Record of *Ceratognathus passaliformis* (Coleoptera : Lucanidae) in Wainuiomata, New Zealand

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Abstract

Ceratognathus passaliformis is recorded from further localities in the Wellington region.

Keywords: Coleoptera, Lucanidae, *Ceratognathus passaliformis*.

Ceratognathus passaliformis Holloway is an unusual and interesting stag beetle because it lives in ants' nests. When it was decribed in 1962 all the known specimens had been collected in nests of the ant *Prolasius advena* (Fr. Smith) (Formicidae) under beech

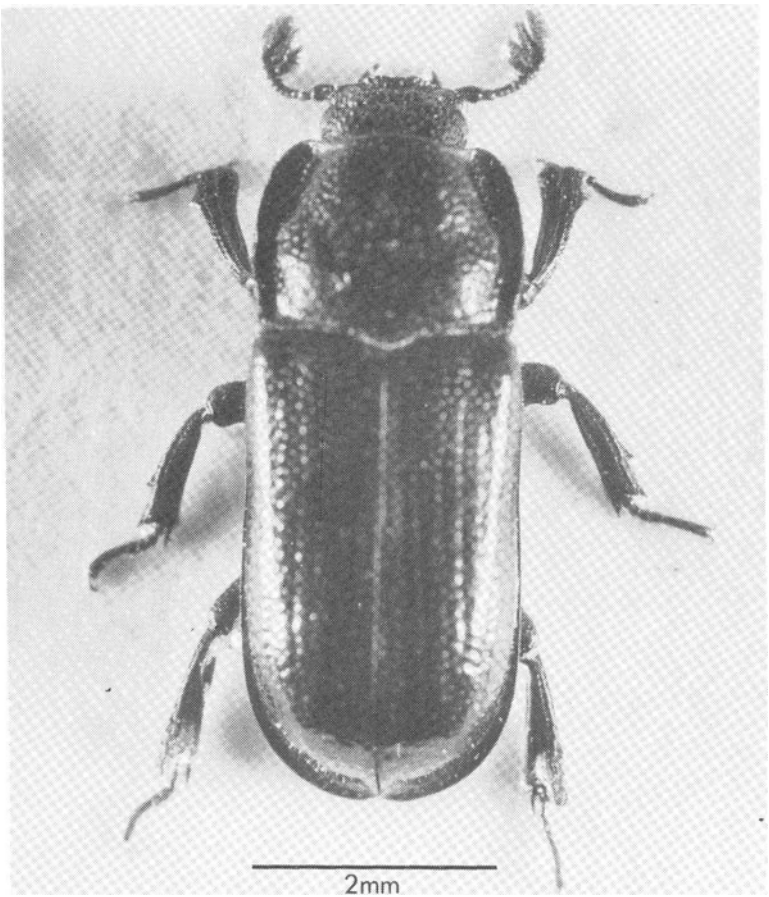

Fig. 1. *Ceratognathus passaliformis.* (Photo: G. W. Gibbs.)

(Nothofagus) logs at Jacobs Ladder, Orongorongo Valley, near Wellington. Morphological features such as the compressed and streamlined body, paddle-like legs, and reduced wings suggested that the beetle was adapted to a specialised subterranean existence (Holloway 1962, 1963). Therefore the occurrence of *C. passaliformis* inside ants' nests was not considered to be accidental.

In 1974 I collected two adults of *C. passaliformis* (Fig. 1) in the Wright Street Bush, Wainuiomata, about 6 km north of Jacobs Ladder. A further 3 specimens were observed at the same locality in October 1978. Adults were also collected from Butterfly Creek near Eastbourne, Wellington, by Dr R. W. Hornabrook in January 1979 (R. G. Ordish pers. comm.). At both localities the specimens were found inside ants' nests. The host ant species at Wright Street Bush was identified as *Prolasius advena* by Mr A. W. Don .

(The Wright Street Bush is located on the eastern hillside of Wainuiomata, adjacent to an urban area. The predominant vegetation is *Nothofagus truncata* and *N. solandri* var *solandri.* All the specimens of *C. passaliformis* were found in a small area of about 100 m2 on the southern side of a small stream at an artificially created forest margin (NZMS1, N164, 501252: altitude 450 m). Well established beech trees are present on the site itself and much of the ground is covered· with *Cyathodes fasiculata* and regenerating beech.

The circumstances in which *C. passaliformis* has been found in Wright Street Bush and at Jacobs Ladder are similar, so far as the vegetation type, host species of ant, and the open nature of the forest floor are concerned. The Butterfly Creek locality is also similar to Jacobs Ladder (R. G. Ordish pers. comm.). It would be of considerable interest to know whether this stag beetle occurs in nests of *P. advena* in different forest conditions, or in nests of other ant species. *P. advena* is widely distributed, and is found throughout the North and South Islands, Stewart Island, and offshore Islands (A. W. Don pers. comm.). It is possible that *C. passaliformis* is restricted to the Wellington area, as is the stag beetle *Dorcus novaezelandiae* (Holloway 1961).

From about 1962 Wright Street Bush has undergone considerable modification due to clearing for urban development (Hutt County Council records). To date *C. passaliformis* has been found only in ants' nests under beech logs lying on open ground. With the removal of trees on the lower boundary, regenerating vegetation is covering a previously open forest floor. It will be interesting to see if this change in forest structure affects the presence of the stag beetle. A major factor that will determine the survival of *C. passaliformis* in this area is the future status of Wright Street Bush itself. At present the bush is privately owned and its Town Plan Classification is under review, with the alternatives of residential or reserve being considered.

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