

PREDATION ON PRIONOPLUS RETICULARIS (CERAMBYCIDAE) BY THORAMUS WAKEFIELDI (ELATERIDAE)

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On 27 April 1972, a larva of *Prionoplus reticularis* White was found with an unknown larva attached by its mouthparts to the dorsal surface of the fourth visible abdominal segment (Fig. 1). No insect predators except *Rhipistena cryptarthra* (Hudson, 1934) have previously been recorded on *P. reticularis* (Edwards, 1959; 1961). The larvae were found in a rotten log of *Cupressus macrocarpa* Hartw., on the ground in a shelterbelt in the Rotorua area. Both larvae were alive when found and the unknown larva had made a large wound in its prey. After 1 week, both larvae had died.

The predator was identified as *Thoramus wakefieldi* (Sharp, 1877). Sharp records an observation by Mr. Wakefield that when a larva of *T. wakefieldi* was put in a box containing one of *P. reticularis*, the *T. wakefieldi* larva "made short work of" the other. Later literature does not specify the diet of *T. wakefieldi*. It has been assumed, however, that it feeds on disintegrating wood only (Miller, 1971), even though it appears to be well equipped as a carnivore, possessing sharply pointed mandibles and an ability to move quickly through loose material.

Other *T. wakefieldi* larvae have since been found in the field, associated with *Arhopalus ferus* (Mulsant) in *Pinus radiata* D. Don. Several of the *T. wakefieldi* larvae have been collected and kept in petri dishes packed with moist cellosene. When *A. ferus* and *P. reticularis* larvae were placed in these dishes, they were attacked and eaten by the *Thoramus* larvae. Feeding was often followed by the predator moulting its skin. Usually only one larva was eaten between moults, although one *T. wakefieldi* larva fed on five small *P. reticularis* larvae before moulting again. Moults resulted in a marked increase of head capsule width; in the latter case, from 2.7 mm to 3.4 mm. Although *T. wakefieldi* larvae fed and moulted repeatedly, all died before attaining the pupal stage. This was apparently a result of mishaps during moulting.

On a later occasion, a very small *T. wakefieldi* larva (head capsule width 0.6 mm) attacked larvae of an unidentified Anobiid species.

Thoramus larvae collected were up to 34 mm long, compared with the 15-30 mm recorded by Hudson (1934). Material from which the larvae were collected included *C. macrocarpa*, *P. radiata*, and *P. nigra* (Arnold).

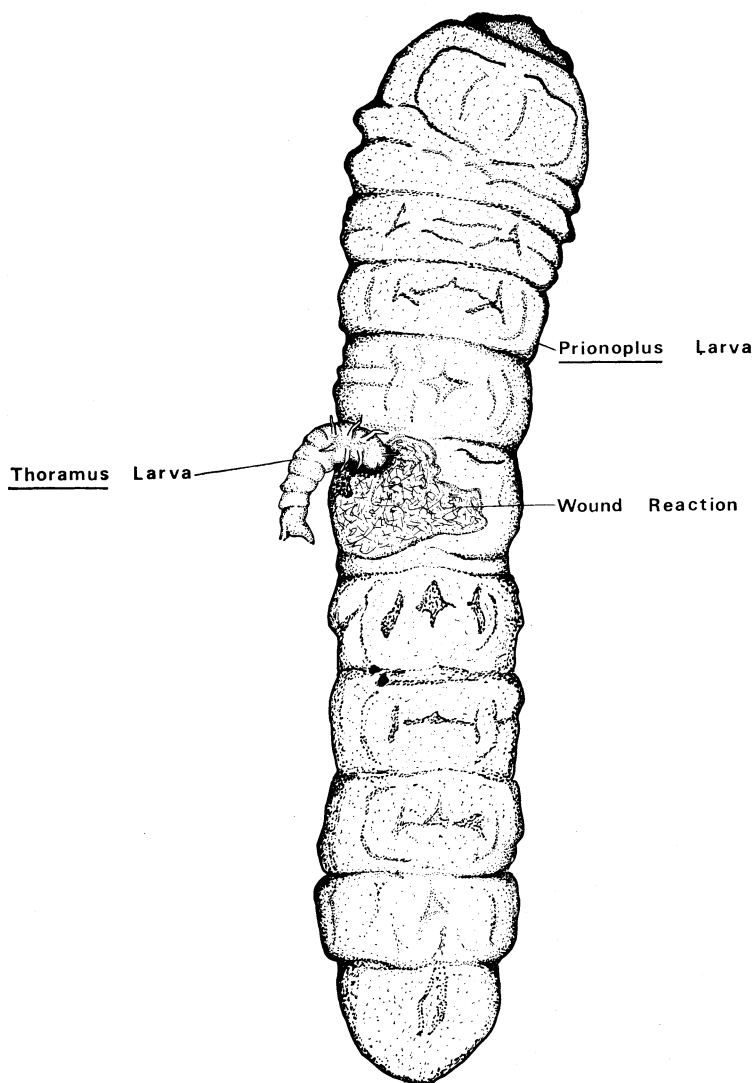


Fig. 1: Position of **Thoramus wakefieldi** larva found on **Prionoplus reticularis**.

CONCLUSIONS

The ability of **Thoramus** larvae to attack and consume quite large **Prionoplus** larvae is obvious. From subsequent observation the method of attack of the first such larva appears to have been

unusual. This was possibly due to the difference in size between predator and prey. The insect's habitat appears to be logs of exotic and indigenous coniferae containing larvae of cerambycidae and other xylophagous beetles.

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REVIEW — BUTTERFLIES OF AUSTRALIA

COMMON, I. F. B. and WATERHOUSE, D. F., 1972: Butterflies of Australia. 498 pp., 41 colour and half tone plates, 25 line drawings, 2 major maps. Angus and Robertson, Sydney. Publishers recommended price \$22.50.

This excellent, if slightly over-priced book will be the definitive work on Australian butterflies for a long time. Its layout and style, to say nothing of its encouragement by those in high places, could well be copied in treatments of some New Zealand groups. The authors have completely re-written and expanded "What Butterfly is That?" by G. A. Waterhouse, now long out of print. They have used N. W. Cayley's original colour plates, and the two additional plates by Mrs. Ninon Geier are also beautifully executed in a style that matches perfectly with Cayley's (cf. Plates 21 and 22). A useful series of photographs and line drawings complement the text and plates.

The book includes clear, useful chapters on Structure and Life History (12pp) Biology (20pp) Behaviour and Other Aspects of Physiology (16pp) Geographic Distribution (5pp) and Classification and Nomenclature (5pp). While the main body of the book is up to date to the end of 1970, the authors have managed to squeeze in a section on information available between 1971 and time of going to press (pp 452-4). Of great general interest to non-Australian enthusiasts are the paragraphs on pp 13-15, 447-