

TRANSACTIONS
OF THE
ROYAL SOCIETY OF NEW ZEALAND

ZOOLOGY

Vol. 6

No. 9

APRIL 14, 1965

The Alimentary Canal of *Anisolabis littorea* (White) (Dermaptera: Labiduridae), with Special Reference to the Peritrophic Membrane

By E. T. GILES

[Received by the Editor, July 30, 1964.]

Abstract

THE alimentary canal of *Anisolabis littorea* (White, 1846) (Dermaptera: Labiduridae) is described macroscopically and histologically. The organ, which is generalised in structure and typical of Orthopteroid insects, is almost straight; the only coil lies in the anterior intestine. There are no enteric caeca; an undivided fold of the midgut probably represents them. The anterior intestine is not divided to ileum and colon. Considerable attention is paid to the peritrophic membrane, including electron micrography of several regions. The long thread-like malpighian tubules are arranged in four groups. They are shown to open into the extreme anterior end of the hindgut. Comparisons are made with the alimentary canal of the European earwig, *Forficula auricularia* L.

INTRODUCTION

THIS paper on the alimentary canal of *Anisolabis littorea* (White, 1846), the endemic coastal earwig of New Zealand, is the last of the present series, earlier papers having dealt with the biology, head capsule and antennal growth, and the male and female reproductive systems (Giles, 1952, 1953, 1961, 1961a). The general morphology of the gut, including its histology, is described, but cellular activity in relation to feeding is not dealt with. This would be a profitable study.

Most work on the Dermapteran alimentary canal has been done on the European earwig *Forficula auricularia* L. Cuénot (1895) briefly mentions some aspects of the physiology of the alimentary canal of *F. auricularia* but deals more fully with the peritrophic membrane. Bordas (1897) figures and gives a fairly detailed description of the structure and histology of the gut of this species. He notes that in both *Anechura bipunctata* (Fabricius, 1781) and *Labidura riparia* (Pallas, 1773) the organ is essentially similar to that of *F. auricularia*. Lhoste (1941) describes the alimentary canal of *F. auricularia*—the external morphology briefly and the histology in more detail.