fish

In Philip Henry Gosse's *The Canadian Naturalist* (1840), a series of conversations about the natural history of Lower Canada, a young Englishman named Charles, recently arrived in Québec, earnest and eager but still somewhat wet behind the ears, announces to his amused father: "Life under water must be a kind of dull existence" (CN 344). Charles renders his verdict while standing on the banks of the "Coatacook" (Coaticook) River, close to Compton, one of the Eastern Townships in Québec, the principal setting of Gosse's book. It is early December, and Charles finds again that he hates the "cheerless and depressing" winter landscapes of Canada when the gaunt trees, stripped of their autumn foliage, rattle in the piercing wind and the fields are one dull, unbroken expanse of snow (CN 336-37). What he seems to be saying, too, is that life in a Canadian province can sometimes be a little less than exciting.

The response of Charles's "Father" (capitalized throughout the book) is revealing and brings out the full originality of Gosse's work. It also encapsulates the central theme of this essay—the challenge to "anthropocentric" ways of thinking, to put it in modern terms, which informs this neglected text of Canadian nature writing as well as much of Gosse's later work. Faced with his son's obtuseness, Gosse's naturalist-father reminds his son that it all depends on who is doing the looking. Just as we can frequently make out the sizes and shapes of the fish swimming below the surface when we look into the water, he explains, so these same creatures, from the bottom of their ocean, river, or pond, may be able to look back up at us. Shouldn't we assume, then, that the fish—as ignorant of "the green face of the earth" as we are of "the caves of the ocean"—can nevertheless see our world

distinctly, “the trees on the bank, the insects and birds that fly over the water, the blue sky, clouds, sun, and stars” (CN 344)? Don’t believe for a moment that the fish are bored: “I should not think their life dull for lack of objects.” No doubt their world is very different from ours, though the Father also permits himself to speculate on some of the similarities: “the bottom is probably as plentifully clothed with vegetation as many parts of the land, and contains hills and dales, rocks, and caverns, and bright sands, in profusion” (CN 344). In fact, humans do not realize that the surface of air touching the water has, for those who live beneath it, the same power of reflection as does, for us in the world above, the lake in which we admire our reflections. And the Father suggests a startling reversal of perspectives to his son: “Could we stand under water and look obliquely towards the surface, we should see every object beneath reflected from it; the diversified bottom, fish swimming, floating weeds, &c. would be as truly imaged, if the top were smooth and unruffled, as the skies and trees are on the surface of the still pond” (CN 344).

This is a remarkable thought experiment. Gosse’s Father encourages his son to see with the eyes of a lowly Canadian fish right after Charles has wondered aloud what underwater creatures do when the river is covered with ice. The Father immediately discerns the flaw in his son’s reasoning: it is not that the fish are shut out from our world, it is that we are shut out from theirs. Later in his career, Philip Henry Gosse would put his fantasies of underwater bliss—of a world serenely unconcerned as to whether humans exist or not—to good use in the aquatic scenes he drew for his seaside books, from *A Naturalist Rambles on the Devonshire Coast* (1853) to *Actinologia Britannica*, a compendium of the natural history of sea anemones and corals (1858-1860), to *A Year at the Shore* (1865). It would make sense, then, to attribute more than anecdotal significance to the story of the fish of Québec peering up at the unfamiliar world of humans. As I will suggest here, Gosse’s *Canadian Naturalist* may be read as an early and, not incidentally, *Canadian* example of what Lawrence Buell considers a central feature of (mostly U.S. American) environmental writing, namely the willingness to question the human point of view as the “primary focalizing device” in descriptions of nonhuman nature (Buell 179). After a detour into the biographical circumstances of the book’s composition and a reflection on the historical and literary contexts within which it *cannot* be placed, my essay addresses Gosse’s subtle subversion of the systems by which humans have attempted to impose order on nature, in this case linear narrative as well as point-for-point analogy. An epilogue confronts the relationship

between the fictional father and his fictional son as it is depicted in Gosse's first published book with the fiercely critical portrayal of an actual father-son relationship in the autobiography written, more than six decades later, by Gosse's "real-life" son, Edmund. As will become evident, one of the main reasons for Edmund's discontent was exactly what made *The Canadian Naturalist* so unique. For his father, wrote Edmund, tremblingly, "the incidents of human life" had been "less than nothing" (FS 247).

Butterfly Business

The incidents of Philip Gosse's life—at least those that accompanied the writing of his first book—are swiftly told. Gosse himself described them in vivid detail in his unpublished "Anecdotes and Reminiscences," and his son Edmund recapitulated them in his father's official biography, *The Life of Philip Henry Gosse, F.R.S.* (1890). Philip Gosse had enjoyed no formal scientific training; the son of a struggling painter of miniatures and a former housemaid from Worcester, he was only fourteen when he was forced to quit school. Reluctantly, he followed his older brother William to Newfoundland, indenturing himself for six years as a clerk in a whaling merchant's counting house at Carbonear. While in Newfoundland, Philip purchased a book on microscopes and developed an abiding taste for natural history. Without local museums or collectors' cabinets to guide him, he became an expert on indigenous insect life. Influenced by friends, he also joined the Wesleyan Society and began to think it "proper," as his biographer-son put it, "to exclude from his companionship all those whose opinions on religious matters did not coincide with his own" (*Life* 79; 83).

In 1835, Gosse was invited by fellow Wesleyans to join them in a cooperative farming venture in Upper Canada. Deeply engrossed in the study of his entomological specimens—several of which, securely packed and stored, traveled with him—he paid scant attention to his new surroundings. Instead of Ontario, where most new immigrants went, Gosse and his friends, persuaded by some newly acquired acquaintances (perhaps agents of the British American Land Company), elected to settle in one of the Eastern Townships of Québec (Innis 56). The land had seemed fertile enough, and Gosse, dazzled by a profusion of beautiful butterflies he had encountered near Compton, was elated: "Like a child, I felt and acted, as if butterfly-catching had been the great business of life" (AR 2.207). As it turned out, neither he nor his friends were cut out to be farmers. As his son remarked, not without malice, "he was not one of Emerson's 'doctors of

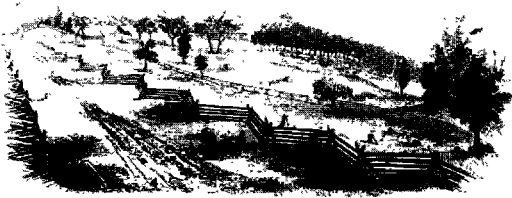
land, skilled in turning a swamp or a sandbank into a fruitful field” (*Life* 97).¹ About half of Philip’s share of the 110-acre farm, featured in idealized form in the elegant drawing Gosse produced for the title page of *The Canadian Naturalist* (Fig. 1), had not even been cleared.² The pages of his

THE
CANADIAN NATURALIST.

A SERIES OF CONVERSATIONS
ON THE
NATURAL HISTORY OF LOWER CANADA.

BY
P. H. GOSSE.

COR. MEM. OF THE NAT. HIST. SOC. OF MONTREAL, AND OF THE
LIT. AND HIST. SOC. OF QUEBEC.



“ Every kingdom, every province, should have its own monographer.”
GILBERT WHITE.

ILLUSTRATED BY FORTY-FOUR ENGRAVINGS.

LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW,
M.DCCCLXII.

Fig. 1. Title page of Gosse, *The Canadian Naturalist* (1840).

farm journal are littered with references to the piles of stones that he gathered, Sisyphus-like, from the swampy soil. Soon he found the backbreaking work so intolerable that he sought additional employment as a school-teacher. His scientific interests, however, flourished even as his crops did not. Entomology became the “very pabulum” of his life (AR 2.209). Philip Gosse contributed papers on insects and climate to the Natural History Society of Montreal and the Literary and Historical Society of Québec, both of which, in turn, elected him as a corresponding member. He also completed a book-length manuscript, never published and now lost, on “The Entomology of Newfoundland,” compiled a series of drawings, titled *Entomologia Terrae Novae*, and mailed a collection of local lepidoptera to the museum in Montreal. “Often . . . after my day’s toil have I sallied forth, insect-net in hand, pursuing the Sphinges and Moths, totally forgetful of fatigue” (AR 2.209). On a “lovely” spring day, the 11th of May 1837, the idea of a book on the natural history of Compton occurred to him as he was strolling through the woods (AR 2.219).

Hopeful that “persons of education” like him were needed elsewhere, he sold his farm in 1838 and lit out for the territory—in this case, the South of the United States. Weeks later Gosse found himself, hardly happier with his new lot, in sweltering Alabama, teaching school in the mornings and stuffing his ears in the afternoon so that he wouldn’t have to hear the blood-curdling screams of the slaves, their bodies writhing under the lashes of the cowhide whip (*Life* 143). His scientific zeal blunted by the excessive heat (*LA* 193) and realizing that slavery alone was “so enormous an evil, that [he] could not live [t]here” (*LA* 255), Gosse once again packed his bags. The voyage home to England lasted five weeks, during which time he worked tirelessly to transform his Canadian diary entries into a readable book. On February 29, 1840, *The Canadian Naturalist* was published. The circumstances of Philip Gosse’s meager existence in Compton had become truly incidental.

What Is Here?

Conceived by a failed emigrant from Dorset, completed on board a ship that was carrying him home to England, printed, engraved, and published in London, Gosse’s *The Canadian Naturalist* has, at first sight, little to offer that could pass as an authentically “Canadian” experience, apart from the fact that the plants and animals discussed by Gosse were, mostly, native to Canada. Oblivious to everything but his beloved insects, Gosse was blissfully immune to the typical immigrant experience, as Northrop Frye and

others have described it. There is no indication in *The Canadian Naturalist* or his letters that Gosse felt he was “being silently swallowed by an alien continent”; nor does “terror” describe his attitude to an environment he never regarded as “nature red in tooth and claw,” only as a source of endless toil and trouble.³ Certainly, he was unconcerned about the question Frye said Canadians don’t ask anyway (“Who am I?”). But the Canadian alternative—“where is here?”—didn’t seem to worry him much either.

If there is indeed one single question that lurks behind the pages of *The Canadian Naturalist*, it could best be described as “*What exactly is here?*” As Wayne Grady has insisted, neither Frye’s fear-response thesis nor Atwood’s survival theory captures the richness of the Canadian experience of nature. But even within the tradition of Canadian nature writing, which Grady sees as originating in the “wonder-filled harmony” of Samuel Hearne’s northern landscapes, and which to him so effortlessly describes the writings of Catharine Parr Traill as well as Grey Owl, Gosse’s text sits uneasily. He is manifestly uninterested in “breaking down the barriers between man and nature” (Grady 8, 9). And while for him, too, Canadian nature, with its “blue lakes,” “blooming vales,” “forests’ gloom” and “strange contrasting seasons,” betrayed “no lack / of bounteous design,” as J. H. Willis rhapsodized in the *Montreal Gazette* in 1833, the poet’s effusive conclusion, namely that all this “makes / the raptur’d spirit seem a part of thee,” obviously had little relevance for Gosse.⁴

In similar fashion, Gosse’s *The Canadian Naturalist* hardly fits the available narratives of the development of Canadian science. In the more traditional version (as told, for example, by Carl Berger), the colonial scientist is described as anxiously conservative rather than boldly innovative.⁵ Scarcely intent on closing yawning gaps in scientific knowledge, forever dependent on the mother country and its established institutions, he never criticizes or challenges the *status quo* and instead collects, classifies and consolidates, enriching “the treasury of science elsewhere” (Jarrell 328). In a more sympathetic reading, Suzanne Zeller calls this activity “inventory science” and stresses its crucial importance, “as a means to assess and control nature,” for Canadian nation-building (Zeller 4). There can be no doubt that Gosse, in the best tradition of late eighteenth-century natural history, was a passionate maker of lists, a tireless compiler of catalogues and collector of specimens. Perhaps it shouldn’t surprise us, then, that Berger reads *The Canadian Naturalist* as just another harmless example of the tepid mix of aesthetic appreciation and religious reverence that marks and mars so many popular

nineteenth-century natural history books. In this interpretation, poor Gosse, puttering about in the Canadian boondocks, as pious as he was dull, filled the willing pages of his diary with lovingly observed garden detail, all bolstered by “familiar truisms,” in the comforting knowledge of God’s overarching wisdom and goodness (Berger 34-37).⁶

But whatever else might be said about him, Gosse was no leaf-pressing, fern-collecting amateur. And he was no haughty *conquistador* either. Writing in opposition to the smugness with which humans see themselves as the focal point of a creation so manifold and multiform that they cannot begin, and therefore shouldn’t even pretend, to comprehend it, Gosse would have had little use indeed for the utilitarian premise of Canadian science as Suzanne Zeller has described it. There is no evidence that all his collecting and catalogue-making ever gave him a sense of domination over his physical surroundings. “How little do we know of the arcana of nature,” sighs the Father in *The Canadian Naturalist* (CN 207).

To be sure, Gosse always pursued his natural history interests *sub specie aeternitatis*, forever mindful of “that changeless state to which time and space are nothing: when we shall know as we are known” (CN 18). For him, natural history was first and foremost natural theology, and the more evangelical his views later became, the greater became his need to see “the world of created things around us” as “a mirror continually reflecting heavenly things.”⁷ As he stated at the end of his last seaside book, there really was “no scientific road to heaven” (*Year at the Shore* 326). Yet in Gosse’s many writings and natural history illustrations there was a contrary tendency at work, too: while constantly searching for God’s universal truth, while standing, for example, at the edge of the sea, “with its gentle waves kissing [his] feet” (*A* 16), he found himself incapable of ignoring the materiality (and individuality) of created things. As Thoreau, hardly a religious fundamentalist, put the dilemma succinctly: “Is not nature, rightly read, that of which she is commonly taken to be a symbol merely?” (*Week* 310). For Gosse—unlike, say, for Emerson—nature is not interesting only in so far as it bears on human experience.⁸ This was the lesson he had learned in Canada: for all the Father’s dedicated lecturing and the son’s dutiful listening, the main concern in *The Canadian Naturalist* is *not* the human observer.

Like Catharine Parr Traill, Philip Gosse knew very well that Canada was no Canaan (*Backwoods* 79). Nevertheless, he remained a bit resentful that he had let himself be swayed into settling in unpropitious Québec rather than on the shores of Lake Huron, and he blamed some of the hardships

that befell him on this initial mistake. In the conversations that make up *The Canadian Naturalist*, Gosse's frustration is still palpable. At one point, the Father compares new immigrants to loons chasing rainbows and mocks those travelers "who pass a few months in going through the pleasantest part of the country, and then think themselves qualified to give a description of Canada, setting forth in glowing colours all the pleasures, and never noticing the disagreeables, probably because they know nothing about them" (CN 108). Choosing his pronouns carefully, the Father nevertheless adopts a consciously Canadian point of view—as the cautious interpreter of Canadian animal and plant life to his audience abroad. Apparently his identification with his new country, warts and all, supersedes even the ties of kinship, and he has spent the last years living apart from his child, a fact offered without further explanation: "as your time since the age of understanding has been spent in England," he tells his son, "your personal acquaintance with *our* natural history must of necessity be slight and limited" (CN 1; my emphasis).

In a curious reversal of roles, the older man in Gosse's book represents the New World, while the younger man, his son, stands for the opinions, conventions, and prejudices of the Old. Charles, still hankering after the comforts of home, has been in Québec only a few months. He continues to be influenced and inhibited by his fond memories of European nature, and his pronouncements are often stilted and awkward.⁹ Apparently not much of an outdoorsman, he deplores the inconvenient ruggedness of the landscape: "Walking in the forest would be much more pleasant," he complains, "if it were not so much encumbered with logs, roots, and fallen trees. Sometimes we break our shins against them, or stumble over them" (CN 224). Youth and age are in fact relative categories even in nature, the Father argues when his inconsiderate son offers a rather tactless encomium on the springtime of life, clothed in a comparison of a young and an old hemlock tree. "The former," Charles had pointed out, unbidden, "has a feathery and graceful lightness, bending to the slightest breeze; but when old it has become sturdy, the bark rough and deeply furrowed, full of gnarled snags, and broken limbs, the top generally blighted and dead, and the foliage almost deprived of that pencilled grace which gave such a charm to its youthful days" (CN 9). To this the Father replies that such changes are an indication not of decay but of distinction: "Like nobler creatures," the hemlock often "survives its beauty" (CN 10).¹⁰ Gosse's fine drawing, which bestows plenty of "pencilled grace" on both the young and the old tree (Fig. 2), proves the Father right.

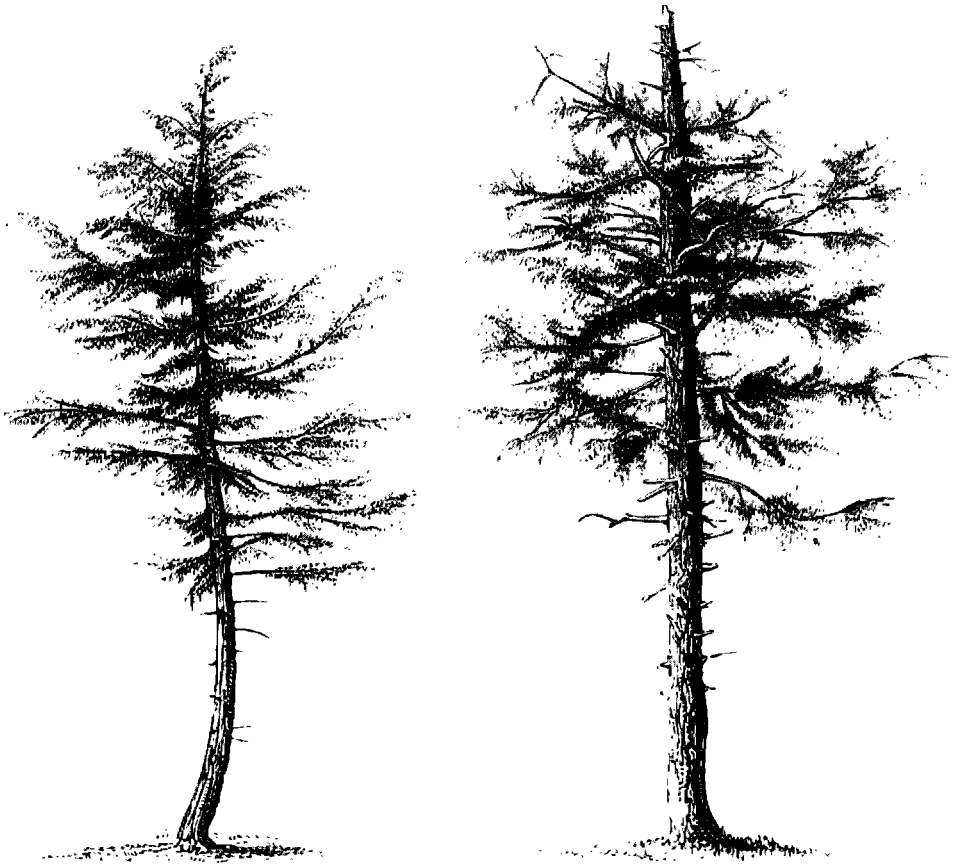


Fig. 2. *Young Hemlock; Old Hemlock* (*Pinus Canadiensis*), from Gosse, *The Canadian Naturalist*.

A few years later, H. W. Longfellow would include the hemlock, “bearded with moss, and in garments green, indistinct in the twilight,” among the indigenous “prophetic” voices that make up the otherworldly “forest primeval” of Acadia, featured at the beginning of *Evangeline* (1848). It is a majestic tree for sure, as Gosse’s Father realizes, although most Canadians don’t consider it worth the “labor of felling” (CN 8). And the fact that such glory may grow “on the poorest and most swampy land” (CN 7) makes it a more than suitable metaphor for the hapless farmer Gosse’s own lofty aspirations in his first natural history book, the real fruit of his years of toil in Canada.

Rambles and Ramblings

Thus inspired by the flora and fauna of Compton, the Father, in a total of twenty-five conversations, valiantly tries to increase his son's, and implicitly the reader's, understanding of Canadian natural history. The form Gosse had chosen recalls the popular manner of scientific writing well-established at least since Galileo's *Dialogue on the Two Chief World Systems* (1625-1630), but it is a genre that had recently gone a bit "out of fashion," as he admits himself (CN viii). It is not hard to see why. At their worst, Gosse's "snip-snap" dialogues (*Life* 159), though conducted outdoors, still carry a whiff of the classroom, and the narrative details sprinkled very sparingly into the text seem like afterthoughts: "Now draw in your horse a moment, and look at the prospect from this hill" (CN 105); "Now, Charles, it is time to see about returning" (CN 106); "But while we are talking of the Indians, the evening has waned into night" (CN 157). On the other hand, the loose structure allows Gosse to instruct his readers without seeming pedantic, and to eschew absolute pedagogical rigor for creative spontaneity. "A master," Gosse later wrote, "may be easy and familiar without being vague."¹¹

In *The Canadian Naturalist*, randomly perceived "trifles," such as the characteristic spotting of a butterfly's fragile wings or the pretty sight of a dandelion seed dancing in the wind, are discussed at great length, while other and arguably more important matters, such as the political situation of the colony, are not mentioned at all. There is no trace, for example, of the mounting tensions between the *Canadiens* and their British overlords in Québec, no comment on the increasing cultural and economic diversity of a region in which loyalists and their descendants mixed, sometimes uneasily, with newer immigrants from the British Isles and Ireland and even the United States (Sweeny 77-79). A three-page general disquisition in chapter ten of Gosse's book on the natives of North America summarily acknowledges their sad fate ("few remains of these powerful tribes survive") and deplors the "treachery" of the whites. In the end, however, the disappearance of the "Indians," like the current political situation of Québec, is a fact of human, not of natural, history and therefore uninteresting: "Nature remains the same" (CN 151). Bits and pieces of local color—references to neighbors like "J. Hughes" (CN 35) and "my friend, Mr. H. Bill" (CN 267) or to landmarks such as "Spafford's bridge" (CN 103), the "Bois Brulé" (CN 297), and "Bradley's mill" (CN 303)—never combine to give *The Canadian Naturalist* the kind of sustained topographical and regional specificity that distinguishes, for example, Gilbert White's *Natural History of Selborne*, from

which Gosse took the motto enshrined on his title page: "Every kingdom, every province, should have its monographer."¹²

But Gosse's *The Canadian Naturalist* is more a *multi-* than a *mono-*graph. Within the chapters themselves there is no pretense of order, cohesion, or progression: father and son leap lustily from topic to topic, from species to species, from animals to plants to agriculture and then back again, depending on what they happen to see while they walk. Serendipity is one of "the greatest pleasures of the out-of-door-naturalist," believed Philip Gosse. "There is so great variety in the objects which he pursues, and so much uncertainty in their presence at any given time and place, that hope is ever on the stretch. He makes his excursions not knowing what he may meet with; and, if disappointed of what he had pictured to himself, he is pretty sure to be surprised with something or other of interest that he had not anticipated" (*RNH* 271).

The apt analogy Gosse offers for this erratic-seeming procedure is that of the hummingbird's flight: "we may ramble from one subject to another (as the humming-bird waywardly shoots from flower to flower), often by a transition more abrupt than could be permitted in a systematic discourse" (*CN* viii). The hummingbird dips into the corolla of the bee balm and, barely finished, "like lightning" (*CN* 273) hurries on to draw its nourishment from the next sweet-smelling blossom—just as Gosse's text skips nimbly from one observation to the next. "See how they hover on the wing," observes the Father, watching a ruby-throated hummingbird poised before the showy flower of the bee-balm, "in front of the blossoms, quite stationary, while their long tongue is inserted, but their wings vibrating so rapidly as to be so invisible as an indistinct cloud on each side" (*CN* 163).

As so often in *The Canadian Naturalist*, Gosse doesn't just vaguely appeal to the reader's sense of vision, he performs the work of visualization himself and creates for our inspection a perfect image of stasis-in-motion. As the bird's wings flutter, so does Gosse's sentence, which, having begun with a strong, ponderous imperative ("See"), ends lightly, suspending all time and movement with the playful touch of a present participle ("vibrating"). But the speaker's tortuous attempt at analogy ("so rapidly as to be so invisible as . . .") also suggests that what we see here finally resists visualization—an effect later captured beautifully in Emily Dickinson's poem about the hummingbird, "A Route of Evanescence." Obviously, the hectic yet concentrated activity of the little bird (which delves deeply, its throat "a glowing coal of fire," into each flower it selects but stays there only a short time) supplied Gosse with

a good model for his own whirlwind approach to Canadian natural history—except that the blossoms Gosse prefers are usually more homely ones. Within the space of a page or two, he easily moves, for example, from “the rank smell” of the skunk to the colouring of the longhorn beetle, which he goes on to compare with the more subdued hues of the horsefly—a train of thought no sooner established than it is abandoned for the sake of sundry observations on the natural history of the milkweed: “Here is a bed of plants. . .” (CN 255).

By choosing the hummingbird’s zigzag flight as an analogy for the unpredictable motions of his own narrative, Gosse ironically illustrates the limits of analogy itself as a tool for a sustained human understanding of nature. His choice of a verb in the passage cited above (“we may *ramble* from one subject to another”) does gesture toward the genre in which his text may be conveniently situated, but the differences between Gosse’s work and the ur-text of the “ramble” in North American nature writing, John Godman’s *Rambles of a Naturalist*, are immediately evident. Godman’s walks in his immediate neighborhood, during which he discovers the deeper meaning of ordinary places and animals, are clearly circumscribed, either geographically or thematically, and what he happens to see is usually debated at length, with some topics, such as the behavior of the common crow, stretching out over several installments. Godman’s *Rambles* were first serialized in 1828 in the Quaker journal *The Friend*, a publication quoted extensively in *The Canadian Naturalist* (CN 164-66; Croft 21). But even if Gosse can be said to share some of Godman’s purpose—“to read what Nature had written . . . for my instruction” (Godman 62)—we find him perusing not so much a large book as a random collection of loose leaves. *Rambles* may, as one of Gosse’s Canadian successors notes, easily become *ramblings*, “a mental assimilation of sights and sounds,” and may even be the better for it (Wood 1).¹³

Crystal Pageants

One shouldn’t assume, though, that chaos reigns supreme in Gosse’s book. Like an almanac or “Naturalist’s Calendar,” to use Gosse’s own term from the preface, the sequence of the chapters is determined by the succession of the seasons, a popular device in English literature since James Thomson’s widely read blank verse epic, *The Seasons* (1726-1730; 1744). *The Canadian Naturalist* begins on January 1, with an image of “dazzling” snow “in the sunshine” (CN 3) and ends the same year, on December 1, when the Coaticook River is again covered with ice (CN 341). As Lawrence Buell has

pointed out, an emphasis on the cycles of the year gently guides us toward a realm where human concerns are no longer central. To observe “the changeful year” (as Thomson called it in *Winter. A Poem*) requires no special training, but to understand its nuances takes a lifetime of dedicated study. The seasons predict and prescribe the way we act and dress, but if they symbolize human behavior they do so only provisionally, as a reminder that their ineluctable change is entirely beyond human control: “Whichever way one wants to respond to them, they offer one of the first and commonest paths by which a human being may be teased into ecological awareness” (Buell 220-21).

More than a formal device, then, the seasons are a powerful source of the imagery through which humans try to relate themselves to nature, and it is here, too, that Gosse’s originality becomes evident—in a book, it is worth remembering, that was published a full ten years before Susan Fenimore Cooper’s *Rural Hours* (1850), hailed by Buell as “the first and still the most ambitious seasonal compendium published by an American author” (221). Characteristically, Gosse is particularly intrigued by a phenomenon that defies the orderly sequence of the seasons, that happens, as it were, in the interstices between them—the “silver thaw.” Like other observers after him, Gosse is struck by the unreality of the spectacle.¹⁴ As he describes it in the “February 1st” chapter, rain has fallen during the night, transforming nature as if with a “magician’s wand.” Come, says the Father to Charles, and

I will show you such a scene of splendour, as you will not see every day. Observe the woods: every little twig of every tree, every bush, every blade of grass, is enshrined in crystal: here is a whole forest of sparkling, transparent glass, even to the minute needle-like leaves of the pines and firs. What are the candle-light lustres and chandeliers of the ball-room, compared with this? Now the sun shines out; see, what a glitter of light! how the beams, broken as it were, into ten thousand fragments, sparkle and dance as they are reflected from the trees. (CN 19)

The passage demonstrates well Gosse’s “power of word painting,” which he says he first discovered in Newfoundland when he was still dabbling in poetry and felt “a dawning anticipation of authorship” (“Account” 259). Gosse’s exhortative language (“observe”; “see”), enhanced by repetition (“every tree, every bush, every blade”), alliteration (“twig . . . tree . . . bush . . . blade . . . needle-like leaves”), assonance and near-asonance (“a whole forest of sparkling transparent glass”), meticulously recreates on the page what the reader cannot see, moving from the general (“the woods”) to the particular (“twig”; “blade of grass”) and then back again (“a whole forest”).

As if to purge the reader's imagination of all inappropriate associations, the Father first suggests and then immediately retracts an analogy from human life, the radiant glass pendants of a chandelier in a ballroom. What the reader is invited to visualize is a dance of a quite different sort, performed not by humans but by the sunlight as it is refracted by the ice. The beams of light playing over this enchanted crystalline forest Gosse again conjures up merely through the magic of his alliterating, assonating language, in a sentence that begins and ends in regular trochees: "How the beams, broken as it were . . . sparkle and dance."

What we see in this mirror of ice is not, however, our own reflection. Charles might feel as if he had entered a scene from *The Arabian Nights* (CN 19), but the Father goes on to show him how fragile all this wondrous beauty is when interrupted by the slightest touch from a "rude" human hand. Instantly, Gosse's syntax loses its force and concentration, with a rapid sequence of independent clauses imitating the passing of all that brilliance into disenchanting sobriety, as shattered glass hits the barren ground: "on my striking the trunk of this tree, see! the air is filled with a descending shower of the glittering fragments, and the potent spell is broken at once; the splendour has vanished; the crystal pageant has returned to its old sober appearance, and is now nothing more than a brown leafless tree" (CN 19-20).

Such natural fragility can only too easily be associated with the vicissitudes of human life, but the analogy the Father suggests is an unconventional one: "What a figure of youthful hopes and prospects," he exclaims, marveling at the trees resplendent with ice. The silver thaw, like youthful innocence, cannot last. Inevitably, "the rush of years," "struggles for the means of existence," "intercourse with a cold world" will shatter the crystal tree of youth. In a surprising twist, then, the frozen landscape of late winter reminds the father of the still pure aspirations of life's beginnings. But it is certainly no accident that it is a crude, rude, interfering human hand—the Father's own!—which puts an end to all that glittering natural beauty and makes the insubstantial pageant fade. Ultimately, the seasonal analogy has only limited use, as Gosse points out elsewhere: "Man grows old, but nature is ever young; the seasons change, but are perpetually renewed" (A 17).

The "February 1st" chapter offers another example of how the splendor of the Canadian winter will always triumph over all human attempts to appropriate it. Father and son, with the help of a pocket magnifier, scrutinize the various forms of snowflakes, available for inspection only to the eye that is "accustomed to pry into the minutiae of creation" (CN 28). But their inves-

tigation does not end in a celebration of the power of science to see what is “little seen or suspected by people in general” (CN 26). Instead, the brilliant, well-defined crystals (Fig. 3), “thin and flat stars . . . resembling in beauty and variety of shape the forms produced by the kaleidoscope,” teach these two human observers a lesson in humility. Gosse’s illustration beautifully brings out, against a stark black background, the regularity of the structure of the crystals, the wonderful combination of sameness and difference that makes each of them recognizable as an individual. Snow crystals are elusive: destroyed by the slightest increase in temperature, they dissolve instantly when we bring our prying eyes too close. How shoddy seems human workmanship beside such delicate beauty! If we look at anything produced by human hands through a magnifying glass, declares the Father, “we shall see that however fair it appeared as a whole, it was composed of

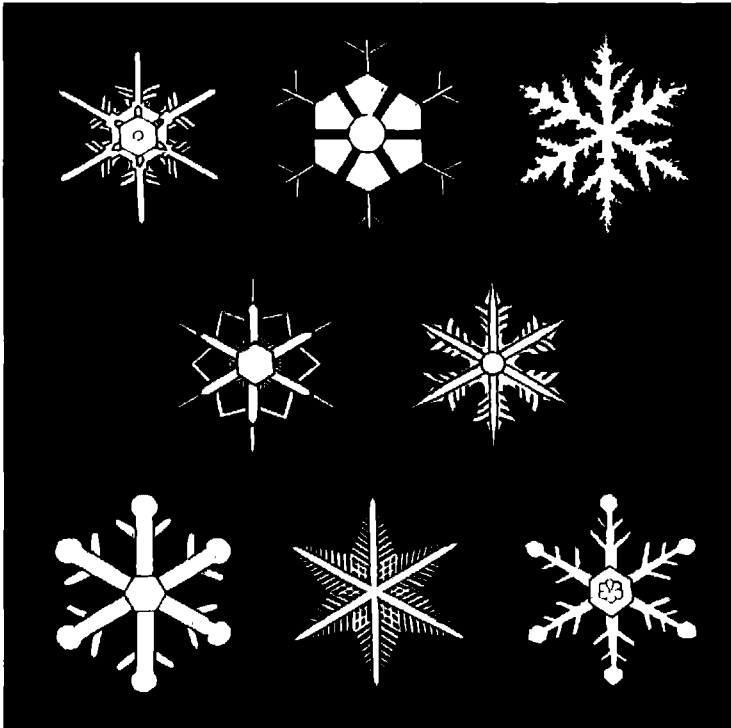


Fig. 3. *Crystals of Snow*, from *The Canadian Naturalist*.

ragged and shapeless parts, and that its beauties were only produced by the defective nature of our senses.” To underscore his point, the Father selects an example with which the author Gosse, the son of a professional miniaturist, was especially familiar. “Look at a fine miniature painting: it is made up of minute dots, which, when magnified, are seen to be uncouth blotches, coarse and without form.” Then examine the minutest parts of God’s creation and you will find them to be perfect beyond reproach, from the humble house-fly sitting on the windowpane to the snowflake that has come to rest, if only for a fraction of a second, on your arm: “Nothing coarse or shapeless is there; and it is so in every case: the most minute crystal or point on your sleeve is of faultless regularity and beauty” (CN 28-29).

The poet Wallace Stevens would much later suggest that in order to understand winter, “the junipers shagged with ice / The spruces rough in the distant glitter,” one must “have been cold a long time” (“The Snow Man,” 1923). But even such a minimalist version of the pathetic fallacy the Father in *The Canadian Naturalist* would reject, arguing that “cold” is not a “positive quality,” merely “the absence of heat.” Our senses aren’t trustworthy and do not “give us a true estimate of the real temperature of the atmosphere” (CN 337). Properly regarded, no season, not even winter, “is so barren but that it possesses charms . . . peculiar to itself” (CN 360).

The winterscapes of Québec reappear as late as 1860, in Philip Gosse’s popular work, *The Romance of Natural History*, a rebuttal of all attempts to study natural history in “Dr. Dryasdust’s way.” On some winter nights in Canada, says Gosse, the stars will flash and sparkle “with unwonted sharpness” and, if we are lucky, we may even see the *aurora borealis* perform its “mystic dance” across the purple sky (RNH 2). Again, perhaps remembering his earlier illustration, he praises the arabesques formed by the frost on the windowpanes, “the symmetrical six-rayed stars of falling snow, when caught on a dark surface” (RNH 3), and he quotes, almost verbatim, his own description of the “crystal pageant” of the silver thaw from *The Canadian Naturalist* (RNH 4). In this cold, wintry world, humans are marginal to the purposes of nature: “A snow-storm . . . rapidly obliterating every landmark from the benighted and bewildered traveller’s search on a wild mountain-side in Canada” is something “terrible to witness” (RNH 2). Even the insects fare better here, as Gosse points out in a note on the *Poduridae*, tiny spring-tails known as snow fleas: “In Canada I have found, in the depth of winter, living and active insects on the surface of the snow, which are seen nowhere else, and at no other season. Little hopping atoms, of singular structure,

adapted to a mode of progression peculiarly their own, dance about on the unsullied bosom of the new-fallen snow” (*RNH* 67; see also *CN* 341).

The Insect View

In their casual survey of Lower Canadian nature, father and son devote their attention democratically to things both large and small. It is obvious, though, that they both have a distinct preference for the “insect view,” as Thoreau called it, whose early essay on “The Natural History of Massachusetts,” with its promise that “entomology extends the limits of being in a new direction,” would have very much appealed to Philip Gosse (*Natural History Essays* 5).

A case in point is the dragonfly, which in Gosse’s little universe enjoys pride of place among the insects, as it did, incidentally, for Catharine Trill, who was enchanted by these “beautiful creatures” and by the variety of colours they displayed (*Backwoods* 238; *Pearls and Pebbles* 104).

Incomparably older than humans, the *Odonata*, the dragonflies and damselflies, are one of the oldest orders in the animal kingdom. For his *Entomologia Terrae Novae*, compiled while still in Carbonear, Gosse drew four of these elegant insects, beautifully arranged on the white page as if performing, even in death, a kind of ballet. In Gosse’s composition, the tails of three long-bodied dragonflies (two of which are darners or *Aeshnidae*)¹⁵ in the right half of the drawing appear to be pointing at each other, whereas the more compact “4 Spotted Dragonfly” (*Libellula quadrimaculata*, now known as the “Four-spotted Skimmer”) in the lower left corner occupies a separate place outside the formation. The precision with which Gosse has rendered the gauze-like wings of his insects and the furry plasticity he has given to their bristly limbs are still remarkable (Fig. 4).

In *The Canadian Naturalist*, however, Gosse does not celebrate the dragonfly in its mature and most attractive state; characteristically, he approaches the creature when it seems at its least prepossessing. When Charles, on one of his walks, picks up the nymph of a *Libellula*, or dragonfly, he finds it an “awkward, sprawling creature, something like a spider” (*CN* 79). Prodded by his father, he stores it in a moist box and takes it home, where, after placing it in a water basin, he watches with amazement the operations of its piston-like tail whose strong musculature pumps water in and out, “a breathing apparatus as well as a means of locomotion” (and, incidentally, also the insect’s rectum). Then, just when Charles thinks he is done, the Father feeds the “ugly creature” some worms and points out the strange motions of its active mouth. Again, Gosse’s language allows the



Fig. 4. Philip Henry Gosse, *Dragonflies*, watercolor on paper, page 37 in Gosse, *Entomologia Terrae Novae* (1833-1835), Collections of the Canadian Museum of Nature. By permission of Jennifer Gosse and the Canadian Museum of Nature.

reader to participate in the process of discovery, as her eyes follow the slow passage of the tiny pin penetrating the insect's labium or "face," as Gosse prefers to say. Ironically, his very choice of such a humanizing term—in the context of a passage describing in great technical detail a form of behavior that is so obviously alien to humans, so clearly unique to the animal under investigation—serves to emphasize the incomparable difference between the world of the insect and that of the human observer:

The whole face is composed of a long flat kind of mask, ending in a rounded point, and divided in the middle (as you see when I separate it with a pin) by serratures, like the teeth of a saw, which fit into each other. These valves it throws open, and darts out to a great length by means of a double fold, as you saw, on the approach of prey, to seize it, and carry it to the mouth which is concealed within, and the serrated teeth are said to hold it firmly while it is being devoured. (CN 81)

Gosse's inverted syntax, imitating the insect's sly capture of its prey ("These valves it throws open . . ."), adds to the drama of the scene. With the dragonfly nymph, the simple act of procuring food is a complex operation, involving the smooth cooperation of exterior and interior organs, the movable lobes at the front (tongs armed with hooks for capturing prey) and the long labium, which shoots forward with lightning speed, absorbing the struggling victim into the devouring jaws. A very "formidable apparatus" indeed, whose machinelike regularity of movement, though minuscule, appears nothing short of monstrous—an almost medieval instrument of torture that holds you in its grip while you are being eaten alive! Pity that prey. But although there is a definite element of deceit in the nymph's approach to its unsuspecting victims (consider the references to the mask, the "concealed" mouth, the trap-like teeth), the lesson to be learned from studying this mechanism is, as Gosse sees it, a cheerful one: "Should not this very thing 'hide pride from man?'" asks Gosse, citing Job 33:17. "So much care bestowed upon an animal altogether out of the pale of general observation, and evidently *without any reference to him!*" (CN 80; my emphasis).

To think that from this fully developed, effortlessly functioning underwater creature should soon emerge another one that is so incomparably different, a kaleidoscope of whirring colors, the mature dragonfly! Faced with such wonderfully complete and intricate beings as the dragonfly, even in its allegedly "immature" status, the naturalist can no longer comfortably see himself as Adam at the centre of God's creation.

In *The Canadian Naturalist*, the metamorphosis of insects becomes the best example of nature's constant capacity to surprise and confound the human observer. What today seems like a "large and handsome caterpillar," tomorrow will turn into a pupa "with a remarkable prominence on the back," out of which will then emerge, a fortnight later, the Banded Purple Butterfly (Fig. 5). But even without the complications of having to identify which larva becomes what butterfly, nature, delighting to step nimbly from one "gradation" to the next, always eludes and mocks the taxonomist's grasp: "So exactly do many of the hawk-moths of the division *Aegeria* resemble hymenopterous flies, that even an entomologist may be deceived at the distance of not more than a yard" (CN 193). This is nature's way of making fun of us: "Thus does Nature laugh at our systems!" (CN 194).

Gosse loves the names of his butterflies and moths, and in *The Canadian Naturalist* they roll off his tongue mellifluously: the Tiger Swallowtail, the Violet Tip, the Pearl-border Fritillary, the Camberwell Beauty, the Spring

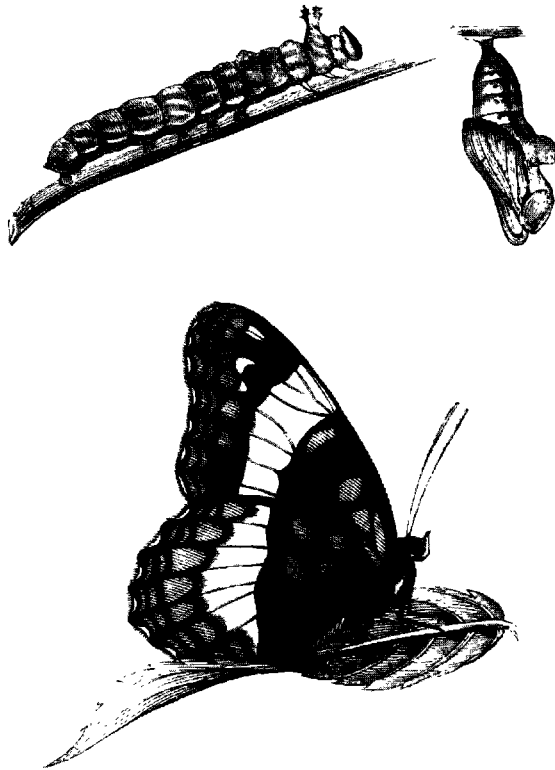


Fig. 5. Larva, Pupa, and Imago of the Banded Purple Butterfly (*Limenitis Arthemis*), from *The Canadian Naturalist*.

Azure, the Tawny-edged Skipper, the Angleshades, the Lemon Beauty, the Streaked Hooktip, the Twin Goldspot, the Spangled Orange, the Crimson Underwing. Pondering the evidence of nature's multiplicity, for which the metamorphosis of the butterfly is just a particularly appropriate metaphor, Gosse, for all his awareness of taxonomic generalities, grants individuality to each and every living being. Again, the fault is ours if we don't perceive this individuality: "I doubt," says the Father, "if there were ever two objects created, of whatever kind, between which there was not some difference, if our senses were acute enough to appreciate it" (*CN* 17). Faced with such bewildering multiplicity, the human capacity to err is as boundless as nature itself; therefore, Philip Gosse shows patience even for those would-be naturalists who cannot tell the difference between a hummingbird and a moth (*RNH* 298).

Life must be sheer enjoyment even for the insects, muses Gosse, and those who call them “inferior creatures” betray their own ignorance. “Look at yonder maple woods,” exclaims the Father on June 10, look at these “masses of the most soft and refreshing green,” the wonderful bushes and shrubs that “are studded with myriads of happy insects, of all sorts, merrily hurrying to and fro and enjoying their brief but joyous span of life” (CN 192). But such anthropomorphisms are ultimately too comfortable, too comforting. Consider the example of the “whirlbeetle” (the whirligig beetle). His dance at first seems comparable to that of a “band of full-grown ladies and gentlemen” performing “the mysteries of the quadrille in a ball-room” (CN 102). However, the easy analogy between the human and the animal world collapses when the Father goes on to point out that this insect, which paddles in the water with half its body submerged, has not two, but four eyes to help it see better, or at least more at once, than any human ever could: one eye is just above the surface, the other just below, a perfect example of the “adaptation of an organ to its use” (CN 102).

The image of Canadian nature sketched out in Gosse’s gracefully written pages is, as should now be apparent, somewhat different from that evoked in Catharine Parr Traill’s numerous works, from *The Backwoods of Canada* (1836) to *Pearls and Pebbles; or, Notes of an Old Naturalist* (1894). This difference is not only attributable to the obvious fact that Gosse writes about Québec and Traill about Ontario.¹⁶ Feeling that Canadian nature was hers to appropriate, Traill cheerfully appointed herself the “floral godmother” of Upper Canada, at liberty to bestow on the wildflowers she finds evocative names of her own choosing (*Backwoods* 120). Gosse restricted himself to being the patient cataloguer, for his more or less arbitrarily chosen province, of the “amazing diversity in all the realms of Nature.” In *The Canadian Naturalist*, Canada is not “the land of hope,” as Traill saw it (*Backwoods* 210), and it is not primarily the site of bustling human activities, other than perhaps walking and talking. Instead, it emerges as the subject of *natural*, not *human*, history—not so much as terrain to be seized, cleared, settled and owned, but as a world that knows no past nor future, inhabited by dancing fireflies, busy beetles, fast-moving hummingbirds, and aromatic plants, where the most momentous event is a butterfly’s slow metamorphosis.

Epilogue: Natural History and Human History

The Canadian Naturalist, warmly received by the critics, marked the beginning of Philip Henry Gosse’s amazingly productive career as a writer of

books on natural history.¹⁷ In 1844, to make his cup of foreign experiences full, he departed for a two-year stint in Jamaica. In his preface to *A Naturalist's Sojourn in Jamaica*, published a few years after his return, Gosse lashes out against the still-prevalent conception of "natural history" as a "science of dead things; a necrology," dealing mostly "with dry skins furred or feathered, blackened, shrivelled, and hay-stuffed," with animals "impaled on pins, and arranged in rows in cork drawers; with uncouth forms, disgusting to sight and smell, bleached and shrunken, suspended by threads" and then pickled in dusty glass bottles. Where is natural history as the record of *living* things, where are the books in which the "bright eyes" of animals still shine, in sentences full of "the elegance and grace that free, wild nature assumes" (*SJ* vi-vii)? For Gosse, it is clear, natural history isn't *history* at all. Rather, it captures—as he himself did in *The Canadian Naturalist*—the *present moment* in all its glory and effervescence.

Philip Henry Gosse to some might seem an unlikely purveyor of such "seize-the-day" philosophy. In the mid-1840s, he had joined an austere sect of dissident Christians, the Plymouth Brethren, who abhorred ritual, hierarchy, ministers and the wicked ways of the world, believed in the infallibility of Scripture and the importance of public "testimonies" of faith, and, above all, lived in constant expectation of the imminent return of Christ. Much has been made of Gosse's hardening religious fundamentalism and the influence it had on his resistant response to Darwinism. But Gosse was too good an empiricist not to accept that there was "a measure of truth" in evolution, even as his religious convictions kept him "from accepting Mr Darwin's theory to the extent to which he pushes it" (*RNH* 81).¹⁸

His most ambitious attempt to define his distance from the developing evolutionary ideas was *Omphalos*, published two years before *On the Origin of Species*: a passionate argument for the createdness of nature, intended as a justification of the findings of modern science as well as an endorsement of the literal truth of Genesis. For page after page Gosse repeats the same procedure, first recapitulating, in great detail, all the obvious indications of development, change, and age to be seen in individual organisms by everyone who cares to look closely. Then he interjects, invariably, the same refrain: "All these evidences of age, clear and unanswerable though they are, are yet fallacious" (*O* 217). Species are created, not born; the moment in which we first look at an animal or plant "is the very first moment of its life" (*O* 252). Even Adam came into life sporting a full-sized belly-button (*omphalos*), with no mother ever having been attached to it. God had created a world in

which all living things carried the evidence of a gradual history—but of a history that had never happened. All evidence of prior change is “prochronic” (as opposed to “diachronic”) or “ideal.” Put differently, we need to think of all organisms as ever-revolving circles, with no identifiable beginning or end, created at an arbitrary point in the circle, which also means that, newly brought into existence, they would nevertheless show “all previous rotations of the circle.”

Predictably, Gosse’s book bothered the evolutionists, but it hardly helped advance the creationist cause either. For didn’t the argument for prochrony, when followed to its logical conclusion, also imply that God had purposely left false clues, to deceive the scientists and to taunt the devout? Read as a refutation of evolution, Gosse’s theory sounds absurd indeed—“spectacular nonsense,” as Stephen Jay Gould fondly called it. But if we, following Jorge Luis Borges’ advice, accept *Omphalos* on its own terms, we see a wonderfully poetic evocation of the *present moment*, a continuation of the project begun, more than a decade earlier, in *The Canadian Naturalist*. Nature, for Gosse, knows no yesterday or tomorrow, no parent and no offspring—all of which are irrelevant human concepts anyway.

Deeply opposed as he was to the notion of parenthood in nature, Philip Henry Gosse is reputed to have been an “appalling parent” himself (Allen 121), incorrectly so, as Ann Thwaite has demonstrated. Evidence of Philip’s colossal failure as a father usually begins with a notorious entry in his diary, made the day his wife Emily gave birth to their son Edmund: “E. delivered of a son. Received green swallow from Jamaica” (*Life* 223). Seemingly callous, this passage in fact indicates the same conviction that informs the dialogues in *The Canadian Naturalist* as well as the cycles of creation evoked in *Omphalos*—namely, that humans aren’t what makes the world go ‘round. *Father and Son: A Study of Two Temperaments* (1907), Edmund Gosse’s most elaborate attempt at coming to terms with his ambiguous parent, is a powerful argument against such a view of nature that excludes humanity from its purview. In his official biography, Edmund had used a reference to the overbearing Father featured in Philip’s first book, *The Canadian Naturalist*, to criticize, ever so subtly, the author of the work himself. The Canadian parent was, he said ironically, at his “most entertaining when he talked with the least interruption of the young enquirer” (*Life* 159; see Raine 75).

In *Father and Son*, Edmund’s second book about Philip, written more than fifteen years later, such verbal skirmishes have turned into open warfare. It is tempting indeed to compare the real son’s later grievances against

his father, however embellished, however exaggerated, with the interactions of the fictional father and son in *The Canadian Naturalist*. “My father,” remembers Edmund, now himself in his fifties, “was for ever in his study, writing, drawing, dissecting; sitting . . . absolutely motionless, with his eye glued to the microscope, for twenty minutes at a time” (FS 40-41). Shutting his son off from most contacts with the outside world, Philip tried to draw Edmund into the study of natural history; in retrospect, Edmund recalls no other image of his childhood than that of father and son together, in contemplation not of each other but of molluscs and crabs: “Those pools were our mirrors, in which, reflected in the dark hyaline . . . there used to appear the shapes of a middle-aged man and a funny little boy” (FS 124). A photograph taken in 1857 shows the father clutching a book, with his left arm affectionately, if firmly, around his serious-looking son, whose lowered eyebrows and stiff posture indicate his discomfort before the camera, a “funny little” child indeed (Fig. 6).



Fig. 6. Father and Son (Philip Henry Gosse and Edmund Gosse, 1857), British Library. By permission of Jennifer Gosse.

In his muffled *cri de coeur*, Edmund Gosse likened himself to his father's natural history collectibles, as if he were one of the "speckled soldier-crabs that roamed about in my Father's aquarium" (FS 229). Even as a small child, he had wanted Philip Gosse's natural history books to assume a human face, dreaming that, as if by magic, he could liberate the birds and butterflies from the pages on which they were being held prisoners: "I persuaded myself that, if I could only discover the proper words to say or the proper passes to make, I could induce the gorgeous birds and butterflies in my Father's illustrated manuals to come to life, and fly out of the book, leaving holes behind them" (FS 60). In an unconscious (per-)version of his father's theory of *ex nihilo* creation, young Gosse simply went ahead and invented his own specimens. Compiling little natural history monographs of his own, he populated them with the seaside animals of the kind his father liked to collect, "arranged, tabulated and divided as exactly as possible on the pattern of those which my Father was composing for his *Actinologia Britannica*" (FS 146). But the crucial difference was, of course, that little Gosse's creations had no counterparts in real life: "I invented new species, with sapphire spots and crimson tentacles and amber bands." The bewildered father, conscientious shepherd of the multifarious flocks of the sea, grew concerned: "If I had not been so innocent and solemn, he might have fancied I was mocking him" (FS 147). In a sense, Edmund Gosse had become a parody of the docile Charles in *The Canadian Naturalist*.

Truth is stranger than fiction, believed Philip Gosse, who later in life proudly banned the "belles lettres" from his bookshelves (RNH 299). When his little son was sketching his fantasy creatures, all of them close enough to "real species" to be disconcerting, he was in reality discovering the world of *fiction* as a separate realm, the rival of nature in its capacity to body forth forms strange and beautiful. Now Britain's foremost literary critic, Edmund offered assurances to his readers that Philip's austere world had vanished for good. But for all the author's attempts to freeze the image of Philip Gosse in a distant past, Edmund's *Father and Son* is framed by assertions that would have made his father proud—namely that the tale told here is *not* fictional, *not* invented, but "scrupulously true" (FS 33). Behind Edmund Gosse's strenuously scientific mask, however, there was a loud longing for a kind of intimacy that he felt Philip Gosse had enjoyed never with him but only in nature—as when on a cold Canadian winter night, while standing on the banks of the Coaticook River in Québec, imagining he was a fish, he tried to picture for himself "the scenery" under water: a world infinitely more interesting, captivating, and brilliant than that inhabited by himself or his kind.

NOTES

I am profoundly grateful to Jennifer Gosse for her friendly advice and the gracious permission to use unpublished material from her great-grandfather's papers. Thanks are due also to Patrice Stevenson and Jodie Lane of the Canadian Museum of Nature in Ottawa, Kathleen Cann of Cambridge University Library, Tim Ford of the Department of Biological Sciences at the University of Maryland Baltimore County, and the staff of the National Archives of Canada.

- 1 See Emerson's lecture "Concord Walks" (1867), in which he appreciatively calls the farmers of Concord "not doctors of laws but doctors of land, skilled in turning a swamp or a sand-bank into a fruitful field" (172).
- 2 The original watercolor, "View of P. H. Gosse's Farm, Compton, L.C.," is now in the National Archives of Canada, where it is shelved with Gosse's "Farm Journal."
- 3 Frye 830. The most recent version of Frye's long-lived concept is offered by Dunlap, who identifies "death in nature, death by nature" as the great Canadian theme (43).
- 4 *Montreal Gazette*, 19 January 1833 (qtd. in MacDonald 54).
- 5 For this influential definition of "colonial science," see the three-part model of the diffusion of Western science proposed by Basalla; for a trenchant critique of this concept, see Jarrell.
- 6 See also Dance's attack on the "pious, prolix" and "unreadable" texts of Gosse and his contemporaries (205-06). Barber, 239-50, explores the central role of Gosse in the Victorian natural history craze. For the best modern treatment of Gosse, see Merrill 190-240.
- 7 On Gosse's use of marine biology as a road to "revealed religion," see Smith.
- 8 In "Country Life" (1858), Emerson declares that "what we study in Nature is man" and reiterates: "man only interests us. We are not to be imposed upon by the apparatus and the nomenclature of the physiologist. . . . For Nature is only a mirror in which man is reflected colossally" (164-65).
- 9 Raymond believes this is due to Gosse's inability to enter "the mind of a normal boy" (51), though we have no clear indication anywhere in the book of how old Charles really is.
- 10 *Pinus canadensis* was labeled thus by Linnaeus in 1763, when it was still grouped with the pines. The current designation of the eastern hemlock, *Tsuga canadensis*, first suggested in 1847 by the Austrian botanist Endlicher, rather adventurously combines the reference to the tree's North American origin with the Japanese word for hemlock.
- 11 See Gosse, *Evenings at the Microscope* 5. Writing about the benefits of the epistolary form in *Tenby* (1856), Gosse confesses that he is fully aware of the artifice involved in his "demotic" approach to natural history writing: "This admits of a certain ease and freedom, by which the author is (or seems to be) brought into more direct and individual communication with every one of his readers."
- 12 Letter VII to Daines Barrington (White 125). On Gosse's topography, see Raymond 54-55.
- 13 Gosse has, of course, little interest in the complicated demonstrations, thought experiments, and learned axioms of the scientific dialogues by the more distinguished practitioners of the genre. His avowed model was chemist Sir Humphry Davy's *Salmonia; or Days of Fly-fishing* (1828/29), a lighthearted series of conversations mostly about the joys of fly-fishing but full of digressions, with topics ranging from practical advice for anglers and disquisitions on the nervous system of fish to the role of instinct in nature and the existence of mermaids. But, as Gosse later admitted, he knew Davy's work "by quotations" only (AR 2.219).

- 14 For a description of the “silver thaw” in the Maritime Provinces, read Captain Campbell Hardy’s entertaining *Forest Life in Acadie*: “The network of the smallest bushes is brought out to prominent notice by the sparkling casing of ice, and the surface of the snow gleams like a mirror. Such a scene as I once beheld it at night by the light of a full moon was most impressively beautiful, and, I would almost say, unreal” (317). Compare this with the much drier report supplied by the Staff-Surgeon Major Andrew Leith Adams in *Field and Forest Rambles*: “the bare boughs of the deciduous-leaved trees and evergreens become encrusted with ice, present a very striking appearance. . . . But the effect is often fatal to the garden fruit trees” (129).
- 15 See Bruton 36. The collections staff of the Canadian Museum of Nature in Ottawa has identified the dragonfly in the upper right corner of the drawing, the “Yellow Spot D[ragonfly]” (Gosse’s handwritten note), as belonging to the genus *Tetragoneuria* (which is usually found in Québec, not Newfoundland). Letter to the author, 13 October 2000.
- 16 In his autobiography, Gosse dismisses *Backwoods* as “a gossiping, pleasant book” without any real “scientific” value, though, getting his dates wrong, he credits it with having inspired his interest in Upper Canada while he was still in Carbonear (*AR* 2.201). In fact, Traill’s work came out only after he had already moved to Compton (*AR* 2.201; “Account” 263 and 266n 56).
- 17 *The Canadian Naturalist* was never a commercial success, though. When the possibility of a Canadian edition was suggested in 1867, Gosse informed his correspondent in Nova Scotia that 112 copies were still unsold (Freeman and Wertheimer 19).
- 18 Darwin, too, admired Gosse, and it seems that in a small way Gosse even aided and abetted the theory of natural selection, by trying out a “little experiment” on Darwin’s behalf and helping him find a reason for the wide distribution of fresh-water molluscs “from pond to pond & even to islands out at sea” (to Philip Henry Gosse, 27 April 1857, *Darwin’s Letters* 171-72; see also *Origin of Species* 383-85). Unperturbed by their ideological differences, both Darwin and Gosse continued to compare notes about orchids, their shared passion.

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