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Feeding Behaviour and Enemies of Rhabdophoridae
(Orthoptera) from Waitomo Caves, New Zealand

By AOLA M. RICHARDS*

School of Biological Sciences, University of New South Wales, Sydney

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Abstract

RHAPHIDOPHORIDS are scavengers and omnivorous in their diet, as their gut content always includes both plant and animal remains. Fungi and animal food can be obtained inside caves; but mosses, liverworts and angiosperms are also eaten, and in many cases Rhabdophorids must seek these in the epigeal region. However, where a river flows through a cave, plant debris is washed inside and left stranded on the walls or the surface of the water. Where electricity has been installed in caves, mosses and ferns are able to grow near the light source. In both cases they form a food supply for the insects making it unnecessary for them to go outside the cave. In other parts of the world, Trichoptera and Lepidoptera form most of the animal portion of the diet of Rhabdophoridae, but they have never been found in the faeces of New Zealand members of the family, where the hemipteran *Scolypopa australis* Walker, the dipteran *Anatopynia debilis* (Hutton) and Rhabdophorids themselves are eaten instead. Rat faeces also form a part of their food supply. In the bush, Rhabdophorids show a preference for ferns and rata. The main enemies of Rhabdophorids are glow-worms, spiders and opiliones.

INTRODUCTION

DURING 1955 a study was made of the biology, habits and ecology of two species of cave-wetas, *Gymnoplectron waitomoensis* (Richards) and *Pallidoplectron turneri* Richards, living in limestone caves at Waitomo. The paper is concerned with the feeding behaviour and enemies of *G. waitomoensis* and *P. turneri* in these caves. Previous findings by the author and overseas workers (Richards, 1954a; Remy, 1931; Jeannel, 1926 and Chopard, 1938) have shown that the Rhabdophoridae are primarily scavengers.

FEEDING BEHAVIOUR

Until this study was commenced very little was known about the feeding behaviour and habits of cave-wetas in New Zealand. Information obtained from examination of faecal material led to a more detailed study of the feeding habits of these insects.

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