

exact breeding localities of the rarer birds, the author has striven to make his manual useful to the many Englishmen who go to Iceland every year for various purposes, and who may take some interest in its birds. Besides reviewing and recommending certain earlier accounts of the ornithology, he names a good guide-book and some maps; and he gives a brief but useful description of the plumage of most of the birds (except those that are common and universally known) and also of the nests and eggs. In the introduction, too, we find some very necessary remarks on the English habit of misspelling and mispronouncing Icelandic words. And following this, and a statement upon the law as to the close-time for birds in Iceland, are three pages of most instructive suggestions on the right pronunciation of the language. All the species on the Icelandic list (one hundred and three, exclusive of eleven the occurrence of which is doubtful, and one, the great auk, which is extinct) are clearly and accurately dealt with in the body of the work; and the native names of the birds, if any, are indicated. The volume is in truth a manual, and its handy size will enable any traveller, however light his baggage, to find room for it.

From its geographical position, far north, and on the extreme west of the Palæarctic region, the avifauna is, as might be expected, a somewhat poor and limited one. It is made up, roughly speaking, of thirty-seven resident species, twenty-seven summer migrants (making sixty-four breeding species, three of which are a little doubtful), twenty-one occasional visitors and eighteen rare stragglers. The resident land-birds number only seven, and the land-birds which come to Iceland in summer to breed only five. The fauna is poorest in Passeres, of which we in England have so many; in Iceland there are only nineteen, eleven of which are only occasional or rare visitors. There are seven birds of prey on the list, two of which are resident and one a summer migrant. The three owls are only visitors. There is one game-bird, viz. the rock ptarmigan. We should add that the author is not responsible for this attempt to analyse the Icelandic avifauna. The great auk at one time resorted to Iceland. Nowadays, perhaps, the northern wren, the great northern diver (a western species, breeding nowhere else in Europe, unless it does so in the north of Scotland), and the Iceland falcon, famous among falconers in old days, are the most interesting birds to be found there. With regard to the wren (which is protected all the year round by law) the author remarks that there can be no reasonable doubt that the great increase of domestic cats in Iceland of recent years is leading very rapidly to its extermination—a fact which bird-protectionists in England would do well to lay to heart. But Iceland is very rich in ducks and geese, sixteen—possibly eighteen—species breeding there. Perhaps from a zoogeographical point of view Iceland is most interesting as forming a link between the Palæarctic and Nearctic regions. Indeed, the number of birds which are common to the Icelandic and Greenlandic avifaunas, either as regular inhabitants or wanderers, is surprising. The manual, illustrated by three interesting plates and a map, is one of the most acceptable books which have fallen into the hands of the ornithologist for a long time.

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OUR BOOK SHELF.

Blütengeheimnisse: Eine Blütenbiologie in Einzelbildern.
By Georg Worgitzky. Mit 25 Abbildungen im Text.
Buchschnuck von J. V. Cissarz. Pp. x + 134. (Leipzig: Teubner, 1901). Price 3 marks.

THIS title recalls that which was used in 1793 by Christian Konrad Sprengel, and to him the author traces the beginning of the bionomical study of flowers and their fertilisation which forms the subject of the little book before us. Since Sprengel laid the foundations there have been many workers, notably Darwin and Hermann Müller, and many new facts have come to light, while others observed more than a century ago have been rendered more precise. Therefore the author has been led to supply an introduction to the study, simple enough for beginners, and at the same time up-to-date. His method has been to select two dozen common plants, in flower at various times of year from February to October, and to tell the story of their pollination.

Poppy, wild rose, lime, buttercup, forget-me-not, meadow cranesbill and wild radish form the first and simplest group; white dead-nettle, iris, violet, campanula, figwort, cowslip and pink introduce the student to slight complications; broom, spotted orchis, wild carrot, centaury and ling illustrate special adaptations; while flowers pollinated by the wind are exemplified by ribwort, rye, hazel, willow and pine tree. The second part of the book is occupied with a simple discussion of the parts of the flower, the modes of attracting useful visitors, and warding off those that are injurious, dichogamy, self-pollination and kindred topics.

We cannot say that there is either novelty or individuality in Worgitzky's book, but it is clear, accurate, without waste of words, and objective from first to last. The pages are adorned with decorative devices and there are twenty-five simple figures with the amount of enlargement always indicated. Our only grumble is that the author keeps so consistently to the rôle of the descriptive naturalist and does not discuss the numerous evolutionist problems which his facts inevitably raise in the inquiring mind. Of course this must have been done deliberately, but we think that the author should have given clearer indication that beyond the floral secrets which he lays bare there lie others not less fascinating, though more mysterious.

The Lepidoptera of the British Islands: a Descriptive Account of the Families, Genera and Species Indigenous to Great Britain and Ireland, their Preparatory States, Habits and Localities. By Charles G. Barrett, F.E.S. Vol. vii. Heterocera, Geometrina. Pp. 335. (London: Lovell Reeve and Co., Ltd., 1901.) Price 12s. net; large paper, with coloured plates, 63s. net.

AMONG the numerous smaller publications on British Lepidoptera, most of which are useful and interesting in their own way, Mr. Barrett's great work pursues the even tenor of its course, a Triton among minnows, and likely to hold its place as the standard work for the student of British Lepidoptera for many a long day.

The present volume includes the full life-history, as far as is known, of eighty-four species of Geometridæ considered as British, two or three more being incidentally mentioned as European species probably admitted into our British lists by error. These are placed in the three families Boarmidæ, Geometridæ and Acidalidæ, the genus *Ephyra* being included in the latter family (*Ephyra* and *Hyria* being the only genera of the last family included in this volume), while the portion of the Boarmidæ which falls into it includes species formerly classed in Guenée's families *Fidonidæ*, *Ennomidæ*, *Amphidasidæ*, *Boarmidæ*, *Hibernidæ*, *Zerenidæ* and *Ligidæ*. Guenée's subdivision of the Geometridæ was never accepted in Germany, where the number of families was reduced by