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## Parasites: a treatise on the entozoa of man and animals including some account of the ectozoa

London, J. & A. Churchill, 1879 https://www.biodiversitylibrary.org/bibliography/22473

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## PARASITES;

A TREATISE ON THE

## ENTOZOA OF MAN AND ANIMALS,

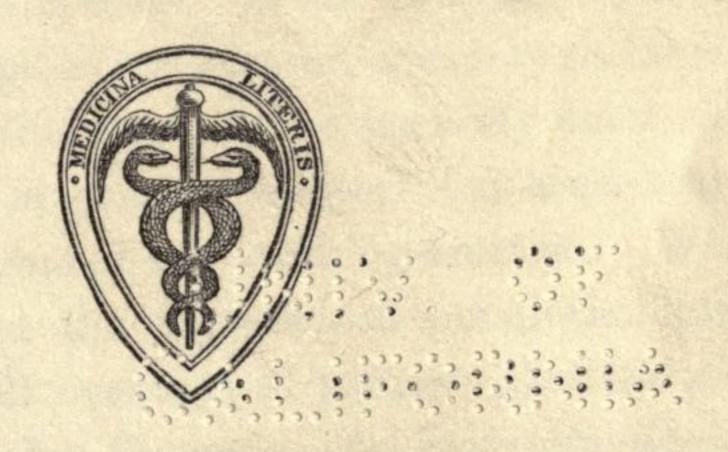
INCLUDING

SOME ACCOUNT OF THE ECTOZOA.

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## LONDON:

J. & A. CHURCHILL, NEW BURLINGTON STREET. 1879.

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VII. CRUSTACEAN PARASITES. CRUSTACEA (part of).—A large number of species belonging to various well-marked sections of this great class of Invertebrates are parasitic in their habits, most of them being comprised in the so-called haustellated group. They are familiarly known to zoologists as Epizoa. As this latter term implies, they are strictly ectozoal in character, most of the species victimising fishes by attaching themselves, not only to the general surface of the body, but also to the eyes, and especially to the gills or branchiæ. The species for the most part belong to the families Lernæidæ, Caligidæ, Dichelestidæ, and Argulidæ. In this category must likewise be placed two other families belonging to the so-called isopodous section of edriophthalmatous crustaceans. These are the Cymothoidæ, which attach themselves to the tails of fishes, and the Bopyridæ, which occupy the branchial cavity of shrimps. The nature of this work precludes any detailed notice of the numerous members of this section.

VIII. INSECT PARASITES. INSECTA (part of).—The insects, properly so called (that is to say, arthropodous, evertebrated creatures, with six legs), are many of them essentially parasitic in their habits. The most important of these are "bots" and other larvæ or maggots of various flies (Diptera). The varieties of lice are also included in this group. Some few of the insect parasites are strictly entozoal in habit, at least for a part of their lifetime, being previously attached externally for a short period only. Most of the forms are essentially ectozoal. A very large number of insect tormentors, although deriving nourishment from their victims, attach themselves to the animals for so short a time that they cannot be classed as parasites under the ordinary acceptation of the term. As examples of the so-called free parasitism, the autumnal flies (Tabanidæ) and Stomoxys may be cited. Although embracing but few strictly parasitic forms we have the following :-Estridæ, Hippoboscidæ (with Melophagus), and Nycteribiidæ. In regard to the maggots of Muscidæ and Sarcophagæ, some of them are parasitic on animals and man, whilst others are parasitic upon insects themselves. The larvæ of Conopidæ attack humble-bees internally. Those parasitic insects, properly so called, which, like certain of the crustaceans, are sometimes spoken of as epizoa, comprise three well-marked families. Thus, we have Pediculidæ (the source of lousiness), Philopteridæ, and Liotheidæ. Both of the latter embrace numerous