

two most important maladies of that crop. That the viewpoint of the author is that of parasitology rather than pathology is further shown by the omission of any discussion of the physiology of disease. The very brief appendix chapter on physiology has no relation to the rest of the book.

From the standpoint of the lay reader it is feared that the space devoted to remedial measures is in most cases not sufficient, nor the recommendations as definite and specific as the needs of practice require.

The large number of minor diseases mentioned without adequate description will also confuse the inexperienced student.

Some more serious errors occur. The reviewer knows of no warrant for the statement on page 445 that *Microsphaera alni* practically destroys the pecan crop in the south in certain years. This fungus is one of the least harmful of the pecan parasites. Stigmonose of carnation is not mentioned while there is a reference to a more obscure bacterial disease. The discussion of mosaic disease of tobacco and tomato would be cleared by including Woods's results.<sup>1</sup>

Absurdly large losses are attributed to cotton anthracnose in Georgia, and the injury to tomatoes from *Phytophthora* is overstated. The description of Bordeaux injury is incorrect, as is also the statement that blossoms are killed and the lives of bees endangered by spraying with Bordeaux.

All workers in plant pathology should possess this book and it will be useful to farmers, fruit growers and all who are interested in growing plants. There has long been urgent need for a treatise on American plant diseases adapted to general readers, in which the widely scattered and often unobtainable recent publications should be summarized. This book is intended to meet this need.

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*Preliminary Report on the Peat Deposits of Florida.* By ROLAND M. HARPER. Third Ann. Rept. Fla. Geol. Surv., 1910, pp. 197-375, pl. 16-28, tf. 17-30.

<sup>1</sup> Bulletin 18, Bureau of Plant Industry, 1902.

The state of Florida because of its flatness, its abundant ponds, lakes and swamps, its ample, well-distributed rainfall and the absence of sediment-laden streams, affords exceptionally favorable conditions for the formation of peat, and the present report is a monumental disproof of that ancient and persistent fallacy that peat is formed only in high latitudes.

For purposes of discussion the state is divided by the author into fourteen more or less natural divisions based chiefly upon topography and vegetation, and these are shown on a sketch map. The varied swamps of the state are elaborately classified, more than thirty types being enumerated and described in more or less detail. The more common plants of each are listed in the order of their abundance.

A few pages are devoted to fossil peat. Numerous analyses of peat samples are given and there is a chapter upon the utilization of peat. This is followed by a reliable systematic catalogue of Florida peat-forming plants and the report is concluded by a bibliography and a good index.

The report, as a whole, is well done and excellently illustrated by 13 plates and 14 text-figures. While it is confessedly superficial, it should be remembered that the economic development of Florida at the present time would hardly warrant the investment of the large sum of money necessary for an exhaustive study of its peat deposits. From the commercial view point the present report is surely ample enough to point the way to a utilization of the more important peat deposits and those which are favorably situated for exploitation.

Dr. Harper approaches the subject from the view point of the plant geographer, and it is this aspect of the report which has the most scientific merit and which will occasion the widest interest. A more intensive study and a much fuller treatment of the flora would have been desirable from the standpoint of the botanist, but for the reasons mentioned above such a study was not practicable.

The report is weak in its discussion of fossil peat, only two or three occurrences being briefly mentioned. It is very probable, however, that there are no deposits of this sort in the state which are not too small or too deeply buried to be of commercial value. At the same time, the reviewer's experience in the southern states shows that Pleistocene or older peats are more wide-spread, if not more extensive individually, than recent peats, and their botanical records are often of the greatest value. For example, such a deposit just across Perdido Bay from Florida contains not only ancestral forms of *Nyssa*, *Hicoria* and live-oaks, but abundant remains of the genus *Trapa*, which is unknown in the existing flora of the western hemisphere.

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#### NOTES ON ENTOMOLOGY

AMONG the recent parts of the "Catalogus Coleopterorum" are part 19—Staphylinidæ (1), by A. Bernhauer and K. Schubert; part 20—Aphodiinæ, by A. Schmidt; 21—Gyrinidæ, by K. Alwarth; 22—Tenebrionidæ (2), by H. Gebien; 23—Cleridæ, by S. Schenkling; 24—Histeridæ, by H. Bickhardt; 25—Cebriionidæ, by K. W. von Dalla Torre, and 26—Scraptiidæ and Pedilidæ, by M. Pic.

A NEW French entomological journal is *Insecta, Revue Illustrée d'Entomologie*, published by the entomological station of the faculty of sciences of Rennes, F. Guitel, editor. It is a monthly, and the first number contains articles on orthoptera, coleoptera and economic entomology; all the systematic articles are illustrated.

THE peculiar larval cases of the Cryptocephalidæ and the remarkable larvæ of the Cassidæ with their highly modified tails have always been entertaining subjects with coleopterists. Mr. Karl Fiebrig has added greatly to this interest by his article on these insects.<sup>1</sup> The life history of a number of South Amer-

<sup>1</sup>"Cassiden und Cryptocephaliden Paraguays, ihre Entwicklungsstadien und Schutzvorrichtungen," *Zool. Jahrb. Supp.*, 12, heft 2, pp. 161-264, 5 pls., 1910.

ican species is given more or less completely, and the plates (partly colored) illustrate many details of structure.

MR. A. M. LEA is the author of an interesting article on the beetles occurring in ants' nests in Australia and Tasmania.<sup>2</sup> Although the paper is a systematic one, there are notes on the habits and occurrence of many of the species. Most of the species belong to the Pselaphidæ; many are new; there are 23 species of *Articerus* and 14 of the curious long-legged Histerid—*Chlamydopsis*. A new family is based on a new genus, *Tretothorax*, placed between the Rhysodidæ and Cucujidæ; the mouth-parts are entirely concealed by the broad mentum, the hind tarsi four-jointed, the others five-jointed; it is a slender insect, with short and broad antennæ.

THE first part of the work on the aquatic flies of Germany is issued, the author being Dr. K. Grünberg.<sup>3</sup> This part includes all the diptera with aquatic larvæ except the Chironomidæ, which will be treated in the second part. There are synoptic tables to the genera and species and in many cases to the genera of the larvæ as far as known. Since many of the genera and a number of the species also occur in the United States, the book will be of considerable use to Americans. The arrangement of the Culicidæ is that generally followed a few years ago.

THE twenty-fourth lieferung of "Das Tierreich" is on the hymenopterous gall-flies (Cynipidæ), and is by Dr. K. W. von Dalla Torre and Professor J. J. Kieffer; 891 pages, 420 figs. About 1,200 species are treated; the genera are used in a broad sense, many recent segregates being sunk as synonyms, or subgenera. Tables are given for the galls of the old and new world. In the back is a list of genera, with references, derivation and originally included species.

<sup>2</sup>"Australian and Tasmanian Coleoptera Inhabiting or Resorting to the Nests of Ants, Bees and Termites," *Proc. Roy. Soc. Victoria*, XXIII., pp. 116-230, 3 pls., 1910.

<sup>3</sup>"Die Süßwasserfauna Deutschlands," Heft 2A, Diptera, Jena, 1910, pp. 312, 348 figs.