THE ISLE OF WIGHT.[1]

NOWHERE else in this country can the geologist find, along a coast line of only sixty miles, so many varied and magnificent cliff sections of the Cretaceous and Tertiary formations, and in no British area of equal size—a hundred and sixty square miles—can the botanist collect so many species of flowering plants, as in the "Garden Isle," which has long been a happy hunting-ground for field naturalists. Its rich flora and fauna, conditioned largely by its diversified soil, has already been dealt with in various works, notably in Venables' "Guide to the Isle of Wight" (1860), and in the Hampshire section of the "Victoria County History" series.

This new "Guide" contains a large number of new records, and will at least form a good basis upon which resident and visiting naturalists may build a complete natural history of the district. There can be no question as to Mr. Morey's qualifications for the editorship of this volume, since he has worked at the fauna and flora of the island for forty years, and in producing the "Guide" has obtained the services of a capable band of systematists in the various branches dealt with. One cannot but admire his industry, versatility, and enthusiasm. He tells us, "when, nearly three years ago, I decided to bring out a work which should fairly illustrate the fauna and flora and the natural history generally of the Isle of Wight, I did so, almost literally, with fear and trembling, fully realising the difficult task that I was undertaking"; and he expresses himself content to have served as a "horrible example" if by doing so those who come after him are enabled to profit by his mistakes of omission and commission. Such modesty disarms criticism, and Mr. Morey's energy and enterprise deserve the warm thanks and congratulations of all who are interested in the natural history of the Isle of Wight.

As is the case with all compilations, the book is unequal in quality, but we feel bound to point out two defects which, though common enough in works of this kind, detract considerably from its value and interest.

A book which attempts to compress into a comparatively small space an enumeration of the entire fauna and flora of a rich district, with an account of its geology, to say nothing of articles on palæolithic implements, meteorology, and even earthquakes, must necessarily consist largely of a census catalogue of species. Lists of species are undeniably useful, and not to be despised when compiled carefully, but the ideal to be aimed at in a real natural history is surely something that shall go beyond, and in some respects be the antithesis of, a mere list. Beyond a few vague references to the bare fact that the distribution of species of flowering plants, mosses, &c., is affected by the characters of rocks and soils, we look in vain for any evidence of the scientific ecological spirit which animates such works as Baker's "North Yorkshire," Lees' "West Yorkshire," and Wheldon and Wilson's "West Lancashire," and has made them valuable contributions to the growing literature of plant ecology. The three books cited are, of course, limited

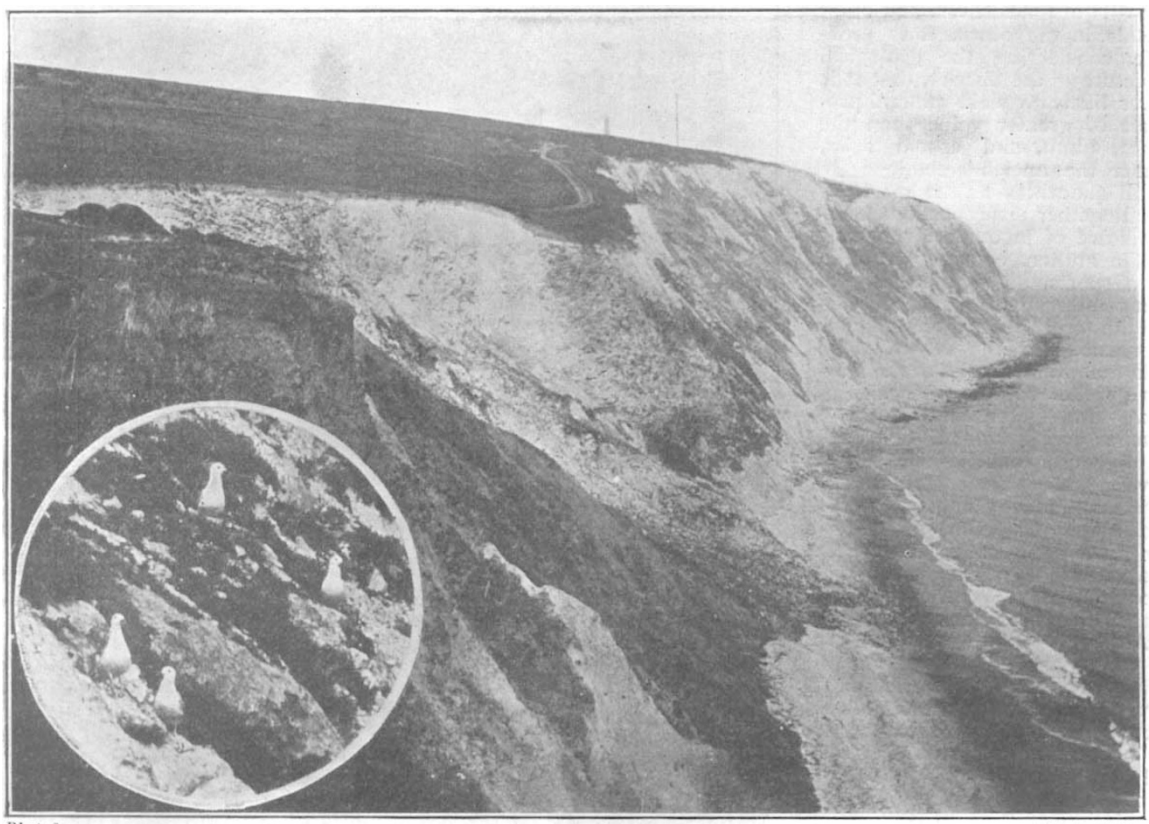

Photo.] [*H. F. Poole.*

FIG. 1.—The Culver Cliffs: Inset showing Herring Gulls at their Nests. From "A Guide to the Natural History of the Isle of Wight."

[1] "A Guide to the Natural History of the Isle of Wight." A Series of Contributions by Specialists, relating to the various branches of Natural History and kindred subjects. Edited by Frank Morey. Pp. xx+560. (Newport, I.W.: County Press; London: W. Wesley and Son, 1909.) Price 8s. 6d. net.

to the botany of each district, but a general sketch of the distribution of the flowering plants, at any rate, should have been given in this "Guide." The island would afford excellent scope for a botanical survey, on the lines of the well-known work done by Dr. Smith, Dr. Moss, and other ecologists, in various parts of Britain. It is greatly to be hoped that in a future edition of, or supplement to, this "Guide" it will be found possible to include a chapter on plant distribution, with a vegetation map of the island, and, for comparison and correlation, a geological map. This would, if carefully done, preferably by an ecologically-minded botanist residing in the district, undoubtedly enhance the value of the book and secure for it more than the local interest that attaches to a merely floristic work.

Photo.] [*H. F. Poole.*

FIG. 2.—White Stork—a rare visitor—captured at Shorwell in 1902. From "A Guide to the Natural History of the Isle of Wight."

The second suggestion we venture to make, with reference generally to books similar in scope to this "Guide," is that most of the systematists responsible for the various lists of plants and animals given in local naturalistic compilations would do well to obtain the cooperation of a biological botanist or zoologist when writing their prefatory remarks on the group of plants or animals they are dealing with. So far as this "Guide" is concerned, we refer chiefly, as examples, to the sections dealing with some of the cryptogamic plants. It would be far better for the average cryptogamic systematist to pass straight on to his list and say nothing whatever about the life-history and development of his group than to write a string of incoherent and inaccurate sentences, repeating and perpetuating long since exploded errors and mare's-nests. Lichenologists, we know, are a stiff-necked generation, but surely it is time they hesitated to record in print their refusal to recognise the dual nature of the lichen thallus, which has been fully and finally established. There can be no excuse, either, for the hepaticologist who tells us that the liverworts are "linked to the lichens" by means of their thalloid forms! The account of the relationship between the liverwort Frullania and the rotifer which sometimes occupies its pitchers is entirely imaginative. The list of hepatics (liverworts) is conspicuous by the omission of several species which are certainly found in the island, and often abundantly in places, such as *Anthoceros laevis, Scapania nemorosa,* and *Lepidozia reptans.*

The articles by Mr. G. W. Colenutt (geology), Mr. P. Wadham (fishes, mammals, &c.), and Mr. R. H. Fox (birds) stand out as refreshing oases in the arid desert of species lists, being written in a "nature-study" spirit which can hardly be said to characterise the work of the other contributors. The "Guide" is illustrated by twenty-six excellent plates, chiefly from photographs by Mr. H. F. Poole, two of which we are permitted to reproduce here. F. C.

SLEEPING SICKNESS.[1]

IT may be taken as definitely established that sleeping sickness is due to infection with a trypanosome (*Trypanosoma gambiense*), and that this trypanosome is conveyed by a tsetse-fly (*Glossina palpalis*). But if we proceed to analyse and extend this proposition we soon get into difficulties. We do not know for certain whether man is the only "reservoir" of this trypanosome, or whether monkeys and other mammals, especially native dogs, can also harbour it. Should this prove to be so—though the balance of evidence is against the supposition—it must materially affect prophylactic measures. If we consider next the mode by which the trypanosome is conveyed we find ourselves in the midst of the most conflicting evidence. It is still uncertain whether the transmission is mechanical or whether there is a cycle of development[2] of the trypanosome in the fly; facts appear to be all in favour of the first view, analogy all in favour of the latter. Nor is the question a purely academical one, for if the transmission is mechanical, then the flies are no longer infective after the infecting reservoir (man) is removed; if, however, there is a cycle of development, then it remains to be determined how long an infected fly can remain infective after the infecting source is removed.

If, again, we consider the question, Can sleeping sickness be conveyed by any other species of tsetse-fly than *Gl. palpalis*? we must confess our ignorance. The balance of evidence certainly seems to be against the possibility, but should it be shown that other species can convey the disease, then the question of prophylaxis would be even more difficult than it now is. These reports show that these are some of the questions that urgently need solution, but there are others of equal importance which arise in the immediate carrying out of prophylactic measures. They concern the fly itself, its habits, duration of its life, its breeding grounds, its food, its powers of flight, its likes and dislikes in regard to foliage, trees, shrubs, grass, &c. These questions are all important, and

[1] "Reports of the Sleeping Sickness Commission of the Royal Society." No. ix.

[2] The existence of such a cycle is now practically established by the recent work of Kleine confirmed by Bruce.