

A Living Inheritance: Collecting the Wonder of Early Naturalists

My collection consists of nineteenth- and early twentieth-century naturalist books concerned with the observation, interpretation, and celebration of the natural world. These volumes, often modest in binding but rich in voice, form a small, carefully assembled library of unknown writers who approached nature not merely as a subject of study, but as a source of intellectual exhilaration and moral imagination. I began assembling this collection several years ago, long before I began my doctoral studies in biology at the University of St Andrews. At first, the books were curiosities: objects discovered in second-hand shops, charity bookshops, and antiquarian stalls. Yet over time I realised that I was not simply acquiring old scientific texts. I was gathering fragments of a way of thinking about the natural world that feels increasingly rare.

The science in these works is not always correct. Taxonomies have shifted; mechanisms have been refined and entire theoretical frameworks have been replaced. But what compels me is not their factual accuracy. It is their intellectual posture. These authors wrote with attentiveness, humility, and an unmistakable sense of wonder. They did not separate observation from emotion. They allowed themselves to be astonished. In an age where scientific prose often strives for impersonal precision, these naturalists wrote as participants in the living systems they described. Their pages reveal walks through hedgerows, hours spent kneeling beside ant trails, stalking ground beetles on the prow, patiently watching owls, gulls, bugs, and streams flowing by. They recorded not only what was seen, but what was felt.

My personal jewel within the collection is *Ants and their Ways* by the Reverend W. Farren White, M.E.S.L. The letters after his name likely indicate membership of a learned society, a reminder that nineteenth-century science flourished much as today in local networks of dedicated observers. Yet it is not his myriads of letters or institutional affiliation that makes the book precious to me. It is his voice. White describes the ants in his garden as “little people.” He follows their movements with affection and curiosity, charting their labour, their organisation, and their interactions with a tone that is at once careful and tender. His book is not naïve; it contains serious attempts at observation and inference. But it is infused with personality. Reading it, one senses not only data being gathered, but a human mind in dialogue with another form of life. That intimacy is striking. White does not write as though he stands above nature; he writes as though he is in its presence. Noting his religious affiliation, one senses that for him the encounter is almost sacramental, a *mysterium tremendum et fascinans*, at once humbling and captivating.

The same quality animates many of the volumes I collect. One cannot read *On the Origin of Species* without feeling the force of a mind genuinely exhilarated by discovery. Darwin persuades not only through logic but through the visible “glimmer” of insight, flashes of imaginative reasoning that draw the reader into the argument before the conclusion is fully reached. His prose is rigorous, but it is

never sterile. This way of writing science, rigorous yet alive, feels to me essential. Something of that same spirit exemplified by Darwin appears throughout the more modest books on my shelves. In Fabre's *Bramble-Bees and Others*, entire chapters unfold from patient watching, the author following a single insect through its daily labours until a pattern slowly reveals itself. In Crompton's *The Hunting Wasp*, the narrative moves between careful observation and genuine admiration for the intricate behaviour of animals that many people barely notice. Even small guides such as Kirby's *British Butterflies, Moths and Beetles* were written not simply to catalogue species but to invite readers outdoors, encouraging them to kneel in grass or lean over hedgerows and discover for themselves the extraordinary diversity of life around them.

These authors were rarely famous, and many wrote far from the great centres of science. Yet they shared an intellectual posture that Darwin himself embodied so powerfully: curiosity first, explanation second. Their books remind us that scientific insight often begins with prolonged attention to ordinary things. Darwin's achievement was to weave such observations into a theory that reshaped biology, but the habit of mind behind it, the willingness to watch closely, to wonder, and to follow a question wherever it leads, belongs to the same wider tradition of naturalists whose quieter voices fill the pages of my collection.

As a doctoral researcher in biology, I study how organisms respond to environmental change. My work involves statistical models, experimental design, and technical analysis. I am trained to dissect systems into mechanisms: thermal thresholds, behavioural responses, physiological trade-offs. Some might imagine that such training diminishes wonder, that once the machinery of nature is exposed, the magic fades. My experience has been the opposite. The more I learn, the more extraordinary the world appears. To walk through woodland now is to see invisible connections made visible: the owl depending on the veteran tree; the mouse threading through undergrowth shaped by decades of succession; the fungi quietly mediating nutrient flows beneath the soil. Education has not reduced nature to cogs and gears. It has revealed the intricacy of the system. And yet, the language with which we communicate this intricacy has narrowed. Scientific writing today often suppresses the emotional dimension of discovery. We are cautious of metaphor, wary of overt admiration, careful to avoid anthropomorphism. These instincts serve important purposes. But something has also been lost, the open admission that studying the natural world is, at its core, an act of fascination.

Ultimately, my collection is not an exercise of nostalgia. I do not wish to return to outdated science or abandon modern methods. Rather, I wish to preserve and reanimate a mode of engagement, one in which curiosity is celebrated, language is alive, and the natural world is approached with reverence as well as rigour. Nor am I alone in this endeavour. Although my shelves are presently dominated by older works, since moving to St Andrews I have become increasingly aware of contemporary scientists who continue this tradition of attentive, impassioned writing. A particular

highlight for me has been the work of Dave Goulson, whose books such as *The Garden Jungle* and *A Sting in the Tale* demonstrate that scientific precision and personal wonder need not be opposed. In his writing, close empirical observation coexists with affection, urgency, and moral clarity. He shows that it remains possible and perhaps increasingly necessary, to write about nature in a way that is both intellectually rigorous and emotionally resonant. In this sense, my collection is not only retrospective but aspirational. It honours a lineage of naturalists while recognising that the marriage of science and passion is not confined to the past. It is a living tradition.

I teach post- and undergraduate students here in St Andrews. When I demonstrate in laboratories or guide discussions, I try to transmit not only information but orientation - a way of looking. The old naturalists in my collection help me do that. They remind me that enquiry begins with attention. That astonishment is not childish, but foundational. That the human capacity for wonder may be one of our most important intellectual tools. James David Forbes himself was both scientist and educator. His library, later presented to this University, stands as a testament to the intellectual ecosystems that sustain scholarship. In assembling my own modest collection, I feel connected to that tradition: the belief that books are not static repositories of information, but catalysts of thought.

If awarded the James David Forbes Collecting Prize, I would seek to expand the collection in five specific ways. First, I would acquire an early edition of *Flora Danica*, the monumental botanical work begun in the eighteenth century. Its hand-coloured plates represent the union of scientific precision and artistic devotion, and as a Dane studying in Scotland, it would connect my collection to my own cultural and natural heritage. Second, I would seek an early edition of a work by Alexander von Humboldt, whose vision of nature as an interconnected system marked a decisive shift from isolated observation toward ecological thinking. His writing bridges exploration, science, and philosophical reflection in a way that deeply resonates with the spirit of my collection. Third, I would add W. D. Hamilton's *Narrow Roads of Gene Land*, whose collected papers are interwoven with philosophical and autobiographical reflections. Including Hamilton would extend the collection into modern evolutionary genetics while preserving the human voice behind theoretical innovation. Fourth, I would include a contemporary work such as *The Bee Spotter's Guide* by Dave Goulson, demonstrating that the marriage of scientific rigour and wonder remains not only possible but urgently needed. Finally, I would leave room and space for the beforementioned unknown naturalist wanderers, which with their personal take on nature and all that inhabit it will forever be the backbone and driven force of my collection and scientific life.

My collection exists partly as a reminder of that lineage. These books testify that science has long been propelled by wonder as much as by measurement. They preserve a mode of engagement in which careful observation and imaginative delight were not opposites, but companions. Many of the volumes carry inscriptions or marginal notes; some bear softened edges and foxed pages from decades

of attentive reading. These traces matter to me. They remind me that scientific knowledge is not only produced, but transmitted, passing through hands and minds, across generations of readers who wrestled with questions not so different from those I now pursue. In a world increasingly mediated by algorithms and automated systems, the deliberate act of observing, of kneeling beside an ant colony and simply watching, feels quietly radical. My collection honours that posture. These books sit on my shelves as companions and provocations. They ask me not only to analyse the natural world, but to attend to it. And in doing so, they preserve the possibility that science, at its best, is not merely a catalogue of mechanisms, but an ongoing conversation with the living world.