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SCIENTIFIC BOOKS.

British Museum (Natural History). Second Report on Economic Zoology. By FRED. V. THEOBALD, M.A.

The author, who is vice-principal and zoologist of the Southeastern Agricultural College, and lecturer on economic entomology to Swanley Horticultural College, in England, has carried on the whole of this work, and drawn up the report as printed. It contains a large part of the information furnished by the director, Professor E. Ray Lankester, to the board of agriculture and fisheries, between November, 1902, and November, 1903, besides the replies given by the zoological department to other correspondents in connection with economic zoology, as well as special notes and some longer papers dealing with the subject. This makes a volume of nearly 200 pages of preeminently economic literature, relating to subjects of the utmost importance to the husbandman, not only in England, but throughout the British colonies as well. It is a very creditable report, from both the practical and the scientific point of view, and exhibits on the part of both author and director a sincere desire to enlarge its usefulness. This is witnessed by a number of cases where Mr. Theobald has been able to make some personal investigations and experiments, the results of which are given and serve to add materially to the economic value of the volume. It will prove of interest to American entomologists in a number of ways, as subjects of applied entomology in British colonies overlap similar subjects of investigation in the United States. Thus the Mexican cotton-boll weevil, cotton-boll worm, American fowl tick (*Argas americanus* Packard), Mediterranean flour moth, pear midge, wooly aphis (which our British cousins term the American blight) pea weevil, hog louse, sheep scab, cabbage root-fly, larch and spruce aphis, willow scale, ox warble fly, liver fluke in sheep, rose aphis, grain weevil, and the sheep nasal fly are all of them cosmopolitan pests, and anything pertaining to them is of equally general interest, and all receive attention in this report, together with suggestions for the best means of prevention or extermination.

Mr. Theobald has been able to experiment with arsenate of lead for codling moth, and found that it is as effective in England as it is in America; besides he has found that while fruit growers can not combine Paris green, Bordeaux mixture and paraffin emulsion, they can do so with arsenate of lead substituted for Paris green, and besides combine with quassia washes, thus securing a wash that will combine two chief insecticides and a fungicide.

The introduction of beneficial lady beetles comes in for its share of attention, and there is much encouragement in reading of the inquiries that have been received from not only hop growers but fruit growers. Surely, if some of the aphis-eating lady beetles that the writer observed in the gardens about Hobart, Tasmania, a number of years ago, feeding on these insects, could be colonized in the United States, there might be considerable benefit derived from them, and there is no reason to suppose that the results would differ in England.

While not of vital importance to the American entomologist or fruit grower, it is inter-

esting to know that some of the ground beetles attack the ripening strawberries in England, precisely as do similar insects with us, and it is especially interesting to learn that good results have been obtained by sinking small 'pudding-basins' in the soil between the rows of strawberries and baiting the beetles with lights and sugar water. It is also of interest to us to know that *Byturus tomentosus* attacks the raspberry in England precisely as does its congener, *B. unicolor,* in America.

The volume gives every promise of meeting a demand among the agricultural classes for just this sort of helpful literature, but since it was received we have been surprised and pained to learn that continuance has been made impossible from the fact that the Royal Board of Agriculture has refused to grant funds for publication of future volumes.

When we recall that, for almost a quarter of a century, the late Miss Eleanor A. Ormerod carried on this work and published annually her valuable and painstaking reports, all at her own private expense, from which this board of agriculture made constant and copious abstracts, not always with too scrupulous credit, and now this same body refuses to contribute the mere pittance to enable Professor Lankester and Mr. Theobald to continue the work, we are forced to admit that our British (no, English) cousins have some characteristics that we find it hard to comprehend. However, the apple growers of the United States, Canada and Tasmania, who keep up with the times, will doubtless continue to furnish England with apples at profitable prices, and, as they jingle good British gold in their pockets, they will mentally smile at the little bigness of the Royal Board of Agriculture, which body seems inclined to further assist by a continuation of the conditions most favorable for future commercial transactions in fruit, etc., between these countries and England. F. M. Webster.

SOCIETIES AND ACADEMIES.

THE CHEMICAL SOCIETY OF WASHINGTON.

A special meeting of the Chemical Society of Washington was held on Wednesday April 6, 1904, at eight o'clock P.M. in the chemical lecture hall of the Columbian University. The meeting was addressed by Dr. Charles Baskerville, of the University of North Carolina, who after being introduced by the president spoke upon the following subjects:

Geo. F. Kunz and Charles Baskerville: 'Kunzite and its Unique Properties.'

Chas. Baskerville and L. B. Lockhart: 'Cause of Radio-activity.'

Chas. Baskerville: 'Thorium, Carolinium, Berzelium.'

The speaker exhibited specimens of kunzite and described some of its peculiar properties. In regard to the cause of radioactivity he called especial attention to the observation that all minerals which have the property of becoming phosphorescent under the action of radium rays, contain the element helium. The possibility was suggested that there is a relationship between the emanations of radioactive bodies and helium. In regard to the last subject on the program the speaker entered into greater detail, from both the historical and the experimental side of the question. He described the work which has occupied the attention of himself and a large number of assistants for the past ten years.

At the conclusion of the address some experiments were shown and specimens of radium of different degrees of activity were exhibited.

The 150th regular meeting of the Chemical Society of Washington was held Thursday evening, April 14, 1904, in the assembly hall of the Cosmos Club.

The first paper on the program, entitled 'The Feldspars—The Relation between their Composition and Certain Physical Properties,' was presented by Dr. E. T. Allen. An abstract of this paper has already been furnished Science for publication.

The second paper on the program, entitled 'Solubility of Gypsum in Solutions of Potassium Sulphate and Sodium Sulphate,' by F. K. Cameron and J. F. Breazeale, was presented by Dr. Cameron. The authors showed that at 25° C. with increasing concentration of potassium sulphate the solubility of calcium sulphate at first falls from 2.126 gms. $CaSO_4$