

BOOK NOTICES.

THE TAXONOMIC VALUE OF THE ANTENNÆ OF LEPIDOPTERA. BY DONALDSON BODINE, TRANS. AMERICAN ENTOMOLOGICAL SOCIETY, XXIII., PP. 1-56, PLATES I.-V., 1896.

Mr. Bodine finds good characters in the finer external structure of the antennæ, especially the sculpturing and the distribution of the different types of sensory hairs. Prof. Comstock's suborders are abundantly confirmed. Not only does Mr. Bodine find that the antennæ of *Hepialus* and *Micropteryx* separate them sharply from all the frenatæ, but he considers the jugatæ even more nearly allied to the *Trichoptera* than to the other Lepidoptera. Mr. Bodine does not attempt a rigid classification of the frenatæ on antennal characters which would have been desirable; but draws attention to a number of special affinities. The only one of these which is at all disturbing to the most recent views is that which implies a close relationship between the *Sphingidæ* and *Sesiidæ* (p. 36). In spite of the close similarity in structure of the antennæ, I do not think that this view which derives the *Sphingidæ* from the *Sesiidæ*, and therefore from the Tineids, will obtain. There seem to be too many objections on other grounds. HARRISON G. DYAR.

THE CRAMBIDÆ OF NORTH AMERICA, by C. H. Fernald, A. M., Ph. D., Massachusetts Agricultural College, 1896.

This little book of less than one hundred pages is really an admirable monograph of this family of Grass-moths. In the introduction, the author briefly relates the injury that is often done by these insects to grass crops, and mentions some of the natural enemies that keep them in check. He then gives an historical account of the family in the writings of Entomologists, and after a chapter on the external anatomy, proceeds to give descriptions of the genera and species, including the preparatory stages as far as known. The synoptical tables of genera and species are excellent, and afford a ready means of identifying a specimen when made use of in connection with the clear and concise descriptions and the beautiful illustrations. Besides a few wood-cuts in the text, there are three plates depicting the anatomy and wing venation of the family, and six exquisite coloured plates of the species. We trust that collectors will now be induced to study this family, as the way has been made so easy for them, and then be encouraged to investigate other families of Microlepidoptera.

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