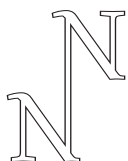


THE NEW NATURALIST LIBRARY

BOOKS AND NATURALISTS

DAVID ELLISTON ALLEN



Collins

*To the memory of
Gavin Bridson (1936–2008) and Richard Freeman (1915–1986)
to whose decades of meticulous groundwork this book owes so much*

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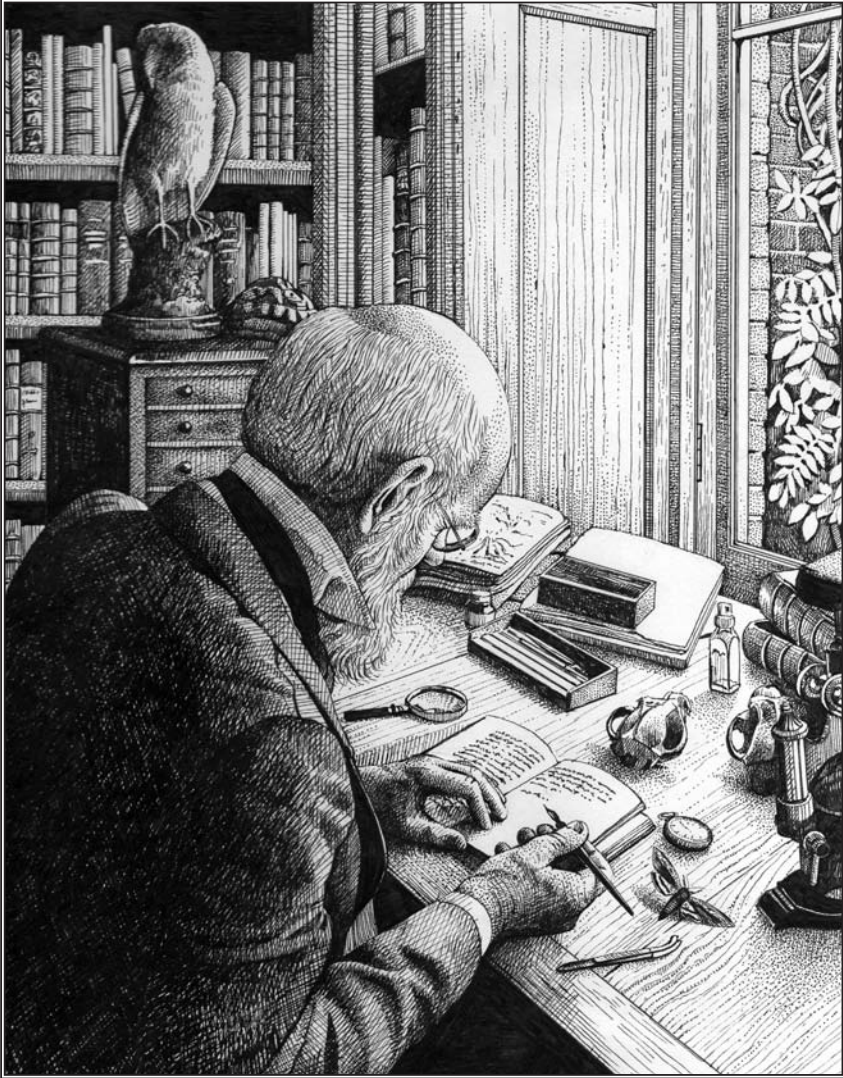
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Editors' Preface

ANY SERIES OF books on British natural history cannot fail to acknowledge its debt to the long tradition of naturalists and their writings for which Britain is almost unique. It was inevitable, therefore, that from the birth of the series the New Naturalist authors have been particularly conscious of this inheritance. Indeed, the first chapter of the first volume in the Series, E. B. Ford's *Butterflies*, is devoted to a history of British entomology. Similarly, the second chapter of *Wild Flowers* is a scholarly history of British botany by John Gilmour. It has long been an ambition of the Editors to produce a volume celebrating the 'old naturalists' and their contribution to the scientific, social and literary culture of the British islands.

David Elliston Allen is uniquely qualified to contribute this important addition to the series. Historian and botanist, he studied Archaeology and Anthropology at Cambridge whilst a long interest in field botany led to the presidency of the Botanical Society of the British Isles and his election as an honorary member. He is also a past president of the Society for the History of Natural History by whom he was awarded the Founder's Medal for outstanding contributions to the study of the history of natural history.

Anyone who has read his *The Naturalist in Britain* (Princeton University Press, 1994) will not be surprised to find that *Books and Naturalists* is as much a social history of natural history publishing as it is the story of British natural history. Indeed, for the first time, the critical role of the publishers, and their not always harmonious relations with the naturalist authors, is explored and revealed. Given the size of the literature, it was inevitable that difficult decisions have had to be taken relating to scope and about what to retain and what to omit. David Elliston Allen discusses these thorny issues in his Foreword. The prime focus of the book

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has had to be those naturalists who have made major contributions to the discovery and description of Britain's natural history and on our islands' fauna and flora. One omission that may strike the reader is any major reference to Charles Darwin. Notwithstanding the importance of Darwin's prodigious output, the evidence base for his ideas was drawn worldwide and was not exclusively British. Furthermore, the recent 200th anniversary of his birth and the 150th anniversary of the publication of the *Origin of Species* has resulted in the appearance of several new works that cover a similar theme. Rather than duplicating this, it was felt that the space that would have been needed to do justice to a review of Darwin's contribution to British natural history would be better used on less familiar material.

We are delighted to welcome this fascinating, but at the same time scholarly, addition to the series.

Author's Foreword and Acknowledgements

FROM THE FIRST, it has been one of the declared aims of the New Naturalist Library to bring before the general reader interested in the wildlife of these islands the distilled results of modern research. That aim was understandably formulated with research on the biological and environmental aspects mainly in mind, but it could equally well have been interpreted as extending to research in complementary directions, such as historical and bibliographical matters.

At the time the New Naturalist Library was conceived, scholarly enquiry into the circumstances under which past publications on our fauna or flora have found their way into print had been taking place for many years, but it had yet to attract much of a following. Most of it arose as a by-product of taxonomy or out of the need to establish the provenance of specimens in museums, many of those the product of long-ago voyages and expeditions. Of those two motives, the taxonomic one was the more pressing, because of the rule of priority that governs biological nomenclature. Increasingly it had become apparent that numerous works in which new taxa had been described, or new nomenclatural combinations perpetrated by accident or design, bore misleading dates, especially if they had been issued part by part over a period of years. Establishing the correct ones as precisely as possible was a matter of some urgency, if names were to be stabilised.

The founding in 1936 of the Society for the Bibliography of Natural History provided a link between the scattered specialists in a range of countries by then engaged in this recondite field of research, in particular through a journal, launched that same year, to serve as a vehicle for publication of the definitive findings – a very necessary if, alas, hardly very readable form of literature. So far

as works on our own fauna or flora are concerned, the fruits of those admirably persistent investigations found comprehensive embodiment in 1980 in R. B. Freeman's *British Natural History Books 1495–1900: a Handlist*, an indispensable reference tool that has never been far from my elbow throughout the writing of the present volume. Except in very rare cases, I have been content to take its dating of works as unchallengeably authoritative. My one regret is that the author did not live to produce a follow-up, bringing the coverage down to the year 2000. For want of that, the dating of twentieth-century works can be regarded as no better than provisional, by comparison.

By the 1970s the specific task for which that society had come into being was effectively completed. In the meantime, its focus had been broadening, as growing numbers of biographers and historians perceived in natural history promising pastures that were seriously undergrazed. Its title was therefore changed, along with that of its journal, to reflect the wider range of concerns it was acquiring. The prominent part it has played over the years and continues to play, in those successive guises, in fostering the scrutiny in depth of natural history's past literature is very evident from the references at the end of this book.

We now know so much more than we used to about our outstandingly rich legacy of natural history books, many of great beauty and hundreds more the triumphant outcome of decades or even near-lifetimes of patient observing and recording, that it was high time that the great advances on this comparatively little-known front were brought to more general notice. The imminence of the 60th anniversary of the New Naturalists gave rise to the suggestion that a volume devoted to this subject could be a fitting way of marking that milestone, and this book is the eventual result.

The topic is one that could be tackled in a number of ways. It could be an anthology, composed of extracts from the writings of past naturalists or from biographical accounts of them, with perhaps a linking narrative. Or the emphasis could be on the illustrations – and excellent volumes on that aspect have indeed appeared (and from hands far better qualified for that than my own). Or a volume could be written from the standpoint of a collector of the books themselves, drawing on a wealth of connoisseurship and recalling some of the excitements of the chase – and an extended work of such a kind we could very usefully have one day.

As it happened, the editors chose to entrust the task to a historian, and to one interested more especially in the external factors that have shaped the pursuit of natural history in these islands down the years. So it should have come as no surprise to them that the theme that commended itself to me was the complicated, often tense relationship between the naturalists who have written

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the books and those who have been invited to produce and distribute them – in other words, how far the quality and quantity of the would-be published output has been affected by the changing economics of the trade. This was a theme of obvious central importance, it seemed to me, yet it did not appear to have been examined hitherto either in much detail or at any great length.

In view of the vastness of the literature, published and unpublished, potentially relevant to that theme, it was immediately clear that I would need to exclude periodicals from consideration and confine myself just to books (including those issued in parts). These were substantially different markets, latterly even competitors, with the one outpacing the other as far as the publication of scientific material was concerned. The geological components of natural history would also have to be excluded if zoology and botany, with more than large enough literatures of their own, were to be covered adequately – and even that could be done only by concentrating on books concerned with the fauna and/or flora of the British Isles at least in substantial part. Much of my own fieldwork having been carried out over the years in the western third of these, I was all the same anxious to try to ensure that books on Ireland's natural history, or by Irish naturalists on Britain's, received a proportionate share of attention. Similarly, I was determined to go out of my way to ensure that guides and monographs devoted to the less-studied groups were not neglected, even to the point of allotting them more coverage than some might consider the size of their followings have warranted. For it has been in many of the less populated stretches of the subject that some of the most heroic, and scientifically most needed, work has been carried out, while at the same time undergoing some of the most arduous and fascinatingly complicated journeys into print. At the same time it seemed only appropriate to recount at more than ordinary length the stories lying behind some of the principal works of identification in use at different periods, in so far as those have been pieced together and published as yet.

As a naturalist, my interests have always been preponderantly botanical, and that inclination has inevitably carried over into my research and writing on past aspects of natural history more generally. As far as the present work is concerned, though, I like to think that that tilt has not been without its advantages, for in the early years books on botany much outnumbered ones on zoology. Botanists, too, from Richard Pulteney in the 1790s onwards, have shown a particularly keen concern for the lives and works of their predecessors, increasingly seeing it as more or less obligatory to include a chapter on those whenever producing an account of a local flora, and have generated a biographical dictionary that in successive guises has greatly outdone in its range and depth those catering for other branches of natural history.

The hardest decision has been how much space to devote to books produced for novices and the less experienced, as opposed to those for the more advanced. Those that have been most influential from the scientific point of view have not necessarily been widely bought or read; indeed, they may have come before very few eyes indeed. On the other hand, some that have sold in great numbers for year after year may have had few scientific virtues, may even have been indifferently written or poorly illustrated, yet despite that played an important part in awakening interest. It seemed invidious to ignore those latter, especially as their sales have helped to sustain the commercial appeal of natural history as a publishing genre and made it possible for many a deserving work with otherwise doubtful market prospects to be privileged with print. What shape or size would Victorian natural history have had without its Gosse, its Morris or its torrent of J. G. Wood? All along, that less sophisticated layer of the market has borne the brunt of the ups and downs in the market by reason of its generally much larger sales and greater vulnerability to shifts in public taste and publishing fashions. Had it not been for its existence, much valuable scientific data would probably never have made it into print, for lack of cross-subsidy. For that we ultimately have the confidence and expertise of individual publishers through the years to thank, one or two of them dedicated naturalists themselves, many of the rest with scant interest in the subject beyond its capacity to yield a worthwhile margin of profit. Some portion of praise for those helping hands in the background, too often anonymous, is particularly overdue.

If the process of writing a narrative history in which the larger picture and the broader trends have been accorded major roles has resulted in the omission of some readers' favourite books or saying too little about others that rate high in their estimation, I can but apologise. It is a very large topic, and a single volume can accommodate only so much.

Omissions in another direction may be a cause of some disappointment too. Natural history is fortunate to have a rich legacy of portraits of the more prominent contributors to the subject over the years, thanks in particular to the practice before the advent of photography of including a likeness of the author in many a book. Not only has that practice continued sporadically ever since, but the readier availability of photographs has made these a standard accompaniment to obituaries. Increasingly, compilers of biographical dictionaries make a point of providing information on this aspect, much simplifying the task of running portraits to earth. Despite my best efforts, however, there remain some glaring gaps in what it has proved possible to provide in that connection. Regrettably, no likenesses seem ever to have existed or at any rate to have survived – unless hidden away in the home of some distant descendant – of such major figures as

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Thomas Johnson, James Petiver, Benjamin White, Edward Donovan or even John Van Voorst. Of Gilbert White, tantalisingly, all that has come down to us for certain is one amateurish, unenlightening pen-and-ink sketch of his head, which it would have been pointless to reproduce.

ACKNOWLEDGEMENTS

Of the many who have assisted with this book there are two I have to thank first and foremost: Gabrielle Hatfield, co-author of my previous book, who has coped uncomplainingly with my raw material and all-too-numerous revisions, meanwhile fortifying me with words of encouragement from time to time; and Tim Bernhard, who latterly came to my rescue with invaluable assistance with the daunting task of securing the many illustrations. His infectious enthusiasm has spilled over, what is more, into providing the masterly frontispiece, replete with subtle iconography that will hopefully keep art historians busy in years to come.

I also owe a special debt to Peter Marren for many searching comments as well as sage advice on my initial drafts of what are now the last three chapters; in addition, he generously made a present to me of hard-to-find copies of his two recent volumes on the history of Frederick Warne & Co. Chapter 10 similarly benefited from the scrutiny of Ray Williams in the light of his unrivalled knowledge of Van Voorst, while Elizabeth Platts, who has long shared my admiration of that linchpin of mid-Victorian natural history, George Johnston, brought a well-informed eye to bear on Chapter 13. Had his health only permitted it, I am sure the text in its entirety would have gained much from an input of Basil Harley's uniquely rich combination of expertise on publishing and British natural history alike, but I am more than grateful nonetheless for a detailed history of Harley Books and the fruits of his research on Reeve & Co., both of which he very kindly placed at my disposal. Ted Pratt thoughtfully made available to me the unpublished memoir of his aunt, Lilian Bland, on the early days of bird photography, and Deirdre Dace was kind enough too to send me informative bulletins periodically as her biography of C. A. Johns progressed. Jack Gibson, John Jocelyn, Michael Darby and June Chatfield are others who allowed me to pick their brains on particular matters, just as a session with Nick Evans valuably filled me in on the policies of the Ray Society. My consulting of the Smith papers at the Linnean Society of London, of the Reeve archive at the Royal Botanic Gardens, Kew, and of the Jenyns correspondence at Bath Royal Literary & Scientific Institution was also facilitated by Gina Douglas, Amanda

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Ingram and Rob Randall respectively, and I take this further opportunity of thanking them for their assistance.

The generosity of the Linnean Society in making its collections freely available to its Fellows for photographing is beyond praise, and Lynda Brooks and Ben Sherwood were ever ready with assistance in that connection. The readiness of two owners of extensive personal libraries rich in early natural history works, Terry Dillon and Bill Hale, to make those available for photography was a further special privilege, as too was access for the same purpose to the antiquarian stock of Henry Sotheran (for which thanks are due to Chris Saunders in particular). Michael Salmon was similarly only too happy to lend photographs of past entomologists from the magnificent collection of those he has built up over the years. For assistance in obtaining individual items for reproduction thanks are also owed to Sam Berry, Declan Doogue, Jeremy Greenwood, David Hosking, Maureen Lazarus, Stephen Moss, Colin Pope, Mark Seaward, Rusty Shteir and Sarah Whild.

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CHAPTER 1

Books and Naturalists

OF ALL THE MANY pursuits and studies that have the outdoors as their principal focus, natural history must surely be without rival in the extent to which it depends on books – and always has done. Unless the different kinds of plants and animals encountered in the wild can be told apart, and, for preference, mentally pigeonholed with a name, the subject could not exist. Without the identifying of its particulars nature remains a purely sensuous experience. Wherever a fauna or flora has been investigated with reasonable thoroughness, there must be a good chance that every one of these particulars has been distinguished, described and dubbed with at least one lasting and widely used designation. Ideally, that will consist of a genus and a species, enabling the plant or animal concerned to be located, if wished, in the unique slot assigned to it in the overall scientific scheme of things; in many cases, though, there will also be a name or names acquired by it over the years in the vernacular, which can serve instead or as an additional label. The natural world presents itself in such a speedily overwhelming diversity that the limit to the number of recognisable entities and their names that the mind can accommodate is reached all too soon. In order to go beyond that limit, or to have one's memory jogged at will, it is consequently essential to have works of reference, some filled with descriptions of a greater or lesser degree of completeness and with or without accompanying illustrations, others lists of what has been recorded from particular areas and of the parts or places within those that appear to be richest in potential.

Not quite all naturalists regard such basic working tools as an altogether unmixed blessing. One of Ireland's greatest all-rounders, A. W. Stelfox, came to deplore the existence of popular guides and handbooks as a class, convinced that

they did more harm than good, with their commonly all-too-brief descriptions, poor figures and selective coverage giving rise to far too many misidentifications on the part of the inexperienced. A one-time librarian at the American Museum of Natural History even made a practice of hiding such works from the members of its staff, contending that those who 'know their stuff' should have no need to look things up. But extreme views like these are the privilege of perfectionists, who can hardly expect most others to share them.

Those who do have recourse to books to identify what they find do not necessarily have to be able to read them, let alone understand the technical terms of which they often consist so very largely. Some of the artisan naturalists who were such a well-known feature of England's northwest in the eighteenth century's later years were so barely literate that, in order to put names to wild flowers they came across, they were all-dependent on a book with good illustrations – and, in some cases, for want of anything more recent, that was a battered copy of an antique herbal. There was one naturalist at that period, a certain John Gough of Kendal, who was not only unable to read, but could not even see: completely blind since the age of three, he developed a remarkable flair for identifying plants by using his tongue and his fingers.

If there have always been the rare one or two in the ranks of natural history for whom reference books serve no useful purpose, at the opposite extreme there are some for whom they have made all the difference. 'In my younger days,' recalled Worcestershire's Edwin Lees of the nineteenth century's earliest years, 'it was difficult to obtain instruction in any department of Natural History, for illustrated books were rare or inaccessible ... But when at last knowledge was attainable, it was like the discovery of a treasure that required years to count. With that first knowledge, dating from the first determined plant and insect, came a flood of enthusiasm, leading to unnumbered rambles and explorations.' Arthur Patterson, the self-taught naturalist of Norfolk's Broadland, experienced a similar light-bulb moment. At the age of eight he expended his total savings of just twopence on a copy of Edward Jesse's *Gleanings in Natural History*, and was so taken with it that he proceeded to learn all of the lines of it by heart. They 'ate into me like a fever: it gave me a passion for nature' – a passion which was to stay with him for life.

In the reminiscences of other early naturalists sudden conversions of that kind feature much less usually than a more purely intellectual yearning that finds the acquisition of one book in particular as its focus. If that involves a struggle against adversity, financial or physical, the acquisition is all the more momentous. The story that Thomas Horsefield, a Lancashire weaver, had to tell is typical. After coming across the classes of the Linnaean system for the first time in a book

borrowed by his father from a library (James Lee's *Introduction to Botany*, as it chanced), 'I distinctly recollect the determination that actuated me, to overcome the difficulties that lay in the way of learning them.' In response, he wrote the 24 names on a sheet of paper and fixed that to his loom-post, 'so that when seated at my work, I could always have opportunities of looking it over.' In similar fashion a future Curator of the Royal Gardens at Kew, John Smith, while sharing a bothy with fellow apprentices took the first step on the way to a career in scientific horticulture by saving enough out of his meagre wages to become the owner of a copy of his namesake's dauntingly titled *Compendium florae Britannicae*. His near-contemporary, George Caley, later to be a valued collector in New South Wales, won the heart of the great Sir Joseph Banks and thereby his patronage by telling him of a seven-mile walk he had made one dark winter's night purely in order to secure for himself a book on botany at an auction. Those seven miles, though, were as nothing compared to the 16 that William Proctor, subsequently Curator of Durham University Museum, regularly trudged into the city of Newcastle for the single purpose of gazing longingly at a copy of Thomas Bewick's *History of*



FIG 1. Book plate of a Victorian entomologist.

British Birds displayed in a bird-stuffer's window, each time forgoing his supper and returning home penniless. Eventually the day came when one of those trips chanced to coincide with a visit to the shop by Bewick himself, who was so touched on learning that the work had such a dedicated admirer that he persuaded the shopkeeper to present the boy with the copy (no doubt promising him a replacement from his own personal stock).

Presents from friends or relations are a more usual way in which books have often touched off an interest in natural history. Thomas Pennant in his autobiography dates his interest in birds to having been given Willughby's *Ornithology* at the age of about twelve. It was on his eighth birthday that H. G. Alexander, in much more recent times, received Charles Roberts' *The Naturalist's Diary*, with one page devoted to each day and sections reserved for entries on birds, flowers and insects; he was to use it for 40 years (till eventually it disappeared in Bombay). Eight seems to be about the average age, when children so often start reading on their own, that an interest in the subject is first aroused and permanently takes hold. A lately deceased Hampshire lepidopterist, Dougie Sterling, was seven, for example, when an aunt gave him *Butterflies and Moths Shown to Children* by J. G. Wood's son Theodore. He was to cherish it all through boyhood.

Receiving books as presents, though, has the snag that the donors, even if they are one's parents, may misjudge the recipient's taste. Conversion to natural history by that means must therefore always be a hit-or-miss affair. A poor book, or even one of those moralising ones that the Victorians turned out in such quantities for inflicting on children, may strike the lucky spark no less effectively than a good one. In a home in which books are rare or even non-existent just about any title may work the trick – and give rise to an unjustifiably firm attachment for many a year afterwards.

A more reliable course is exposure at a particularly receptive age or time to the library of an enthusiast. The spy, explorer and big-game hunter Richard Meinertzhagen never forgot the enormous stimulus he and his brother gained from a copy of Gould's *Birds of Great Britain* (Fig. 2) that had once been given to their father: 'It became our Bible and we never tired of poring over its pages. It was later followed by Lilford's *Birds of the British Islands* and we soon knew both these books by heart.' Leonard Jenyns similarly had the run of the natural history library of a great-uncle godfather, and in later life he was to identify that as the probable source of his passion for the subject. Even so he must have been a late starter, for it was not until he was a teenager at boarding school that he chanced upon *The Natural History of Selborne* on the shelf of a friend, 'a book I had never seen before nor even heard of.' Thereafter he in his turn performed the standard convert's rite of copying most of the pages out and committing to memory much of the contents.



FIG 2. Long-tailed tits.
From John Gould's *The
Birds of Great Britain*,
1862–73.

Better still is when a budding naturalist is the specially chosen recipient of a highly welcome book from a hero-like member of an earlier generation. George Longstaff had the signal honour as a young boy of being presented with a copy of J. W. Douglas's *The World of Insects* by no less a person than William Spence, charmingly inscribed on the fly-leaf 'To a young Entomologist from an old one.' George Johnston also had the inspired idea of offering a complimentary copy of his newly published *Flora of Berwick-on-Tweed* to any young botanist sending him specimens of 20 plants not recorded in that. The Edinburgh boy who successfully rose to that challenge was invited by Johnston to stay at his home – and in due course became his son-in-law.

But it is possible to be converted by a book even without reading a single word, provided it has fine illustrations and the peruser is artistically inclined. The great natural history artist James Sowerby was captivated as a small child by

the colour plates in (what he thought in old age must have been) one or other of the superb series of volumes on birds that George Edwards put out in the mid-eighteenth century. And such was the precocity of F. W. Frohawk's talent in this direction that he was the owner of a copy of W. S. Coleman's *British Butterflies* even at the age of five (Fig. 3).

Naturalists who write their autobiographies tend to have been devoted to the subject since childhood, and this sprinkling of fond recollections of 'my earliest book' may well be untypical of the majority. Many become attracted at later ages, when well into their teens, or in early adulthood or, increasingly today,



FIG 3. Red admiral, Camberwell beauty and peacock. From W. S. Coleman's *British Butterflies*, 1860.

in retirement. But at any age lasting enlightenment may come about through the reading of one book in particular. One of Ireland's leading nineteenth-century figures, Alexander Goodman More, on taking up field botany in earnest at the age of 22 treated himself to the first two volumes of H. C. Watson's pioneering treatise on the factors determining plant distribution, the curiously titled *Cybele Britannica*. 'No other book so completely dominated his whole line of thought,' his posthumous memoirist was to recall, 'and throughout life, both as botanist and zoologist, he was the most ardent of "Cybelizers".' There must be numerous similar stories.

However specialised his or her interests have become, the average naturalist's library is likely to consist of books of a variety of types and levels. Most of them are likely to be for reference – and here it is worth recalling a dictum of R. F. Scharff, a former head of the natural history division of Dublin's premier museum, as recounted by Robert Lloyd Praeger: 'for every specimen that a zoologist or botanist may require in his work, he needs five books.' Those books do not necessarily have to be purchased, at any rate in these days of plentiful public, society and academic libraries, but too often they can only be consulted, not borrowed, or not borrowed for long enough. Assuming they are affordable, it is infinitely better to have them at one's elbow, ready to hand as occasion demands even if not in use continually. Alongside that working nucleus other volumes gradually accumulate: gifts from family and friends, the products of reviewing, irresistible finds in second-hand shops ... And so libraries grow and expand, to the point in extreme cases where book collecting turns into a specialised activity in itself. 'Not only have I with my books invaded every closet in every room in my home,' bewailed the Norfolk banker-botanist, Dawson Turner, to a correspondent of his in 1831, but, in his library 'all the chairs but three are covered with books: the same is the case with the sofa, the same with the four tables & window seats, & then on the floor I have 60 volumes which have been there for months ... Thus situated, you will not wonder if I refuse to buy any whatever except such as I actually want.' Nevertheless he continued to buy books unrelentingly for the remaining three decades of his life.

Natural history has long been particularly prone to this process of accretion, not only because the subject requires such a range of information in order to operate effectively, but also because naturalists have for centuries now been writing so many books themselves. This partly reflects the fact that so much of the basic work consists of making observations and records, which tend to be worthless if not made public at some point. Periodicals can accommodate a certain proportion of those, in some cases as special supplements should the material be particularly extensive, but the main mass must find its outlet in book form if it is to appear in print. Hence the ever-growing stream of local Floras and Faunas. In addition,

though, there are books for beginners, books recalling experiences, belles-lettres, biographies, bibliographies, histories, conference reports, dictionaries of terms, directories ... The literature is dazzling in its diversity and its extent overwhelming if the publications of the past are taken into account as well.

The long period of years over which this great outpouring of books on natural history in all its conceivable aspects has been continuously taking place is impressive in itself, stretching back as it does now for well over two centuries. It is all the more impressive considering how formidable an undertaking it was till well into Victorian times to have one's work published at all; for in addition to the usual hard grind and staying-power inseparable from producing something of book length there was a relatively far higher cost of printing than in later years that had to be overcome. In the case of any book unassured of an extensive sale from the very outset authors needed either to be affluent enough to bear the entire cost themselves or to enjoy the patronage of someone willing to meet much or all of it on their behalf, or else they had to go through the laborious process of soliciting the necessary number of subscribers in advance. Given those deterrents, it can only be considered remarkable that so many books on natural history did arrive in print – testimony to the strength of the hungering on the part of the naturalists of that era to have the fruits of their work given wider circulation and lasting embodiment. For as far as they were aware, books were the sole means of achieving those much-to-be-desired ends. Until periodicals that could also serve those purposes arrived on the scene, there was apparently no alternative. What they could not know, of course, and probably would not even have dared to guess, was that the lengthy letters in which they shared their speculation and discoveries with distant correspondents would be found of such value and interest by their successors that print would eventually be conferred on many of those posthumously.

Quite apart from that formidable financial barrier that most pre-Victorian authors were presented with, some of the works that did manage to appear were written under conditions of great personal stress, so well concealed from their readers that they have remained largely unappreciated down to this day. Thanks to Canon Raven, many do now recognise the heroism of John Ray in his struggle to complete his final work, the *Historia insectorum*, in the face of incessant pain from ulcerated legs and the insomnia that resulted (Fig. 4). But the hardly less fearful birth throes of John Latham's *General History of Birds* are less well known. A once-wealthy physician who had fallen into near-destitution after honourably helping to meet the debts of a bankrupt son (who had shot himself, unable to bear the disgrace), Latham had gone to live with his daughter and son-in-law and their 11 doubtless often noisy children. In the hope that resuming his earlier book-writing would help distract him from his state of distress, his friends encouraged him to embark on what would turn

out to be a massive 11-volume work. At the start he was already in his early eighties, a far more advanced age than it would be today, and the task confronting him involved the retouching of about 140 hand-coloured copper plates, much meticulous proofreading and the complexities attendant upon publishing under his own auspices an edition of a few hundred copies. Amazingly, given all that, he not only finished the job, to his own still exacting standards, but lived on in reasonable health and good spirits till only three years short of a century.

The story of Sarah Bowdich and her beautiful *The Fresh-Water Fishes of Great Britain* is no less heroic. Returning from Africa widowed and penniless, she set about hand-colouring over 3,000 plates for the 12 fascicules that that publication was to prove to run to. Each fish, first specially caught by her, she carefully drew and painted fresh on the bank before the colours had faded, writing as well the accompanying authoritative text, which included original observations of her

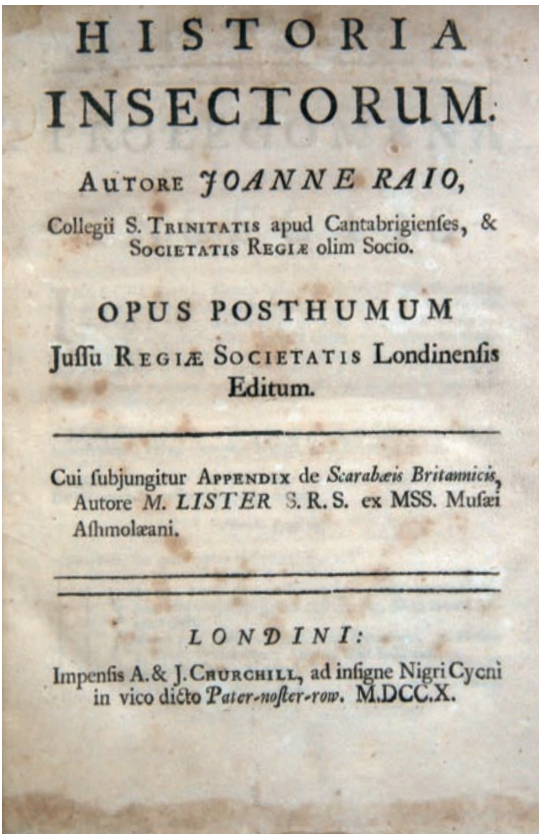


FIG 4. Title page of John Ray's posthumous work on British insects, 1710.

own. 'I begin to feel very much like a machine,' she wrote, very understandably, soon after starting – and it was to be 10 years before the work was completed. During that time she was bringing up three teenage children, devoted a year or more to nursing her mother through a last illness and, whenever there was a spare moment, earning what extra she could as a freelance journalist.

Other authors have written their books while more or less crippled, like Ray. Towards the close of his stunningly prolific career J. G. Wood had the misfortune to trip over a heap of manure when dashing for a train in the dark. Despite breaking three fingers of his writing hand, with characteristic Victorian grit he took a church service the next day, almost fainting in the middle of it from the pain. It was months before he could hold a pen, and for the rest of his days he could write only by steadying his right hand with the left one. After failing to write with the latter, or to master dictating, he eventually won through by taking to a typewriter. Luckily, the almost equally prolific Philip Henry Gosse had more success with dictating when an outbreak of violent headaches forced him to resort to that for the first draft of *Tenby*, the third most profitable of his seaside books. For another marine researcher of an earlier vintage, Dugald Carmichael, a retired army captain who worked on the seaweeds of the Appin district of Argyllshire, it was rheumatism that was the assailant, of a type so severe that he was unable to hold a pen. Though his treatise never in the end made it into print, ironically the cause was not that affliction, however: he could not find a publisher willing to entertain it as a commercial proposition and he could not contemplate bringing it out at his own expense.

A perhaps more usual source of anguish for authors is having to produce a large and complex work by an agonisingly tight deadline. Those who write for newspapers or magazines are well accustomed to producing copy under pressure, but the timescale in their case is short: a book which presents the culmination of many years of research is quite a different matter, and those prepared to take on such inevitably long-term tasks expect to be treated with latitude by publishers, not unreasonably. But trouble arises when a book is needed for a commemorative occasion or when the accumulating of ever more material, or the acquisition of too many competing commitments, results in the delivery of a manuscript being repeatedly deferred. For all their tolerance, there has to be a limit to the number of times publishers can revise their schedules. Eventually, a book has to be completed by a firm date or the contract has to be cancelled.

Natural history, predictably, has had its share of frantic finales, and there is a distinctive type of correspondence, punctuated by moans and groans, that those have given rise to. Here, for example, is Henry Denny, Leeds Literary and Philosophical Society's long-time curator, complaining to his friend Leonard Jenyns in 1841 of the angst he was undergoing in the effort to come up at last with

his monograph on British lice for his publisher, Henry Bohn (after the award of a generous grant to that end by the British Association for the Advancement of Science): 'I am working until 4 and ½ past 4 every morning, which makes me feel quite unwell, but ... *the evening (and that not always)* is my only time which I can take to do my own work in ... It is only by strong coffee that I can keep up at night.'

The lichenologist James Crombie was similarly kept 'extremely busy all day and often all night,' he grumbled to his mentor, William Nylander, in 1880, by the chivvying he was getting from the British Museum to complete his long-overdue catalogue for it. In his case there was the further problem that he subsisted on sporadic earnings from a diversity of sources. The museum's commission, to make matters worse, was 'very unremunerative, and for many years I have had to earn my "daily bread" by occasional preaching ... and by ephemeral literary work.'

The Leicester botanist A. R. Horwood seems to have faced up to the same predicament with better grace (if the fact that he later described it coolly in print is anything to go by). In his case it was a local society that applied the pressure. He had been counting on that body to underwrite the cost of the eventual publication of a new *Flora of Leicestershire and Rutland* on which he had been engaged for many years with the unhurriedness conventional for projects of that type. While the fieldwork was still far from complete, as he saw it, the society learned that the British Association had chosen Leicester as the venue for one of its multitudinously attended, week-long annual meetings in two years' time. Seeing this as an ideal context in which to launch an authoritative and comprehensive account of the local plants, it ruled that the volume must be out by then or its sponsorship would be forfeited. Horwood alone realised what a gigantic task this ultimatum presented him with, but he had always been tirelessly industrious and he buckled down to the challenge without hesitation. Single-handedly and, what is more, in the interstices of a full-time job, he first had to transfer the records contained in his field notebooks onto 40,000 index cards that the exercise proved to require. In the process each record had to be assigned to one of 15 'botanical districts' into which he had divided the counties for easier assessment of how widely and uniformly each species occurred. That preliminary work took him six months, leaving the text – which included several lengthy introductory sections – still to be written. Despite then losing a third of the time available for that to illness, he succeeded in the end in meeting the deadline. Even so, it must have been a close-run thing.

While the amount of effort that lies behind many another natural history book is in no way inferior to Horwood's, it must be virtually unexampled for so much of it to be compressed within such a very short time frame. On the other hand the physical demands involved in combing slowly and methodically on

foot an extensive stretch of lowland countryside, none of it all that distant from home, as he had to do in the first instance, is hardly comparable with the feats of endurance that some authors have found it necessary to perform in areas that are both faraway and rugged. For example, to procure specimens of two endemic species of whitebeam that grow in a remote part of the Isle of Arran, for his artist, Florence Strudwick, to draw for their *Further Illustrations of British Plants*, R. W. Butcher made the 400-mile journey from London in a third-class railway carriage overnight and made it back again the following night, in his anxiety to keep the cost to a minimum and sacrifice no more of his annual leave allowance than absolutely necessary. But that was nothing to the rigours undertaken by some of the pioneer bird photographers, whose cumbersome equipment added an extra layer of arduousness. One of those, Cherry Kearton, made a train journey of more than 400 miles preparatory to lugging his camera up and down a mountain for over a dozen miles further – only for a thick mist to descend just as the apparatus was being erected and completely obscure the nest that he had travelled all that way just to capture a shot of.

In common with other pursuits, natural history seems always to have had its share of individuals endowed with such superabundant energy that discharging some in hectic bursts acts as a kind of release. The botanist John Lindley was famously one of those. For the first three-quarters of his life he never knew what it was to feel fatigue, he credibly asserted, and he was proud of never having taken a holiday till he reached the age of fifty-two. As a young man, avid for books but without the money to buy more than a very few, he once had a rare French volume on short loan from a trusting friend and immediately on its receipt worked on it non-stop for three days without going to bed. His English translation of it, *Observations on the Structure of Fruits and Seeds*, published the next year, included six new plates from drawings of his own that he had made in the meantime.

In the earliest days of natural history the borrowing of books by one naturalist from another was often essential, particularly by authors of monographs, which could require the extensive consulting of earlier works in maybe several languages, and particularly if they lived in remote country areas (as so many in that era did). Most of the works needed were only to be had from the fine libraries of the wealthy, who could have been rightly wary of letting valuable volumes out of their sight and entrusting them to individuals with less than impeccable credentials or exposing them to the risk of damage or loss in the mail. Sending any books by post, moreover, was an expensive matter in itself. On the other hand helping a needy, proven scholar by this means, as Sir Hans Sloane helped John Ray on frequent occasions, was just another way of acting as a patron of learning and provided justification for the fortunes spent on acquiring great collections of books of which so relatively few were

probably ever made use of for personal study by their owners. Such considerations presumably came into play far less when the lending was by one wealthy owner to another, especially if the two were collaborators on some project. We know that when William Borrer and Dawson Turner were preparing their *Lichenographica Britannica*, foreign monographs passed between Sussex and Norfolk repeatedly. Yet lending even to an enthusiast of the same social standing and reputability as oneself was not invariably free from risk, as William Withering discovered to his cost when a fellow physician in a neighbouring town, Jonathan Stokes, failed to return a sizeable portion of his botanical library and he had to go to law to retrieve it.

Learned tomes formed the prevailing reading matter of naturalists as long as books of all kinds continued to be luxury objects, by virtue of having to be produced by onerous craft methods and with a costly imported material, paper. In the near-absence of the specialist periodicals that would later emerge there was little else indeed with a bearing on the subject that naturalists *could* buy and read, for there were still far too few of them to make works with a lighter character viable commercially. These scholarly works themselves appeared only because, along with reference collections, they were the basic tools without which this group of studies could not be entered and pursued at a serious level, and those who could afford to do so had no option but to stump up for the high prices that obtained. Although the middle years of the eighteenth century saw a surge in demand for illustrated works on the flora and fauna of exotic lands, as part of a wider vogue for travel literature, books with the natural history of the British Isles as their focus could not compete with those in glamour, and they stolidly remained one of the market's obscurer sections, sustained only by an adequacy of devotees with the necessary long purses.

As we shall see, that pattern changed radically in the second quarter of the nineteenth century. Through a combination of factors the reading public greatly expanded and the market for natural history books assumed the much more diverse character that it has sustained ever since. There continued to be a solid substratum of scholarly works underlying the several new layers that were now brought into being, but despite being assisted by cross-subsidy on the part of certain publishers its commercial viability was as much a matter for concern then as it has been ever since. Books which represent the outcome of a heavy investment of time and money extending over many years tend of necessity to be of more than average dimensions even if they are not also inescapably technical. Costlier to produce for these reasons alone, their usual minority appeal dictates a high cover price too. Yet it is the bottom layer that matters most for the continuing vitality of the subject, for, together with the learned journals, it constitutes the critical filter through which new findings pass before becoming absorbed into the general store of knowledge.

Once this layering of the market took place, authors began to turn out shorter, less technical, more readable books with a new realistic prospect of making significant amounts of money from them. Many wrote out of high-mindedness, with a religious or educational motive that was uppermost, but the financial one was probably in all cases not as unimportant as it was and had been for those whose overriding concern was to see the outcome of their studies converted into the security and prominence of print. Many active naturalists who failed ever to put any of their works into print may have sheltered behind the pretext that they could not afford the expense involved when the real reason was simply inertia. Others compromised by writing anonymously or using a pseudonym. Women in particular were reluctant to publish without some veiling of this kind, perhaps because they feared to be considered 'forward', perhaps out of general diffidence. Some of them, indeed, like the renowned Amelia Griffiths of Torquay, who became one of the leading experts on seaweeds, were seemingly content to leave it to others to bring their efforts to wider notice, in effect publishing by proxy. At least one instance is known of a married woman even expressing guilt about engaging in natural history at all. Anna Maria Hussey, a busy parson's wife and mother of three children, produced paintings of fungi that grew around her home in Kent that were numerous and good enough to make up two successive series of her eventual *Illustrations of British Mycology* (Fig. 5). Yet in a letter to her mentor, the great Miles Berkeley, she once confided, 'I am always under the uncomfortable impression that the thing I am doing is not the right thing to be doing.'

A few of those who turned out 'popular' books did so out of financial desperation, we now know. One was the first occupant of the Chair of Botany at Cambridge University, the unfairly maligned Richard Bradley, whose prodigious output – which descended into plagiarism – on a great range of topics, of which natural history was only one, was occasioned by his need to climb out of debt. How that debt came about is unknown, though one researcher has plausibly suggested the South Sea Bubble as the cause, on grounds of chronology. Certainly, sudden financial disaster seems to have been the commonest reason why naturalists took to the pen. Captain Thomas Brown, another prolific author, was forced to earn a living by that means when his flax-spinning mill burnt down uninsured. Priscilla Wakefield did so, in her mid-forties, when her husband was experiencing business difficulties. Edward Forbes, on the other hand, was careful not to injure his reputation as a scientist when his father's bankruptcy suddenly whisked away his generous allowance: his hectic life as a freelance journalist for a period thereafter was confined to the respectable end of the periodical press and combined with part-time work exploiting his natural history expertise as a lecturer and a curator. His contemporaries fortunate enough to be ensconced in

one of the very few permanent posts in the subject were scarcely better off financially, though, if they had little or no private means to supplement the miserable stipend that tended to be the norm; their job security, however, meant that they could afford to be less high-minded about the kind of literary work they undertook as a remunerative sideline. Dr George Shaw, who was notably active on this front in the years 1780–1825, spent so much of his official time ‘writing for the booksellers’ that he totally neglected the British Museum’s natural history collections (according to William Swainson, a not altogether trustworthy witness, for he fancied that job for himself).

But some naturalists have turned to authorship simply because they found it a more congenial alternative profession. J. G. Wood is the outstanding example of that: he tried pastoral work for a year or two before finding books a more satisfying form of preaching. James Duncan, the pioneer of Scottish entomology, after following his father into the ministry soon came to recognise that he was too shy ever to be successful in that and turned instead to earning a living as a writer and editor.

FIG 5. From Mrs Hussey’s *Illustrations of British Mycology*, 1847–55.



In rare cases books have arisen out of more esoteric motives. A Bristol physician, E. H. Swete, is said to have published his early Flora of that district with the aim of winning patients for his practice by presenting himself as a man of science (in days when doctors still listed botanical publications in their entries in the *Medical Directory*). The £80 he paid to have the book printed and distributed he clearly regarded as a worthwhile investment. Such indeed was the faith that he had in it as a reputation-builder that he carefully concealed the fact that the first half had been written by someone else with greater local knowledge.

At least two other books of a similar kind published around that same period had senior medical men as their nominal authors but are now known to have been largely based, with only slight acknowledgement, on data supplied to them by obscure individuals in humble circumstances. Thus did the young Edwin Lees 'devil' for Charles Hastings in Worcestershire and the poverty-stricken Richard Buxton for J. B. Wood in Manchester. It rather looks as if there was a tacit convention in those days whereby those who had a rich store of records but who could not afford to have them published otherwise were prepared, as a *quid pro quo*, to allow a professional man of high local standing to make free use of their work and receive such credit as might result from his nominal authorship. The brokers of these arranged marriages were no doubt printers, who felt able to take the risk of publishing a learned book on a purely local topic only if it was 'carried' by a name of some distinction – and reasonably convincingly.

A better-known instance of ghosting – because of the far-reaching repercussions this proved to have – is the two volume *A Natural Arrangement of British Plants*, the first work in English to expound and champion the superior virtues of the natural system of classification (as opposed to the artificial Linnaean one that still dominated the field at the time of the book's appearance in 1821). The nominal author in this case was Samuel Frederick Gray, a pharmacist who made his living as a medical writer, an eccentric figure well-known for hair that came down to his knees and as the last man in London to continue to wear a tricorne hat. After completing the preface, and half of the first volume, however, his persistently precarious health gave way and he was forced to entrust the rest to his more than capable 21-year-old son, John Edward, a future head of the Natural History Department of the British Museum and already with much experience of lecturing on the natural system to medical students. The son indeed seems to have been the initiator of the book in the first place, but he was happy for his father to receive the credit. That he was really the main author, though, quickly became an open secret and led to his being fingered by the increasingly embattled Linnaeans as their arch-enemy, culminating in his being humiliatingly blackballed when he stood for election to the Linnean Society not long afterwards. Though

eventually a zoologist of immense productivity and international renown, he never forgave the society for that snub till the end of his days, and he went on to lend his prestige, as its permanent president, to the body that most noisily identified itself with the incoming rival system, the later-founded Botanical Society of London. The schism within the natural history community in the metropolis that John Edward Gray by that time personified arguably did the subject lasting harm, by undermining the previously unifying role of the Linnean Society and by hastening the breaking-up into a series of new bodies which acted thereafter more autonomously than might otherwise have been the case. All in all, no mean achievement for one rather obscure textbook, even if brought about unintentionally.

Ghosted books are by no means the only deceit that has been played from time to time on the naturalist reading public. Worse by far, surely, are cases where the unauthorised use of someone else's data has been concealed or given at best minimal acknowledgement. A mere student, like T. H. Cooper, who published a plant list for Sussex without making it clear that it was made up very largely of two other botanists' records, can perhaps have that form of plagiarism put down to naivety and more or less excused. But Arthur Hassall, the author of *A History of the British Freshwater Algae*, cannot be let off so lightly. Wishing to include the desmids, a group with which he had scant acquaintance himself, he tried to persuade John Ralfs, the recognised national expert on those, to pass on to him all that he had accumulated on the subject over the years. When Ralfs understandably demurred, in the absence of any assurance that his effective authorship of that section would be made fully evident, Hassall responded by making no reference at all to Ralfs' work and even had the effrontery to append his own name to certain figures that were patently poor copies of ones by Ralfs that had already appeared in print. Hassall no doubt persuaded himself that Ralfs had behaved selfishly by leaving him in the lurch. Ralfs, for his part, spoke of the affair with bitterness ever after.

Until the nineteenth century plagiarism and piracy were risks so inseparable from exposing one's work to the rough-and-tumble of a still poorly regulated publishing trade that authors had necessarily to become inured to them. But by the time that people like Cooper and Hassall were appearing on the scene the situation had altered markedly for the better, and it had become reasonable to expect that one's words or illustrations would not be reproduced without express permission. The landmark in this respect so far as natural history was concerned was a lawsuit in 1832. This was brought by a leading entomologist, J. F. Stephens, against a freelance populariser of zoology, James Rennie, accusing the latter of having plagiarised some of his ongoing part-work, *Illustrations of British Entomology*, for a similar work of his own. Stephens was the son and nephew of

naval officers and had been employed for some years in the Admiralty Office, so he was perhaps more than ordinarily a stickler for correctness in behaviour; Rennie, by contrast, was no doubt accustomed to the lighter conventions of the world of business. Whatever the rights and wrongs of the matter, the case went against Stephens, who was only saved from bankruptcy as a result by a special fund raised among his entomological sympathisers. The publicity did him no good in the eyes of the Admiralty, and contributed to ending his career there; but for the world of learning it may have served as a salutary jolt, reminding authors that copying, even if inadvertent, was now liable to be taken very seriously by the high-principled, even to potentially sacrificial lengths.

Yet another form of deceit is the publishing of a book under a misleading title. No naturalist who saw it advertised or came across it on a bookseller's shelf is likely to have guessed that Eleazar Albin's *A Natural History of Songbirds* was in the main about cage-birds (with a special section on canaries and their diseases); or that Sir John Dalrymple's *Rare and Remarkable Animals of Scotland* covered only zoophytes; or that Robert Plot's *Natural History of Oxfordshire* contained mostly topography. 'Natural history' has also repeatedly been used over the years for works whose contents are exclusively zoological.

Sometimes, though, a title can mislead to the reader's advantage, providing an unexpected bonus. Anyone who pulled down a copy of Thomas Bell's *A History of British Quadrupeds* was in for a pleasant surprise if they had failed to spot 'including the Cetacea' appended to those words. Alexander Irvine's *The London Flora* includes records from all over the southeast of England in the first part and from all over Britain in the second, while George Dickie's *A Flora of Ulster*, if less extreme in its expansionism, embraces not only that province but the counties of Leitrim and Sligo too. Going to the other extreme, E. T. Booth – hardly in a fit of modesty, surely? – chose to disguise as *Rough Notes ... three folio volumes and over a hundred colour plates ... on the Birds Observed ... in the British Islands*.

The ultimate deception of all, though, must be the inventing of non-existent works. Two of those have found their way at different times into Britain's natural history literature, in the one case in furtherance of fraud, in the other simply as a joke. The first, entitled *A List of the Birds that have been Observed to Breed in the Island of Arran, Scotland, since the year 1835*, bore the appearance of a privately printed catalogue of a kind that nineteenth-century collectors sometimes drew up. The author was named as 'Dr Martin Barry, MD, FRS', but there were no other details, not even the printer. It subsequently transpired that Dr Barry was the only item of information that was other than fictitious. A physician and embryologist of some renown, he had gone to live in Arran in the 1840s after a breakdown in health and there began forming what eventually grew

into a superb collection of birds' eggs from all over Britain. By the time the fraud was exposed (in *Ibis*, the journal of the British Ornithologists' Union, in 1863) he had been safely dead for eight years. That was not an unlikely lapse of time before a deceased person's collection was put up for sale, and the dealer, by the name of Calvert, who sent to auction in London several lots purporting to have come from this added further verisimilitude by claiming (falsely) to be acting for the executors. His purpose in concocting the printed list was to provide a false provenance for bogus specimens of negligible value that he had substituted for genuine ones in the Barry collection. Unwisely, though, to allay suspicion, he mixed the fraudulent ones with choice eggs lifted from another well-known collection that had come into his possession – but, alas for him, so choice and so well-known that their true identity was spotted by people familiar with them. Fraudulent provenances were nothing new for natural history salerooms in that era, the penalty for the dazzlingly large sums that wealthy collectors showed themselves ready to pay for prize rarities, but Calvert's fraud was seemingly unique in its elaborateness, to the extent of being dressed up in printed clothes.

The other curiosity came to light at a more recent period. In 1935 a well-known author of sporting verse published a very readable, widely reviewed book entitled *Birds Ashore and A-foreshore*, in which numerous records were credited to a work quite unknown to the then foremost authority on the bibliography of Scottish natural history, Sir Hugh Gladstone. This was *Birds of Angus and The Mearns* by a certain Alexander Moniepenne, allegedly printed in that county a hundred years earlier. Deeply intrigued, Gladstone pressed the author for more details – only to flush out an airy confession: the publication was entirely fanciful, inserted just to tease fellow bird-lovers who went in for what he saw as pompous displays of recondite learning.

But there are enough bibliographical booby traps in the natural history literature already, put there unwittingly by authors themselves, without any need to invent some. By their very nature, multi-volume works are particularly liable to contain them, but J. W. Tutt's *A Natural History of the British Lepidoptera* is perhaps the most extreme example. In theory, this was made up of 11 volumes, but only the first five and the last four ever appeared, leaving a gaping hole in the middle of the set. To heighten the complexity, those final four – final only in the numbered sequence: in fact their appearance overlapped with that of the initial five – were issued under a slightly altered title, 'butterflies' replacing the more learned-looking 'Lepidoptera' (at the behest of the publisher, in the hope of broadening the sale?), and renumbered to give the appearance that they were the start of another series entirely. This impression was strengthened by their being brought out in parts

instead of as whole volumes at a time, as previously. What is more, the numbering of the plates is fully in keeping: there were clearly meant to be 41 of those, but three in the sequence never materialised. An innocent purchaser of a set today could hardly fail to think the copy in question was multiply defective, unless apprised of the peculiar character of this work beforehand.

Authors have done even stranger things, surreptitiously. The pioneer of the study of plant geography in Britain, the intellectually fastidious H. C. Watson, is said to have made a regular practice of taking his books off the market well before each had exhausted its print, buying up the remaining stock and disposing of it to hucksters. In one case the number of copies involved was as many as 150. As the majority of his books were self-published, the practice can hardly be put down to anxiety to release capital tied up in warehousing costs. Rather, according to one of his friends, maybe echoing Watson himself, the purpose was 'to make his books scarce', for which the only logical explanation would seem to be that, as his store of data steadily grew and his understanding altered accordingly, Watson wished to prevent premature inferences drawn in his earlier work being mistaken for his latest thinking. What does seem unlikely, though, is that he followed this 'scorched earth' policy for the reason attributed to the coauthor of a work on the butterflies of India, who burnt all the unsold stock of that, it is related, because he was 'so despondent ... at his labours not being appreciated.' Watson could be as brutally honest with himself as he was all too often with everyone else, but he never gave any sign of losing confidence in the value of the project on which he was engaged for the greater part of his life.

All the same, authors must be forgiven their muddles and their quirks in view of the stress and strain so many of them undergo in not only creating a book, but, sometimes even more, in seeking to have it published. Many valuable works have been written over the years but for one reason or another have failed to complete the arduous journey and end up in print. The luckier of those have survived, half-forgotten, in libraries or archives or the cupboards of museums, waiting for the day when some benefactor will deem them worth the cost and effort involved in at last laying them before the world – for though the information they contain is likely to be long out of date by then, some may have value as benchmarks against which changes in the fauna or flora can be measured.

Yet even the works that succeed in being published do not necessarily arrive in print as their authors envisaged. Some prove too long to be a viable proposition commercially without the aid of a sizeable subsidy, or with a larger one than the funds already raised to that end permit, and have to be cut with a greater or lesser degree of severity. Others are so poorly written or so insufficiently researched that they have to be overhauled by someone else, to the

extent that they lose their original identity in substantial part. Still others require editing if the original author is no longer available to bring up to date a work that has proved too lastingly profitable to be lightly allowed to vanish; in such cases, though, the amount of textual change desirable may be vetoed by the author's family or executors, anxious for the character of the work to be faithfully preserved, as a monument to its creator.

Of all the gauntlets that a book has to run, however, none has more punishment potential than the publishing trade's eternally fragile economics. A whole range of factors over which that trade has no control is always liable to intervene and wreck plans and good intentions. In addition to those, the individual firms have their own particular set of vicissitudes to contend with: undercapitalisation, dissension between partners, loss of key staff, the luring away of long-lucrative authors. Worse still, subjects and genres are prey to publishing fashion. Though stability is prized and a solid backlist of long-term steady sellers is the recognised key to financial survival, every so often a title achieves enormous, quite unpredicted success and jolts the trade out of its settled opinions. Over the years natural history has shown a particular capacity for springing such surprises, from White's *Selborne* at the start of the nineteenth century to Keble Martin's *Concise British Flora* two-thirds of the way through the twentieth. This reflects the fact that for the general run of publishers it has always been a subject variously interpreted and but vaguely understood. Of manifestly wide popular appeal in some of its guises, it is open to penetration by purveyors of broadly conceived educational or hobbyist series or of books on country life or travel; in other guises, however, it is dauntingly technical, a minority market made up of knowledgeable enthusiasts and seen as best left to specialist firms with the necessary in-house expertise and experience.

All things considered, British naturalists have been well served by the publishing trade, at any rate for the past two and a half centuries. But some sections have inevitably been better served than others. The works that the subject has all along most *needed* have tended to be those with the least tempting prospects commercially, with the result that the market has continually had a distorting effect on its development, 'swamping' it at periods with lightweight and even seriously inaccurate reading matter while depriving it of worthy products of scholarship – or at least rendering those far harder and costlier to see into print than might otherwise have been the case. The relationship between naturalists and the world of publishing has always possessed a certain tension as a result. It is this relationship, in its various forms, and the shifts it has undergone at different periods over the years, that could be said to be the dominant theme in the pages that follow.