

Wollaston," with one plate, enumerating eleven butterflies and fifty-six moths. The *Micro-lepidoptera*, not here included, and which have partially been worked out by Messrs. Wollaston and Stainton, were reserved for a future paper. In addition to *Picris Wollastoni*, already mentioned, the remarkable form *maderensis* of *Gonepteryx cleopatra* (intermediate between the type and the Canarian *G. cleobule*), and the dark forms of *Satyrus semele* and *Polymnatus phlæas* are remarkable; but much more so is the occurrence of a *Deilephila* apparently identical with the Indian *D. lathyris*.

Previous to Mrs. Holt White's book, the principal sources of our information regarding the Canaries were Webb and Berthelot's "Histoire Naturelle des Iles Canariennes," in which twenty butterflies and thirty-three moths were enumerated, and a paper by Alpheraky in the fifth volume of Romanoff's "Mémoires sur les Lépidoptères," noticing fifty-seven species, of which seventeen were butterflies, several of which are figured. We may mention that the white form of *Danaüs chrysippus*, found in Teneriffe, more resembles the Indian var. *alcippoides* than the common African var. *alcippus*. An interesting species figured by Mrs. Holt White is *Euchloë charlonia*, a species previously known from North Africa and Western Asia (not North and West Africa); and among the moths we notice a figure of *Rhyperioides rufescens*, described, but not figured, by Brullé, in Webb and Berthelot's work, and several other species peculiar to the islands. Mrs. Holt White describes twenty-nine butterflies and thirty-five moths, and adds a list of twenty-seven others, chiefly *Micro-lepidoptera*, which she considered too small or obscure to be included in a popular work. However, if a new edition of her useful little book should be required, we hope she will complete it at least as regards the *Macro-lepidoptera*, and that she may also be induced to extend it to include the *Macro-lepidoptera* of Madeira.

We may add that Dr. H. Rebel has lately published a paper on the *Micro-Lepidoptera* of the Canaries, in which sixty-three species are enumerated (*Annalen d. k. k. Naturhist. Hofmuseums*, vii.; Vienna, 1893), with one plate.

The last list of the *Lepidoptera* of St. Helena was published by Mrs. T. Vernon Wollaston in *Ann. and Mag. Nat. Hist.*, ser. v. vol. iii. (1879). A large proportion of the species are endemic; the others are chiefly wide-ranging African species, several of which are common to the Northern Atlantic Islands, and even to Europe.

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THE ACTIVE PRINCIPLES OF PLANTS.

Dictionary of the Active Principles of Plants. By C. E. Sohn. (London: Baillière, Tindall and Cox, 1894.)

PROBABLY no section of organic chemistry has been more prolific of results, or has added more to the literature of recent years, than that which has dealt with the vegetable kingdom. So many investigators have been occupied with the so-called active principles of plants, that the task of keeping up acquaintance with current researches is a very laborious one, and there is little cause for surprise if much work in this field is in danger of being overlooked or undervalued. On this account the publication of a work which undertakes to gather

together so many scattered papers, and to summarise in a convenient form their most important matter, is likely to be hailed with gratitude by many workers both in organic chemistry and in vegetable physiology. The author has wisely limited himself to some definite sections of the work, and the present volume deals especially with the alkaloids, the glucosides, and the bitter principles. In dealing with the literature of these, he has first set forth the members of these groups which have been chemically examined, taking them in the order of the botanical name of the plant which yields them. In the case of each he gives an account of its botanical source, the workers who have investigated it, and the chief chemical and physical peculiarities it presents. Where, as in so many cases, one plant yields more than one of such principles, all that have been prepared from it are described successively. A summary of the more striking features of each, put in tabular form to admit of ready reference and comparison, forms the second part of the work, while a rearrangement of them, grouped according to their behaviour with various chemical reagents, constitutes Part iii. An idea of the completeness and care with which the book has been compiled may be obtained from the fact that nearly 600 of these vegetable bodies have been described, while the references to contemporary literature embrace the work of the first half of 1893.

The author deals with the various bodies described chiefly, if not entirely, from the point of view of the chemist or the analyst. The therapeutical action of the drugs is but slightly touched upon, though the chief physiological actions of each have been briefly stated in many cases. Their importance to the plants in which they occur is apparently beyond the limits that the author has set himself.

As a work of reference the new dictionary will be much appreciated. It would have been more convenient for use if each page in Part i. had been headed by the name of the plant which is being treated. This has been done in Part ii., where it seems scarcely so necessary.

It is hardly to be expected in a work of this character that the proofs should pass without some slight inaccuracy. A list of errata would no doubt rectify the statement that the name of the darnel grass is *Loliam telumentum*, as stated on p. 62.

The botanist will regret that the author did not include in the scope of the work the vegetable enzymes or ferments which play such an important part in vegetable physiology. They are not very numerous, and would well have repaid inclusion. The only exception made is Papanin, to which a few lines on p. 76 are allotted.

OUR BOOK SHELF.

Forschungsberichte aus der Biologischen Station zu Plön. By Dr. O. Zacharias. Theil 2, pp. 1 152. Two plates and a map. (Berlin: R. Friedländer and Sohn, 1894.)

THE second annual report from this station contains the additions made during last year to a knowledge of the fauna, flora, and physical conditions of the Plöner See, prefaced by a geological and hydrographical paper by Dr. Ule. Lists of the Diatoms are furnished by Count Cstracane and Prof. Brun. A case of "the breaking of the meres," caused by great swarms of *Rivularia (Gloio*