

A History of the Ecological Sciences, Part 26: Gilbert White, Naturalist Extraordinaire

Few British books have been as popular as Gilbert White's *The Natural History and Antiquities of Selborne* (1789, 1970). It has gone through over 200 editions and is translated into several languages (Martin 1934, Prance 1968). Although well written, style alone cannot make a naturalist extraordinary. What else does it take? One historian of biology has attempted to explain this in a long, rambling, well-documented essay (Mullett 1969), but I think one can best reach this conclusion by reading White's writings. Therefore, I include generous quotations in this part of my ecological history to entice you to delve into any edition of Selborne for yourself. Of the book's nine illustrations, only two are on natural history: a drawing of three fossil shells labeled *Mytilus*, *Crista Galli*, and a fold-out drawing of a Black-winged Stilt (*Himantopus himantopus*), which was and is very rare in England and was shot at Frinsham Pond by the pond keeper. Many editions of Selborne lack both these illustrations. His *Antiquities* is really a separate work, and *The Natural History* is commonly reprinted without it. The work is organized into letters written, first, to Thomas Pennant, and second, to Daines Barrington. Since the various editions have different numbers of pages, in references it is helpful to cite the addressee's initials, TP and DB, with the letter number, which apply to all editions. Birds are comparatively easy to observe, and White's many bird observations attracted one ornithologist to edit an edition of Selborne, with notes that especially comment on them in his book (White 1947), and Paul Foster provides a well-informed more recent edition (White 1993).

Gilbert White (1720–1793) was born in Selborne, in south-central England, and lived most of his life there. In a small, isolated village, he developed an early love of nature.

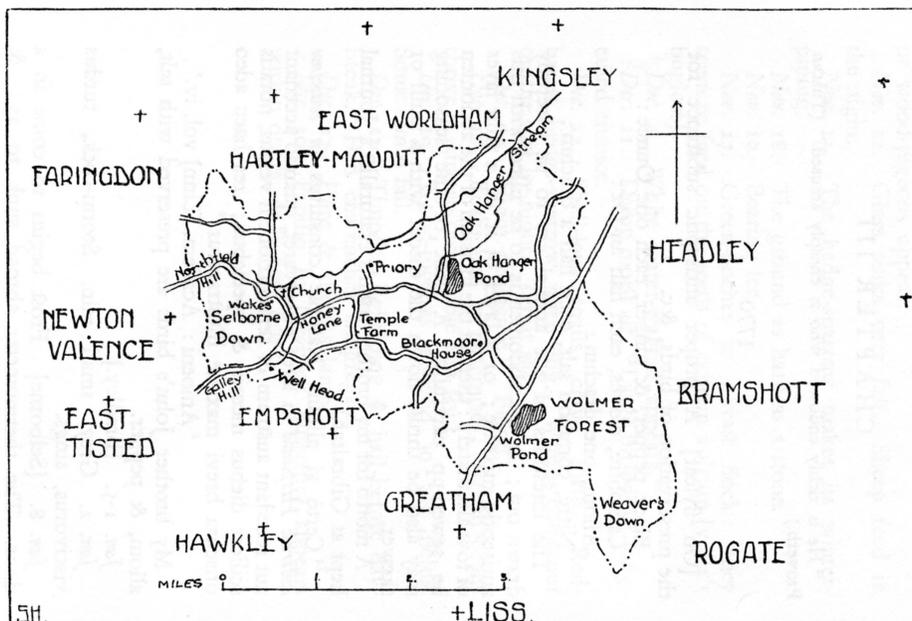


Fig. 1. Selborne Parish, with names of adjacent parishes mentioned in White's journal. White 1931:22.

His youthful recreations included hunting and fishing, and these activities (which he later abandoned, except to collect specimens) may have awakened his interest in animal behavior. Nevertheless, he followed a conventional academic path at Oxford University, leading to the clergy. Although very sociable, he never married, and time that might have gone into family responsibilities was available for other pursuits (Holt-White 1901, Mabey 1986, Foster 1988, 2000, 2004). He was a small, slender man, only five feet three inches tall. There are only two sketches of him that are certainly authentic (one is Fig. 2). He may be one of the people in two landscapes drawn by S. H. Grimm in 1776 for *Selborne*, and there are other portraits that some fans think might be of White (Chatfield 1987).



Fig. 2. Gilbert White when he graduated from Oxford, 30 June 1743. Martin 1934:16.

Hudson's *Flora Anglica* (1762), which used Linnaean nomenclature; and Benjamin Stillingfleet's translation of Linnaean dissertations, the second edition of which includes Stillingfleet's own "Calendar of Flora" for Stratton, England in 1755, to supplement the Linnaean one for Uppsala, Sweden in 1755, defended as a dissertation by Alexander M. Berger (edition 3, Linnaeus 1775:229–314, 1977). In 1766 White was inspired by these last two examples to compile his own *Flora Selborniensis*, which included similar observations on plants, and also "the coming, & departure of birds of passage, & insects; & the appearing of Reptiles" (White 1911, 1986–1989, I:188–222).

Gilbert had five younger brothers and two sisters who reached maturity. Brothers Thomas and Benjamin lived in London, where Benjamin (1725–1794) became a prominent publisher of natural history books, eventually including Gilbert's (Cornelius 1994). In 1767 Gilbert visited in London and met Thomas Pennant (1726–1797), who wrote books on birds and mammals (Mullins 1909, Urness 1974, Foster 1988:80–84, Withers 2004). Pennant recruited Gilbert to provide information for his books, and when Benjamin White printed for Daines Barrington (1727–1800) a set of weekly forms entitled *The Naturalist's Journal*, it was probably Pennant who suggested to Barrington that he send a set to Gilbert. Each form had columns for date, temperature, barometer, rain, weather, trees first leaf of the year, plants first flower, animal observations, and miscellaneous observations. Barrington had designed a form (influenced by Stillingfleet's translation of Berger's dissertation and Stillingfleet's own "Calendar of Flora") to collect phenological data before this area of research was named; at the time, it was part of natural history. The value of Barrington's forms was that they were both comprehensive and standardized. Data from observers in different places was comparable. In January 1768 Gilbert expanded the scope of his recordings beyond that of his *Garden Calendar*, using Barrington's forms, until his death in June 1793 (photographic copies of examples are in Dadswell 2003: Plate 12, Foster 1986:85, 1988: Plate 6, 1990:308, White 1931:vi;

Other paths to natural history observations, besides hunting and fishing, were gardening and books. White expanded the garden at the family home, The Wakes, to provide both food and enjoyment. In 1743 he bought a copy of Philip Miller's *The Gardners Dictionary* (1724 [with eight later editions]), and he kept a *Garden Kalendar*, 1751–1771, to track the weather and growth of plants each year (Foster 1988:49–50). His handwriting in it is so neat and clear that the manuscript has been published photographically (White 1975). On 9 April 1758 he began recording natural history observations in the *Garden Kalendar*. In 1764–1765 he acquired three works that guided his nature study: Jan Swammerdam's *Book of Nature* (English edition, 1758), primarily on insect life histories; William

the complete records are in White 1986–1989). His rainfall and humidity data at Selborne for 1781–1787 are included in *Selborne* (1789, 1970:TP 5). In May 1768 he met Barrington in London, and after their second meeting there a year later, White started their correspondence (Foster 1986, 1988:84–87).

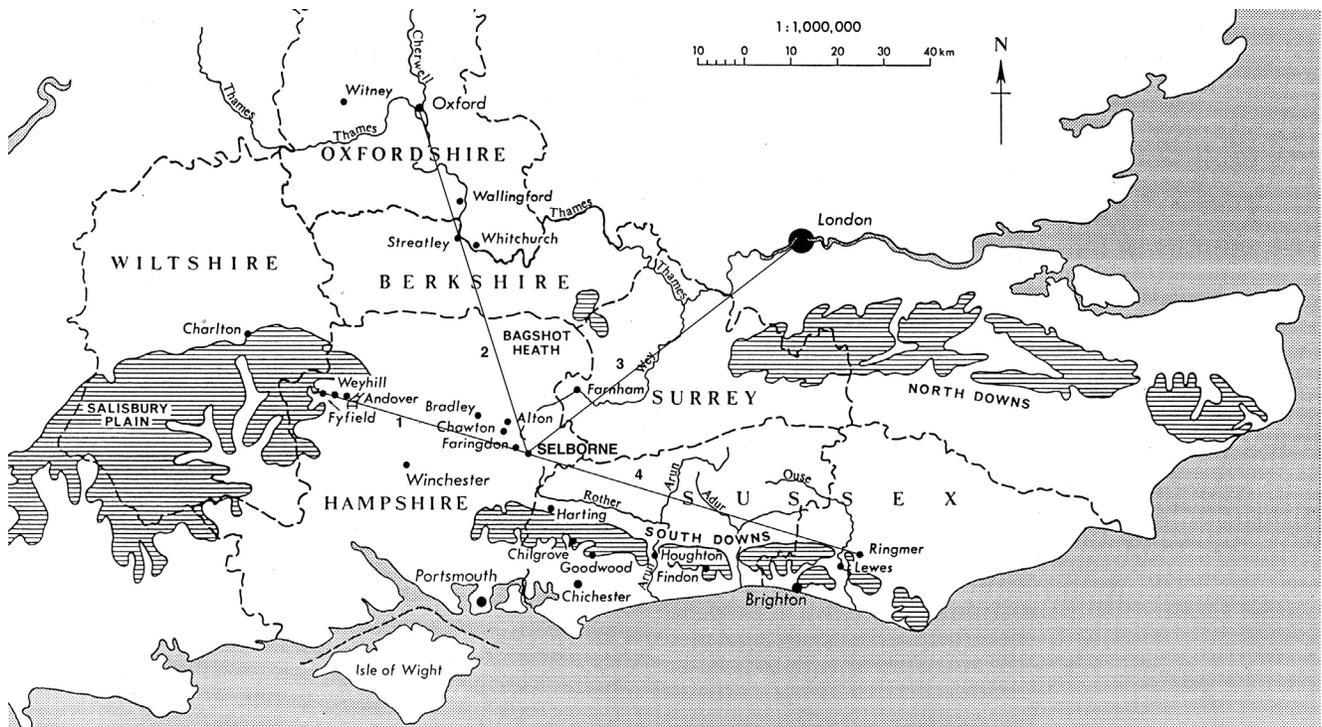


Fig. 3. Gilbert White’s travels: (1) Fyfield, to see a brother; (2) Oxford, to attend the university; (3) London, to see two brothers; and (4) Ringmer, to see a great aunt. All four are about a day’s horseback ride from Selborne. Courtesy of Paul Foster.

In 1751 Gilbert’s sister, Anne, married Thomas Barker, grandson of astronomer–mathematician William Whiston, who had succeeded Isaac Newton as Professor of Mathematics at Cambridge University. Thomas grew up in a house where science was taken seriously, and he recorded his first weather records at age 11, in 1733. Three years later he began recording daily weather records and continued to do so for the rest of his life. His annual records were published in the Royal Society of London’s *Philosophical Transactions* from 1749 to 1800, and are now collected and republished (Kington 1988:127–203). Gilbert White’s biographer (and great-grand-nephew) Rasleigh Holt-White owned Thomas Barker’s nature diary (now lost) that included, besides weather data, the first appearance and disappearance of migratory birds and the breaking into leaf and flowering of trees at his home, Lyndon, for the years 1736–1801 (Holt-White 1901, I:115). In 1768 White sent Pennant a copy of Barker’s diary for the previous 32 years, with Barker’s permission to use his data (White 1789, 1970:TP 19).

Several factors converged to stimulate White to write his natural history. In spring 1770 Barrington suggested that Gilbert write an account of Selborne’s animals (White 1789, 1970:DB 5). Furthermore, after Pennant recruited Gilbert to provide information for his books, it occurred to Gilbert that another of his brothers, John (1727–1780), who was a clergyman serving as chaplain at the Rock of Gibraltar (1756–1772), might provide information for Pennant. Gilbert wrote 14 letters to John, September 1769–March 1772, of advice on natural history studies, collecting specimens, and keeping a daily journal, and he sent John natural history books for guidance and

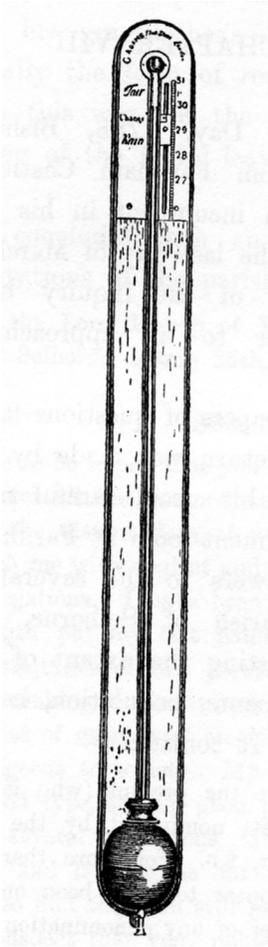


Fig. 4. White's barometer. Holt-White 1901:II, 173.

reference. In return, John sent Gilbert specimens and a copy of his journal. It also occurred to Gilbert that John could write a natural history of Gibraltar, and that he could write a natural history of Selborne to compare with John's (25 January 1771; Foster 1985a:324, 2007). And then William Sheffield, a knowledgeable naturalist, wrote four letters to Gilbert, December 1769–June 1772, which also encouraged him to publish his observations (Foster 1985b). White was also inspired by the example of Giovanni Antonio Scopoli (1723–1788), who wrote a local natural history for Carniola (now in Austria): *Annus Primus Historico-Naturalis* (1769), and he even quoted from it on the title page of *Selborne*.

Under Gilbert's tutelage, John completed his natural history of animals at Gibraltar (Foster 1988:115–128, 2007), but brother Benjamin would only publish it if there were supplemental financing, which never materialized (Foster 2007), and, excepting the introduction, it disappeared—after Gilbert had quoted from it in his own writings. However, there is also a detailed letter that John wrote to Scopoli, which is now published in English, translated from Latin (Foster 2007).

White's earliest signed publications, (anonymous notes, including weather reports, appeared in *The Gentlemen Magazine*; Sherbo 1985), are four letters, written to Barrington, 20 November 1773–29 January 1775, on the four species of swallows in England—the swift then being considered a swallow. Barrington was a member of the Royal Society of London, and after he read them at a meeting, they were published as two articles in the *Philosophical Transactions* (White 1774, 1775). These letters are reprinted with minor changes in White's *Selborne* (1789:DB 16, 18, 20, 21). The most significant change was a deletion of 11 lines on parasites at the end of his letter on the house martin (*Delichon urbica*). In *Selborne*, the letter ends with the statement that these martins “are greatly molested in their nests by fleas”(1789:DB 16). The original letter continues (White 1774:201)

...and annoyed by a large dipterous insect, with narrow subulated wings, which crawls about under their feathers, and is known by the name of hippobosca hirundinis: a species of which is familiar to horsemen under the name of forest-fly; and to some under the name of side-fly, as it runs sideways like a crab, creeping under the tails and about the groins of horses.

Thus does all the creation prey upon one another; and these birds, though insect-eaters themselves, are distressed and tormented by insects.

Hippobosca hirundinis is the Linnaean name for the martin parasite, and he named the similar one on horses *H. equine* (Linnaeus 1758:607).

Swallows seem to have been White's favorite animals, and he watched them every year from their first appearance in the spring until their disappearance in the fall. He tells us of their mating (on the wing), nest building and eggs (two clutches

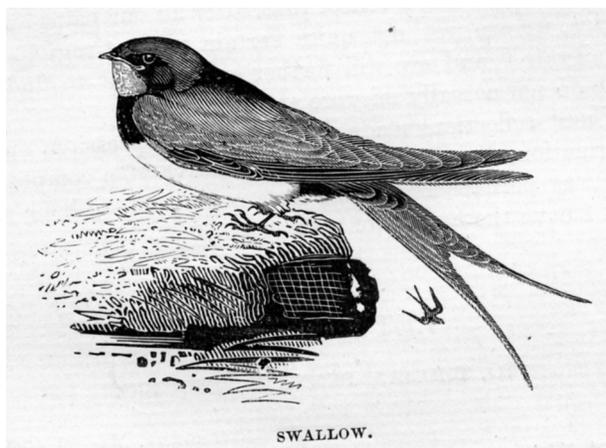


Fig. 5. (Barn) Swallow (*Hirundo rustica*). Bewick 1797. Bewick was the best animal illustrator of the time (Uglow 2007).

of 4–6 eggs for martins and swallows, but only one clutch of 2 eggs for swifts), rearing young, and social habits (sand martins were the least social). Sand martins tunneled about 2 feet into banks and laid their eggs at the end. They used the same nest several times, but then abandoned it to dig a new tunnel. He speculated that they did so because the old one became fetid and accumulated fleas. White was aware of bird migration, and his brother John’s observations at Gibraltar reinforced this awareness; nevertheless, he persisted in thinking that perhaps the late stragglers among swallows hibernated. John Ray and Mark Catesby had both cast doubt on bird hibernation (Egerton 2005:306, 2006:348), but both Pennant and Barrington still believed in it, with Barrington (1772) publishing a substantial article on the subject. (Dadswell [2003:172–176] reprints published remarks by Catesby and Barrington.) White, therefore, was cautious. He paid boys to look for hibernating swallows, without success. One White scholar devoted a chapter to White’s investigations of migration and hibernation and concluded that, “Overall, White’s records showed that hibernation could virtually be ruled out as an explanation of the comings and goings of the hirundines” (Dadswell 2003:38). However, this may only be Dadswell’s interpretation of those records, for in White’s letter to Robert Marsham, 15 June 1793, White disagreed with an anonymous letter dated 7 February in the *Gentleman’s Magazine* that rejected the torpidity of swallows (White 1887:558–559, Holt-White 1901, II:269).

Gilbert’s brother Thomas (1724–1797), who was a fellow of the Royal Society of London, published anonymously “Remarks on Oaks,” that quoted ancient and medieval authors but also included his own observations. One passage resembles brother Gilbert’s environmental thinking and perhaps shows Gilbert’s influence (T. White 1785)

Oaks grow largest on a sandy loam, where the soils of land and clay meet; on sand only, or among rocks, they are apt to be shaky; in stiff clay, or on the tops of hills, the growth is slow, but the timber is excellent. This tree, as well as most other plants, flourishes best in a situation sloping to the south-east; but its spreading roots and branches are injurious to cultivation...

Since Gilbert White was an industrious gardener, many of his observations were made from that perspective. An example is his account of the hedgehog (1789, 1970:TP 27)

Hedgehogs abound in my gardens and fields. The manner in which they eat the roots of the plantain in my grass-walks is very curious; with their upper mandible, which is much longer than their lower, they bore under the plant, and so eat the root off upwards, leaving the tuft of leaves untouched. In this respect they are serviceable, as they destroy a very troublesome weed; but they deface the walks in some measure by digging little round holes. It appears, by the dung that they drop upon the turf, that beetles are no inconsiderable part of their food. In June last I procured a litter of four or five young hedgehogs, which appeared to be about five or six days old: they, I find, like puppies are born blind, and could not see when they came to my hands. No doubt their spines are soft and flexible at the time of their birth, or else the poor dam would have but a bad time of it in the critical moment of parturition, but it is plain they soon harden; for these little pigs had such stiff prickles on their backs and sides as would easily have fetched blood, had they not been handled with caution. Their spines are quite white at this age; and they have little hanging ears, which I do not remember to be discernible in the old ones. They can, in part, at this age draw their skin down over their faces; but are not able to contract themselves into a ball, as they do, for the sake of defense, when full grown. The reason, I suppose, is, because the curious muscle that enables the creature to roll itself up in a ball was not then arrived at its full tone and firmness. Hedgehogs make a deep and warm hybernaculum with leaves and moss, in which they conceal themselves for the winter: but I never could find that they stored in any winter provision, as some quadrupeds certainly do.

Editors of one edition of *Selborne* (White 1887:91) comment that later it was discovered that the little round holes in the walks were instead the work of nocturnal caterpillars.

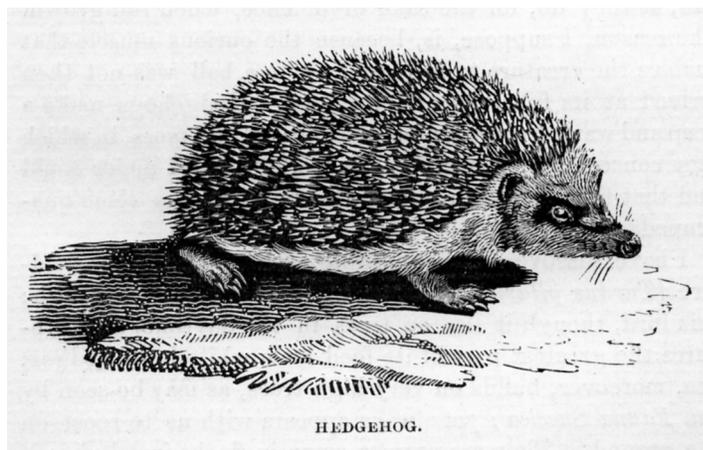


Fig. 6. Hedgehog (White 1887:91).

Although many of White's observations focus on a particular species of plant or animal, his outlook encompassed the whole environment. One of his favorite texts was Benjamin Stillingfleet's translation of Linnaean dissertations (Linnaeus 1775, 1977) that included the one on the economy of nature—Linnaeus' attempt to organize an ecological science (Egerton 2007). Sometimes White discussed a particular area, such as Wolmer Forest, 7 miles long and 2.5 miles wide, which "consists entirely of sand covered with heath and fern; but is somewhat diversified with hills and dales..." The only trees there were on 1500 acres enclosed and planted with oak, larch, and Scotch fir. The firs flourished, showing they are well adapted to the soil. In many low-lying peat bogs local people have dug out logs which they used to build their cottages. Wolmer Forest (White 1789, 1970:TP 6)

...is a very agreeable haunt for many sorts of wild fowls, which not only frequent it in winter, but breed there in the summer; such as lapwings, snipes, wild-ducks...Partridges in vast plenty are bred in good seasons on the verge of this forest, into which they love to make excursions...

Once there had been Black Grouse and red deer, and later editors (White 1887:21) reported that the grouse had been reintroduced into Wolmer in the 1800s. On the edge of the forest were three lakes—Hogmer, Cranmer, and Wolmer—in which carp, tench, eels, and perch live, "but the fish do not thrive well, because the water is hungry, and the bottoms are a naked sand" (White 1789, 1970:TP 8). However, cattle waded in the lakes in the summer to cool off and to escape flies, from 10 am to 4 pm, and they modify the lakes

During this great proportion of the day they drop much dung, in which insects nestle; and so supply food for the fish, which would be poorly subsisted but from this contingency. Thus Nature, who is a great economist, converts the recreation of one animal to the support of another!

Unlike John Ray and William Derham, whose works he read, White said little about natural theology. Although a clergyman, as Ray and Derham had been, White seems to have thought that they had already presented the arguments for natural theology. Instead, he personified "Nature" as a great economist.

An example of White's environmental thinking concerning plants is his account of fog drip (McIntosh 1958) and other aspects of forest–water relationships (White 1789, 1970:DB 29)

In heavy fogs, on elevated situations especially, trees are perfect alembics; and no one that has not attended to such matters can imagine how much water one tree will distil in a night's time, by condensing the vapour, which trickles down the twigs and boughs, so as to make the ground below quite in a float. In Newton Lane, in October 1775, on a misty day, a particular oak in leaf dropped so fast that the cart-way stood in puddles and the ruts ran with water, though the ground in general was dusty.

In some of our smaller islands in the West Indies, if I mistake not, there are no springs or rivers; but the people are supplied with that necessary element, water, merely by the dripping of some large teak trees, which, standing in the bosom of a mountain, keep their heads constantly enveloped with fogs and clouds, from which they dispense their kindly never-ceasing moisture; and so render those districts habitable by condensation alone.

Trees in leaf have such a vast proportion more of surface than those that are naked, that, in theory, their condensations should greatly exceed those that are stripped of their leaves; but, as

the former imbibe also a great quantity of moisture, it is difficult to say which drip most; but this I know, that deciduous trees that are entwined with much ivy seem to distill the greatest quantity. Ivy-leaves are smooth, and thick, and cold, and therefore condense very fast; and besides, evergreens imbibe very little...Trees perspire profusely, condense largely, and check evaporation so much, that woods are always moist; no wonder, therefore, that they contribute to pools and streams.

On the other hand, he knew (1789, 1970:DB 35) that “Lands that are subject to frequent inundations are always poor,” and he thought the reason might be because the worms that live in it drown. He suggested that earthworms,

...though in appearance a small and despicable link in the chain of Nature, yet, if lost, would make a lamentable chasm. For to say nothing of half the birds, and some quadrupeds, which are almost entirely supported by them, worms seem to be the great promoters of vegetation, which would proceed but lamely without them, by boring, perforating, and loosening the soil, and rendering it pervious to rains and the fibers of plants, by drawing straws and stalks of leaves and twigs into it; and most of all, by throwing up such infinite numbers of lumps of earth, called worm-casts, which, being their excrement, is a fine manure for grain and grass. Worms probably provide new soil for hills and slopes where the rain washes the earth away; and they affect slopes, probably to avoid being flooded.

He lamented that gardeners and farmers mistook earthworms for pests, for they actually enriched the soil. He

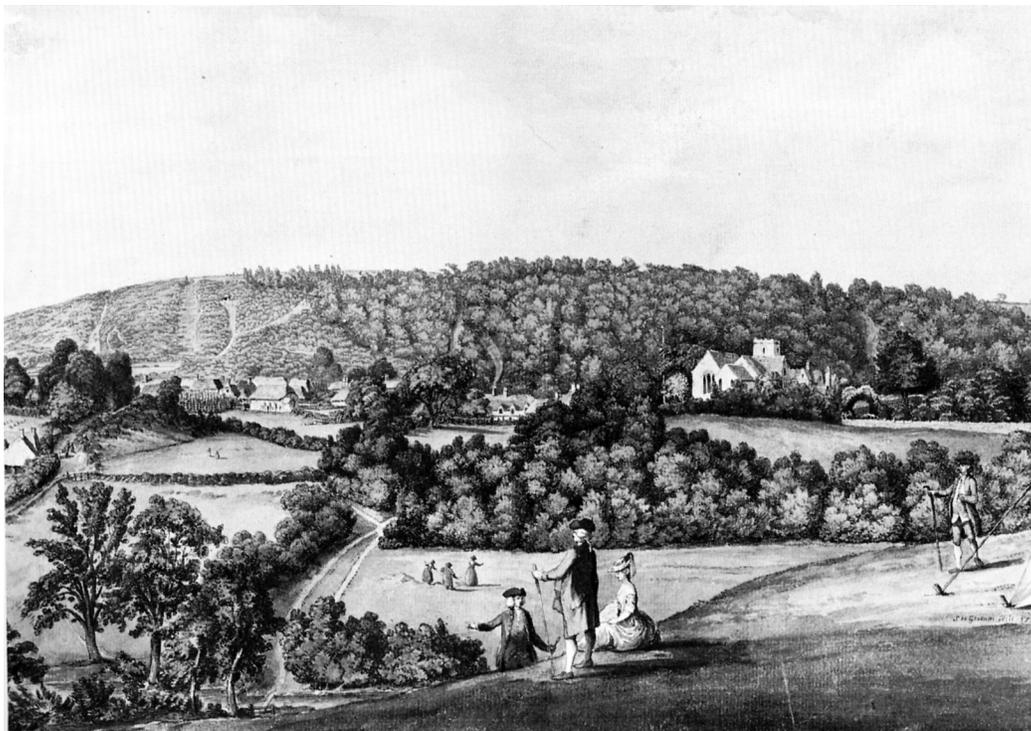


Fig. 7. Northeast view of Selborne from the Short Lythe. White 1789, 1970: frontispiece. This is a fold-out drawing, 17 × 10.5 inches (43 × 26.5 cm), which may contain a figure of White.

ended with the comment that a good monograph on them could open a large new field in natural history. Almost a century later, Charles Darwin, who admired and often cited White's *Selborne*, finally published such a monograph (1881), in which he referred to White's observations.

White was interested in the similarities and differences of similar species. He confirmed William Derham's suspicion that there is more than one species of Willow Wrens (now called leaf warblers). White distinguished three species on the basis of their notes, though he did not assign new scientific names to them; they are now named Chiffchaff (*Phylloscopus collybita*), Willow Warbler (*P. trochilus*), and Wood Warbler (*P. sibilatrix*). At first, White (1789, 1970:TP 16) was only able to collect two species, and he described their differences

No two birds can differ more in their notes, and that constantly, than those two that I am acquainted with; for the one has a joyous, easy, laughing note, the other a harsh loud chirp. The former is every way larger, and three-quarters of an inch longer, and weighs two drachms and a-half, while the latter weighs but two; so the songster is one-fifth heavier than the chirper. The chirper (being the first summer-bird of passage that is heard, the wryneck excepted) begins his two notes in the middle of March, and continues them through the spring and summer till the end of August, as appears by my journals. The legs of the larger of these two are flesh-coloured; of the less black.

He eventually collected the third, which he found (White 1789, 1970:TP 19),

*...is a size larger than the other two, and the yellow-green of the whole upper part of the body is more vivid, and the belly of a clearer white. I have specimens of the three sorts now lying before me, and can discern that there are three gradations of sizes, and that the least has black legs, and the other two flesh-coloured ones. The yellowest bird is considerably the largest, and has its quillfeathers and secondary feathers tipped with white, which the others have not. The last haunts only the tops of trees in high beechen woods, and makes a sibilous grasshopper-like noise, now and then, at short intervals, shivering a little with its wings when it sings; and is, I make no doubt now, the *Regulus non cristatus* of Ray, which he says "cantat voce stridula locustae." Yet this great ornithologist never suspected that there were three species.*

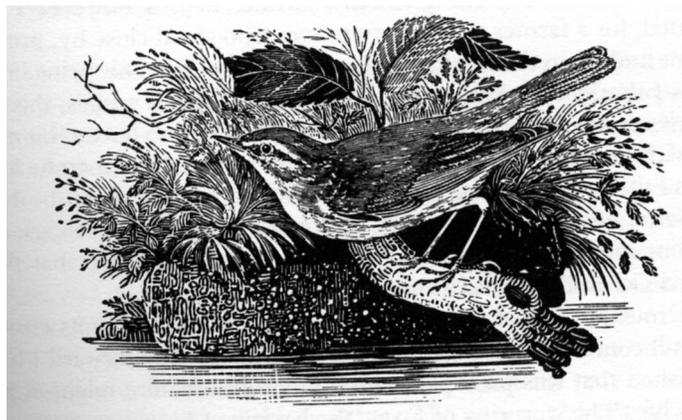


Fig. 8. Willow Wren (= leaf warbler, *Phylloscopus* sp.). Bewick 1797.

White also studied three species of crickets, to which he devoted three letters. Most familiar was the house cricket (*Gryllus domesticus*), which is fond of kitchens and, unlike the other two, is active all year. It is very thirsty, and therefore likes water and moisture. It eats food crumbs and will gnaw holes in wet woollens hung near the fire to dry. It burrows into the mortar between bricks or stones. Sometimes they become numerous enough to be pests. In summer they fly out the window of one house and into another. Cats play with them and also eat them.

Field crickets (*G. campestris*) are numerous but shy and retreat into burrows when they feel a person's footsteps. White first attempted to dig them out with a spade but either failed to get to the bottom of the holes or else inadvertently squashed them with the spade. Then he found that a grass stalk pushed into their holes brings them out. They are solitary, and when males meet, they fight fiercely. However, when picked up, they never defend themselves. They appear at the mouths of their holes about 10 March, but with only rudiments of wings, as if just emerged from a pupa, from which White deduced that adults do not always survive the winter. One summer he transplanted some of them to the terrace in his garden. They stayed for a time but gradually disappeared.

The third species had a yet different environment (White 1789, 1970:DB 48)

How diversified are the modes of life not only of incongruous but even of congenerous animals; and yet their specific distinctions are not more various than their propensities. Thus, while the field-cricket delights in sunny dry banks, and the house-cricket rejoices amidst the glowing heat of the kitchen hearth or oven, the Gryllus gryllotalpa (the mole-cricket) haunts moist meadows, and frequents the sides of ponds and banks of streams, performing all its functions in a swampy, wet soil. With a pair of forefeet, seriously adapted to the purpose, it burrows and works under the ground like the mole, raising a ridge as it proceeds, but seldom throwing up hillocks.

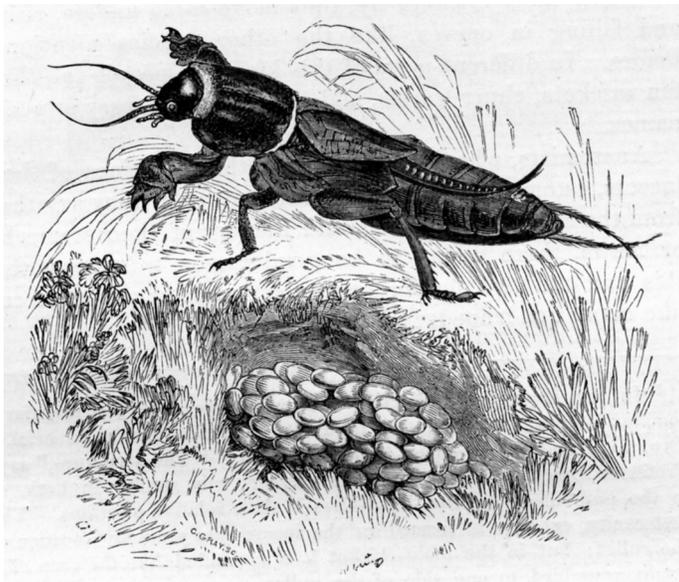


Fig. 9. Mole cricket.
White 1887:271.

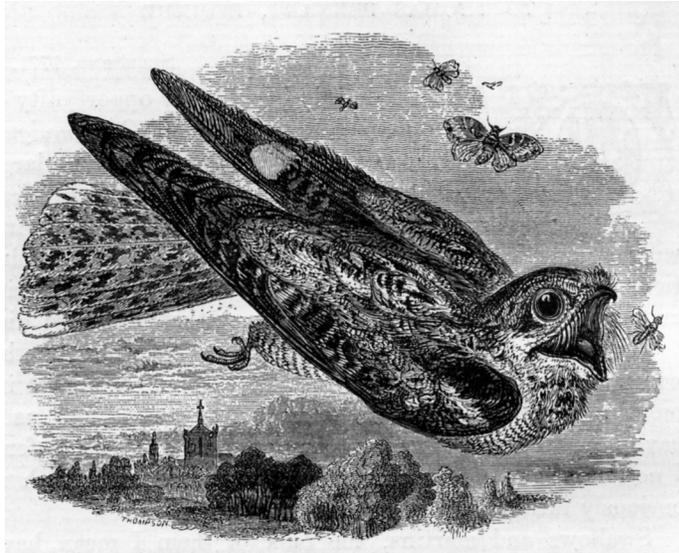


Fig. 10. Fern-owl (= nightjar,
Caprimulgus europaeus).
White 1887:114.

They are pests in gardens beside canals and also destroy cabbages, young legumes, and flowers. They come out of the ground at night and apparently fly about, since White had found them in “improbable places.” They begin to chirp about mid April and lay eggs about the beginning of May, laying nearly 100 “just under a little heap of fresh-mowed mould, like that which is raised by ants.” Anatomists find that “from the structure, position, and number of their stomachs, or maws, there seems to be good reason to suppose that this and the two former species ruminates or chew the cud like many quadrupeds!”

After publishing *Selborne* in 1789 (distributed to family and friends by November 1788), White continued to record his observations, and he continued to write letters. Although Pennant and Barrington outlived him, none of his extant letters written after 1788 are to them. Ten letters to Robert Marsham are included in a later edition of *Selborne* (1887:535–539) and reprinted, with letters to others, in *The Life and Letters of Gilbert White of Selborne* (1901, II:192–270). In the first two letters to Marsham, White conveyed his observations and fondness of beech trees

Beeches with us, the most lovely of all forest trees, thrive wonderfully on steep, sloping grounds, whether they be chalk or freestone. I am in possession myself of a beechen steep grove on the freestone, that I am persuaded would please your judicious eye; in which there is a tree that measures fifty feet without bough or fork, and twenty-four feet beyond the fork; there are many as tall. I speak from long observation when I assert, that beechen groves to a warm aspect grow one-third faster than those that face to the N. and N.E., and the bark is much more clean and smooth.

...my tall seventy-four feet beech measures six feet in the girth at two feet above the ground. Beeches seem to me to thrive best on stoney, or chalkey cliffs, where there seems to be little or no soil. Thus about a mile and an half from me to the S.E. in an abrupt field, stand four noble beech-trees on the edge of a steep, rocky ravine, or water-gulley, the biggest of which measures 9 ft. 5 in. at four feet from the ground. Their noble branching heads, and smooth rind show that they are in the highest vigour and preservation.

Besides writing letters, White took notes on all aspects of nature, and these notes are now published (White 1887:317–402). He often drew upon them in his letters. For example, in his first letter to Marsham he summarized his observations on a bird he called fern-owl, also called goat-sucker and eve-jarr (= Nightjar, *Caprimulgus europaeus*). White was anxious to counter English folklore that this species “is very injurious to weanling calves, by inflicting, as it strikes them, the fatal distemper known ... by the name of puckeridge.” In Italy, it was even accused of “sucking the teats of goats...”

To the contrary, he knew that puckeridge (White 1887:335),

...is occasioned by the Oestrus bovis, a dipterous insect, which lays its eggs along the chines of kine [spines of cows], where the maggots, when hatched, eat their way through the hide of the beast into the flesh, and grow to a very large size... Once I myself saw a large rough maggot of this sort squeezed out of the back of a cow.

Furthermore, these birds

Are perfectly harmless, and subsist alone, being night birds, on night insects, such as Scarabaei, and Phalaenae; and through the month of July mostly on the Scarabaeus solstitialis, which in many districts abounds at that season. Those that we have opened have always had their craws stuffed with large night moths and their eggs, and pieces of chafers...

His notes continue on into the fern-owls’ behavior and nesting (they arrive in early May, breed once, and lay two eggs). White contemplated writing and publishing a study on this species but did not live to do so. He left significant manuscripts, which have been published from 1795 to the present, as well as informative letters, 303 pages of which are collected in Volume 2 of Thomas Bell’s edition of *Selborne* (White 1877). Other letters have been discovered and published since 1877. *Selborne* has remained an out-of-the-way village, and The Wakes is now a Gilbert White Museum (gilbertwhiteshouse.org.uk), which displays the original *Selborne* manuscript. The garden is restored as well as possible to White’s design (Foster and Standing 2005).

Natural history observations had been made by naturalists since the ancient Greeks, notably including John Ray, Linnaeus, and Buffon, but no one had ever made such a thorough study of the plants, animals, and environment of a region as Gilbert White did at *Selborne*, and he achieved a level of precise observations and depth of reasoning that set a new standard. Testimony to White’s influence comes from a later naturalist remembering his youth (Darwin 1958:45)

From reading White’s Selborne I took much pleasure in watching the habits of birds, and even made notes on the subject. In my simplicity I remember wondering why every gentleman did not become an ornithologist.

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Acknowledgments

For his assistance, I thank Professor Emeritus of English Paul Foster, University of Chichester, UK.

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