

7 MAY 1962

TRANSACTIONS
OF THE
ROYAL SOCIETY OF NEW ZEALAND

ZOOLOGY

VOL. 1

No. 24

DECEMBER 21, 1961

[Continued from *Transactions of the Royal Society of N.Z.*, Volume 88, Part 4.]

Revision of the Rhabdophoridae (Orthoptera) of
New Zealand

Part IX—The Genus *Gymnoplectron* Hutton, 1897

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[Received by the Editor, May 18, 1961.]

Abstract

THE genus *Pachyrhamma* Brunner is synonymised with the genus *Macropathus* Walker, and the genus *Gymnoplectron* Hutton re-established. The species *Hadenocetus edwardsii* Scudder is shown to be synonymous with *Pachyrhamma fascifer* (Walker), and the species must now be known as *Gymnoplectron edwardsii* (Scudder).

INTRODUCTION

THE genus *Gymnoplectron* Hutton contains the largest New Zealand members of the subfamily Macropathinae, and has a wide distribution in caves and bush throughout the country. Therefore it is not surprising that it should contain the first species of the Macropathinae to be described from New Zealand. It is also not surprising that long and complicated synonymy has followed. After examination of all type material from the British Museum (Nat. Hist.), the Geneva Museum and the Museum of Comparative Zoology, Cambridge, Massachusetts, I hope that all confusion has finally been resolved.

Genus GYMNOPECTRON Hutton, 1897

1897. *Gymnoplectron* Hutton, *Trans. N.Z. Inst.*, 29: 229.
1897. *Pachyrhamma* (Brunner) Hutton, *Trans. N.Z. Inst.*, 29: 230-231.
1954. *Macropathus* Walker, Richards, *Trans. Roy. Soc. N.Z.*, 82: 740-742.
1958. *Pachyrhamma* Brunner, Richards, *Trans. Roy. Soc. N.Z.*, 85: 466.

In 1954, I revised Walker's genus *Macropathus* and synonymised the genus *Pachyrhamma* Brunner, 1888 and the genus *Pachyrhamma* (Brunner) Hutton, 1897 with it. Four years later, I was able to examine the type material of Walker's genus *Macropathus* (Richards, 1958a). This proved to be a monotypic species, *Macropathus filifer*, so the name of the genus *Macropathus* as redescribed by myself in 1954 was changed back to *Pachyrhamma*.

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In 1888, without examining specimens of it, Brunner took Scudder's species *Hadenoecus edwardsii* and made it the type species of his new genus *Pachyrhamma*. I have recently been able to examine Brunner's type material from the Geneva Museum and have shown (Richards, 1959a) that *Pachyrhamma edwardsii* (Scudder) is a synonym of *Macropathus filifer* Walker. Consequently the genus *Pachyrhamma* Brunner becomes a synonym of the genus *Macropathus* Walker.

In 1897, Hutton erected the new genus *Gymnoplectron*, placing in it Colenso's species *Hemideina longipes*. Comparison of Hutton's description with the re-description of the genus *Macropathus* (Richards, 1954) indicated that the genus *Gymnoplectron* should be sunk in the synonymy of the genus *Pachyrhamma* Brunner (Richards, 1958b). However, as the genus *Pachyrhamma* has now been synonymised with *Macropathus*, the genus *Gymnoplectron* must be re-erected as the next available genus for all the species previously placed in the genus *Pachyrhamma* Brunner. As Hutton's description of the genus *Gymnoplectron* is incomplete, the present author's description as for the genus *Macropathus* (Richards, 1954) still stands, with the name of the genus changed to *Gymnoplectron*.

Type species for the genus: *Gymnoplectron longipes* (Colenso).

Gymnoplectron edwardsii (Scudder, 1869). Plate 1, figs. 1, 2.

1869. *Hadenoecus edwardsii* Scudder, *Proc. Bost. Soc. Nat. Hist.* 12: 408-409.
 1869. *Macropathus fascifer* Walker, *Cat. Derm. Salt. Blat.*: 206-207.
 1869. *Macropathus altus* Walker, *Cat. Derm. Salt. Blat.*: 207-208.
 1881. *Hemideina speluncae* Colenso, *Trans. N.Z. Inst.*, 14: 280-281.
 1888. *Pachyrhamma novae-seelandiae* Brunner, *Monog. Steno. Gryll. Verh.* z-b Wien, XXXVIII, p. 302, Pl. VII, fig. 29.
 1897. *Pachyrhamma speluncae* (Colenso, 1881) Hutton, *Trans. N.Z. Inst.*, 29: 231-232.
 1897. *Pachyrhamma fascifer* (Walker, 1869) Hutton, *Trans. N.Z. Inst.*, 29: 232.
 1897. *Macropathus edwardsii* (Scudder, 1869) Hutton, *Trans. N.Z. Inst.*, 29: 240.
 1899. *Pleiopectron edwardsii* (Scudder, 1869) Hutton, *Trans. N.Z. Inst.*, 31: 41.
 1901. *Gymnoplectron stephensiensis* Alfken, *Abhand. Naturwiss. Ver. Bremen*, XVII, Band 1 Heft.: 150-152.
 1923. *Pachyrhamma fascifer* (Walker, 1869) Chopard, *Trans. Roy. Soc. N.Z.*, 54: 231-233.
 1954. *Macropathus filifer* (Walker, 1869) Richards, *Trans. Roy. Soc. N.Z.*, 82: 742-748.
 1958. *Pachyrhamma fascifer* (Walker, 1869) Richards, *Trans. Roy. Soc. N.Z.*, 85: 466.
 1959. *Pleiopectron edwardsii* (Scudder, 1869) Richards, *Trans. Roy. Soc. N.Z.*, 87: 326.

On April 28, 1869, Scudder described "A New Cave Insect from New Zealand" as *Hadenoecus edwardsii*. It was described from one damaged specimen collected by Mr Henry Edwards from "a limestone cave at Collingwood, Massacre Bay, Middle Island, New Zealand". Unfortunately Scudder's account of it is very inadequate, and this has led to much confusion among later workers who were unable to examine the original material (Richards, 1958a).

On May 1, 1869, Walker erected the genus *Macropathus* and placed in it the three species *filifer*, *fascifer* and *altus*.

Through the courtesy of Dr P. J. Darlington, of the Museum of Comparative Zoology, Cambridge, Massachusetts, I have recently been able to examine Scudder's species *Hadenoecus edwardsii*. This proves to be synonymous with Walker's species *Macropathus fascifer* and Brunner's species *Pachyrhamma novae-seelandiae*, which were synonymised by the author as *Pachyrhamma fascifer* (Walker) (Richards, 1954; Richards, 1958a). However, as Scudder's description of the species *edwardsii* was published on April 28, 1869, it has two days' priority

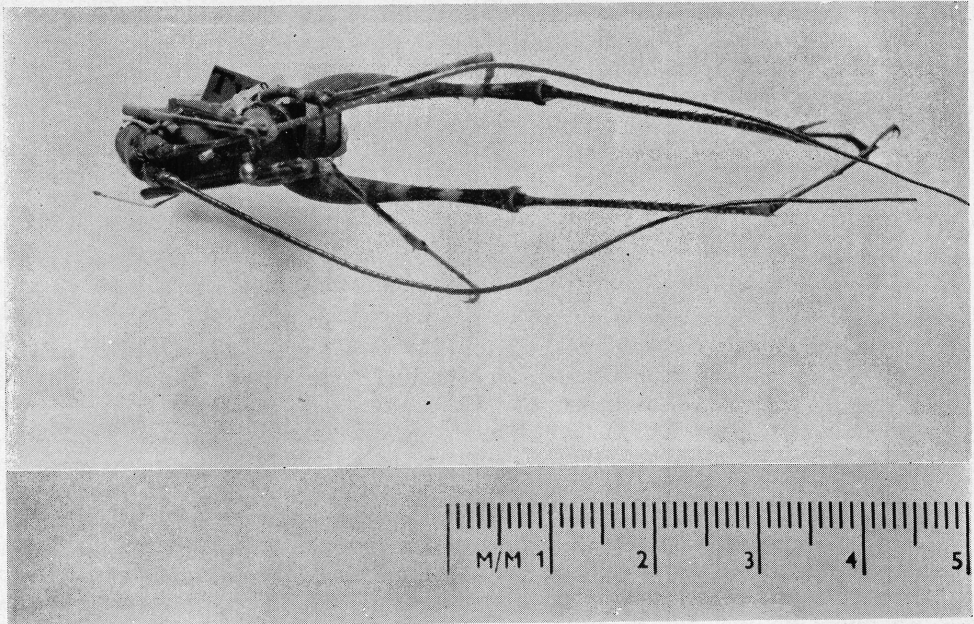


FIG. 1.—Dorsal view of type specimen of *Hadenoeus edwardsii* Scudder.
Photo: S. A. Rumsey.

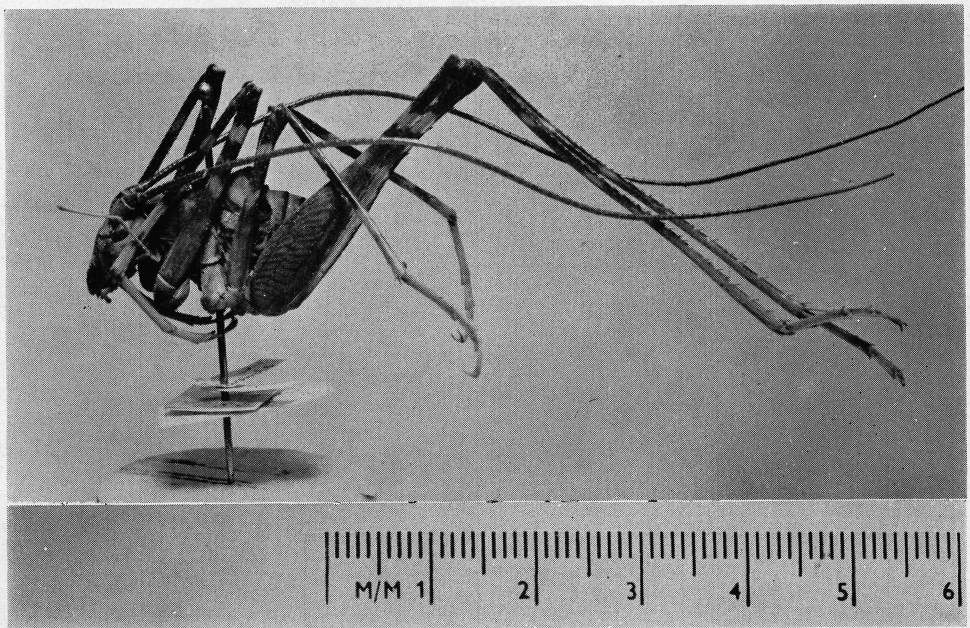


FIG. 2.—Lateral view of type specimen of *Hadenoeus edwardsii* Scudder.
Photo: S. A. Rumsey.

over Walker's species *fascifer* which was described on May 1, 1869, and the species must now be known as *Gymnoplectron edwardsii*. The complete synonymy of Walker's species *fascifer* has already been described (Richards, 1954; Richards 1958a; Richards, 1959b) and, apart from listing it above, it is not repeated here.

Scudder's type specimen of *Hadenoecus edwardsii* is in perfect condition, except for the absence of the external genitalia, and he states, "the sex of my specimen cannot be determined". However, on the basis of the spination of the antennae, it is possible to sex the insect as an adult male.

Except for the length of the pronotum, Scudder's measurements of *G. edwardsii* agree with those made by myself. Scudder gives the length of the pronotum as 6 mm instead of 9 mm.

Confusion has arisen among later workers through Scudder making no reference to the spination of the legs. Hutton wrote to Scudder asking him to re-examine the type material. Scudder's reply was published by Hutton in 1899. He confined his remarks to the apical spines. Now that I have been able to examine the material, it appears that Scudder's description does not agree with it. He says, "the fore femora have an apical spine on the outer side only", whereas they have a prolateral apical spine. He claimed that the hind femora were without apical spines. Using this character, he placed the species in the genus *Pleioplectron* Hutton. The hind femora actually possess a prolateral and a retrolateral apical spine, which with the other characters places them in the genus *Gymnoplectron* Hutton. The complete spination of the legs of Scudder's type *edwardsii* is given in Table I, and by comparison it agrees very well with those given for *Macropathus filifer* (Richards, 1954) now known as *Gymnoplectron edwardsii*.

TABLE I.
SPINATION OF THE LEGS OF THE TYPE SPECIMEN OF *HADENOECUS EDWARDSII* SCUDDER

		Apical Spines		Linear Spines	
		L.	R.	L.	R.
Fore Femur	Pro.	1	1	6	6
	Retro.	0	0	0	0
Fore Tibia	Pro.	1	1	0	0
	Retro.	1	1	0	0
Fore Tibia	Pro.	1	1	4	4
	Retro.	1	1	4	4
Fore Tarsus	Pro.	0	0	0	0
	Retro.	0	0	0	0
Mid. Femur	Pro.	1	1	3	3
	Retro.	1	1	2	2
Mid. Tibia	Pro.	1	1	7	6
	Retro.	1	1	3	3
Mid. Tibia	Pro.	1	1	4	3
	Retro.	1	1	4	4
Mid. Tarsus	Pro.	0	0	0	0
	Retro.	0	0	0	0
Hind Femur	Pro.	1	1	10	11
	Retro.	1	1	4	4
Hind Tibia	Pro.	4	4	34	33
	Retro.	4	4	39	36
Hind Tarsus	Pro.	1	1	3	2
	Retro.	1	1	3	4
Hind Tarsus	Pro.	1	1	1	1
	Retro.	1	1	1	1

In December, 1954, I collected several species of Rhabdiphoridae from limestone caves at Rockville, near Collingwood. One species, which was then identified as *Pachyrhamma fascifer*, was quite common. The Te Anaroa caves have been known in the district for at least 100 years, and it is very probable that this was the type locality for *Hadenoecus edwardsii*. Describing the locality Scudder says, "The cave is close to the seashore and near a very large coal deposit, which occasionally crops out in the interior. The Hadenoeci were rather numerous, but very difficult to catch, disappearing in the crevices of the rocks on the approach of lights. They appeared to be most abundant near the streams of water which percolated through the rocks." The specimens collected by myself were not found in the large tourist cave, but in smaller cavelets within a radius of a few yards of the main cave.

Gymnoplectron edwardsii is common throughout the Nelson district, and has a wide range of distribution in the North and South Islands (Richards, 1954).

ACKNOWLEDGMENTS

I should like to thank Dr P. J. Darlington, Curator of Insects at the Museum of Comparative Zoology, Cambridge, Massachusetts, for permission to examine Scudder's type specimen of *Hadenoecus edwardsii*. I should also like to thank Mr J. Lash for permission to collect insects on his property at Rockville.

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