

INSECTS AFFECTING DOMESTIC ANIMALS.¹

THIS work is one of the most recent of the many valuable publications on economic entomology for which we are indebted to the Department of Agriculture of the United States, and is a well-printed and well-illustrated volume of about 300 pages, giving, firstly, an enormous amount of useful information on the histories and means of prevention of insects injurious to wild and domesticated animals, and also to man. Following on this are about sixty pages devoted to the wingless parasites, classed scientifically in the sub-order *Mallophaga* more shortly here as "biting lice"; and a further division, of about twenty-five pages, gives under the heading of *Arachnida* some of the most important representatives of the "mites, ticks, scab insects, mange insects, &c."

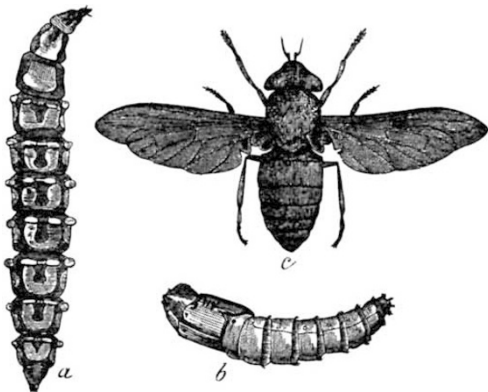
The value of the book is much enhanced by the excellent supply given of explanatory adjuncts, including in these a very full table of contents, with number of page bracketed to name of each insect or parasite; also an introduction dealing mainly with points of entomological classification, distribution of the pests, as to the divisions of mammals, birds, &c., affected by them, and "Effects of Parasites on the Host, &c."

The body of the book is followed by "A List of Parasites according to Hosts"; several pages with titles of works more especially bearing on the infestations previously entered on, together with the names of their authors, and a good index completes the useful volume.

In the "letter of transmittal" of the work to the U.S. Secretary of Agriculture, it is noted by Dr. L. O. Howard, Entomologist to the Department, that "the Report will form an excellent text-book of the subject, and is a work which in the opinion of the writer should be in the hands of all stock raisers." This, of course, refers primarily to stock raisers of the United States; but even on our side the Atlantic, from the plainness of the descriptions, both of infestations and remedies, the information will be of much practical use, and also as a scientific as well as practical manual should be in the hands of all our economic entomologists.

The book may be considered as in some degree a legacy, or posthumous contribution by the late Prof. Riley to the work of economic entomology, which he had so much at heart, as we are told in the "Prefatory Note" that the report was originally planned in 1885 as a conjoint work with Dr. C. V. Riley, and it is matter of congratulation that the plans have fallen in their completion into such very well-qualified hands as those of Prof. Osborn.

The accounts of the infestations consist, for the most part, of plainly-worded descriptions of the insects (suitable for general

FIG. 1.—*T. atratus*.

use), with notes of habits, distribution, or other points of interest, and measures of prevention and remedy. The figures are clear and good, and that at p. 61, of "The Black Gad Fly" (*Tabanus atratus*), after Prof. Riley, gives a good example of method of representation of the insect in all its stages (Fig. 1). The

¹ "Insects affecting Domestic Animals: an Account of the Species of Importance in North America." By Herbert Osborn, Professor of Zoology and Entomology, Iowa Agricultural College, Ames, Iowa. Bulletin No. 5, New Series, U.S. Department of Agriculture, Div. of Entomology. (Washington: Government Printing Office, 1896.)

figure at p. 118, of a cow's horn with the base covered with the clustering masses of the "horn fly" (*Hematobia serrata*), gives a guide to the appearance of the infestation *in situ*, unmistakable by the most superficial observer (Fig. 2). A single extract from

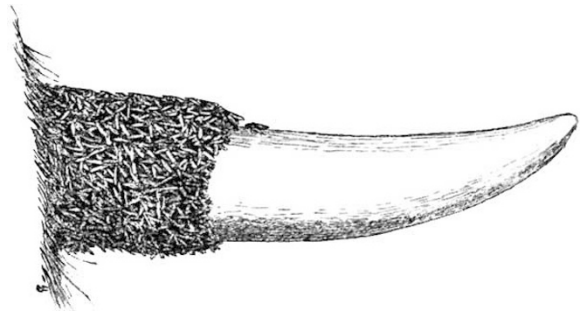


FIG. 2.—Infested cow's horn.

the table of contents may serve as a specimen of the completeness with which the work is given.

"Family SIMULIIDÆ (black flies, buffalo gnats). Losses from buffalo gnats (p. 32)—Life-history and habits (p. 33)—Preventives (p. 36)—Remedies for the bites (p. 37)—Natural enemies of buffalo gnats (p. 38)—Descriptions of species with notes on their habits (p. 38)—The Columbaez midge (p. 38)—*Simulium ornatum* (p. 39)—The black fly (p. 40)—The Southern buffalo gnat (p. 41)—The Turkey gnat (p. 52)—The Western buffalo gnat (p. 55)—*Simulium piscicidium* (p. 56)—*Simulium canescens* (p. 57)—*Simulium rivulara* (p. 57)—*Simulium* sp., in Brazil (p. 57)—*Simulium venustum* (p. 57)—*Simulium* sp., near Washington (p. 58)—*Simulium pictipes* (p. 58)." E. A. O.

THE ENGWURRA, OR FIRE CEREMONY OF CERTAIN CENTRAL AUSTRALIAN TRIBES.¹

AMONGST certain tribes inhabiting the centre of Australia, the last of the initiation ceremonies through which every man must pass before he is fully admitted to all the sacred mysteries of the tribe, takes the form of a series of what may be called ordeals by fire. Some such ceremony is known to us to exist amongst the Urabunna tribe, in the neighbourhood of Lake Eyre; in the Arunta tribe, which extends across the centre of the continent to about seventy miles north of the Macdonnell Range; and also in the Ilparra and Warramunga tribes, who extend at least two hundred miles still further to the north.

We cannot fully translate the term Engwurra, or Urrupulla, by which the rite is known in certain parts, but each of them is formed in part of the word *urra*, which means fire. The Arunta natives say that the ceremony has the effect of strengthening all those who pass through it. It imparts courage and wisdom, makes the men more kindly-natured, and less apt to quarrel; in short, it makes them *ertwa mürra oknirra*, words which respectively mean, in the Arunta tongue, "men, good, very, or great."

Evidently the main objects of it are, firstly, to bring the younger men under the control of the elders, whose commands they have implicitly to obey; secondly, to teach them habits of self-restraint and hardihood; and thirdly, to show to the younger men who have arrived at mature age, the sacred secrets of the tribe, especially those which are associated with the totems.

The Engwurra is the fourth of the initiatory rites through which every Arunta native has to pass. Of two of the three earlier ones the details have already been described by one of us,² and, stated briefly, the ceremonies are as follows. At the age of about ten or twelve the boys are taken to a spot close to the main camp, where the men and women assemble. Whilst

¹ The paper, of which this is an outline, was read before the Royal Society of Victoria, in April, by Prof. Baldwin Spencer and F. J. Gillen, Sub-Professor of Aborigines, Alice Springs, South Australia.

² F. J. Gillen, in "Report on the Work of the Horn Exped. to Cent. Aust." Part iv., "Anthropology," p. 169. Plates 16, 17, 18.