

A new species of *Myrsidea* (Phthiraptera: Menoponidae)
from *Pachycephala pectoralis* (Aves: Passeriformes)

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Abstract *Myrsidea pachycephalae* n. sp. is described and figured from material collected on *Pachycephala pectoralis torquata* in Taveuni Island, Fiji. Additional samples from three other subspecies of *P. pectoralis* are regarded as *M. pachycephalae* n. sp. *sensu lato*. This is the first species of *Myrsidea* known from the avian subfamily Pachycephalinae.

Keywords *Myrsidea pachycephalae*; new species; description; *Pachycephala pectoralis* hosts

INTRODUCTION

Specimens of the louse genus *Myrsidea* from four subspecies of Golden Whistlers, *Pachycephala pectoralis* (Latham, 1801), were found to belong to a hitherto undescribed species. Although many individual hosts, belonging to several subspecies of *P. pectoralis*, were searched for lice, few additional specimens of *Myrsidea* were collected. We therefore decided to describe one new species based on the best represented sample, i.e., that from *P. pectoralis torquata* Layard, 1875. A small number of *Myrsidea* specimens available from three other host subspecies are also included in this new species, but are regarded as *sensu lato* because they show minor differences from the type series (see Discussion, below), and therefore they are *not* designated as paratypes.

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*Deceased

Abbreviations used for depositories

BMNH	British Museum (Natural History), London, England.
MAMU	Macleay Museum, University of Sydney, Sydney, Australia.
NMNZ	National Museum, Wellington, New Zealand.
NZAC	New Zealand Arthropod Collection, Entomology Division, DSIR, Auckland, New Zealand.
QVTA	Queen Victoria Museum and Art Gallery, Launceston, Tasmania, Australia.
ZFMK	Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, Federal Republic of Germany.

Myrsidea pachycephalae n. sp.

(Fig. 1-6)

Type host: *Pachycephala pectoralis torquata* Layard, 1875.

Holotype ♀ in NZAC.

Diagnosis. Hypopharynx fully developed. Shape of metasternal plate, and sternite I and II as in Fig. 2, female and Fig. 4, male. Abdominal tergite I in the female enlarged, with its posterior margin convex (Fig. 1). Male genitalia and sclerite of genital sac as in Fig. 5. Female bursa as in Fig. 6.

Table 1 shows the measurements of six specimens from the type host, including the holotype. All figures were made from type specimens.

Chaetotaxy of head. Head seta 10 (see Clay 1966, fig. 1) in ♂ and ♀ distinctly shorter than seta 11; length of seta 10 in ♂, 32-36 µm (range), 34.0 µm (mean); in ♀, 34-40 µm, 37.2 µm; length of seta 11 in ♂, 84-90 µm, 86 µm; in ♀, 90-116 µm, 98.8 µm. Ratio 11/10 in ♂ 2.33-2.65, 2.54; in ♀ 2.40-2.90, 2.66. Number of gular setae in ♂ and ♀: 4+4 (in one specimen 4+5).

Chaetotaxy of thorax. (Fig. 1-4) Pronotum with 12-13 marginal setae: 6 long posterocentral and 6-7 short anterolateral (3-4 on each side). Metanotum with 10-12 posteromarginal setae in ♂, and 12-14

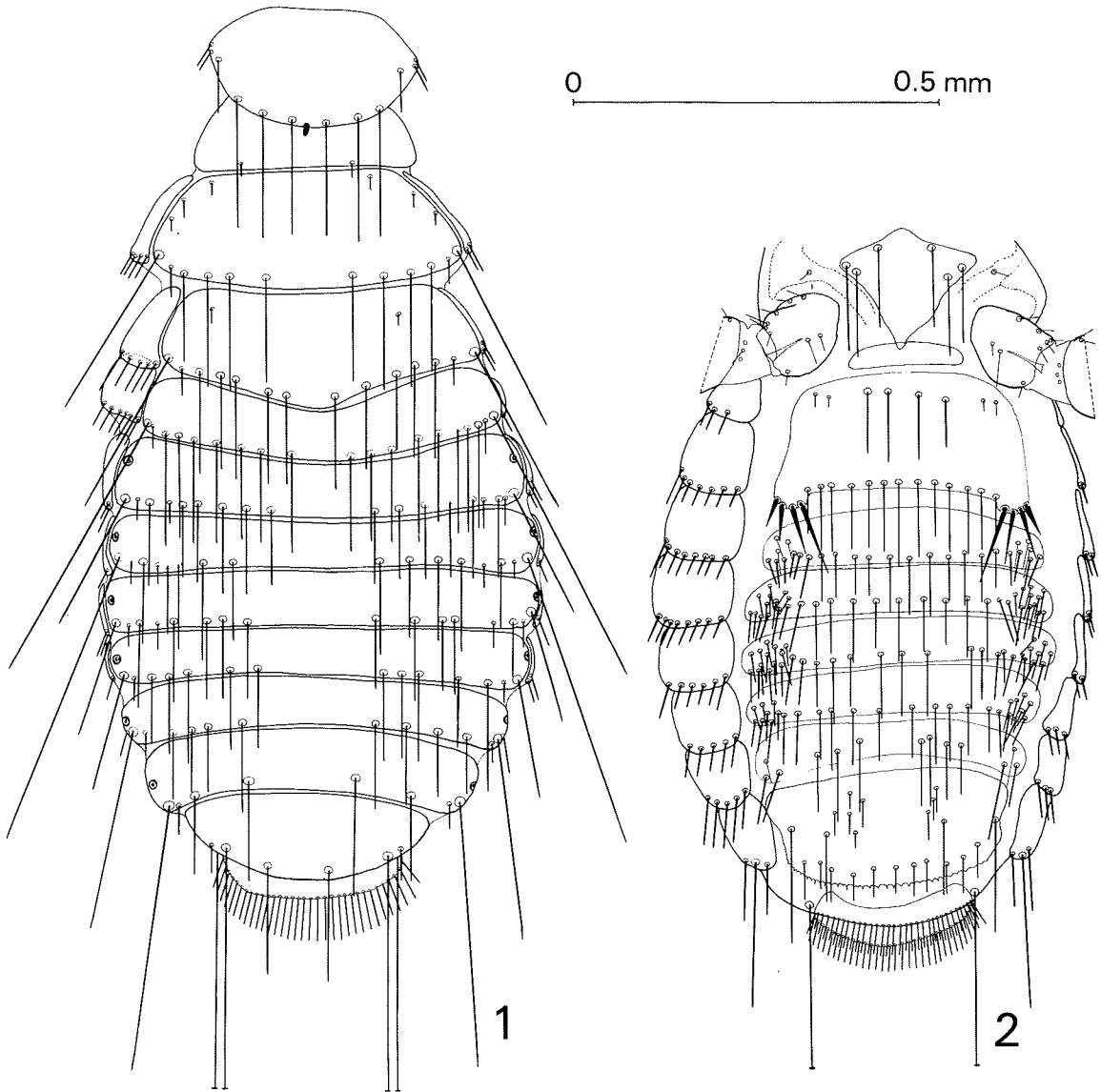


Fig. 1, 2 Female of *Myrsidea pachycephalae*: (1) dorsal view of thorax and abdomen; (2) ventral view of metathorax and abdomen.

in ♀. Pleurites of metathorax with 3 short stout setae in ♂, and 3–4 in ♀. Metasternal plate with 6 setae in ♂, and 6–7 in ♀. Number of setae in femoral brush: 10–15 in ♂, 17–21 in ♀.

Chaetotaxy of abdomen. (Fig. 1–4) Number of tergal, sternal, and pleural setae as in Table 2. Sternite I without setae; sternite II with anterior setae (7–10 in ♂, 7–8 in ♀), posteromarginal setae (10–11 in ♂, 13–14 in ♀) and 4 spine-like setae on each aster

of both sexes (Fig. 2, 4). In ♂ and ♀ the length of the postspiracular setae is variable both on the same tergite of different specimens and between different tergites of the same specimen (see Table 3); however, on tergites III, V, and VI these setae are distinctly shorter than those on the remaining tergites. Internal opening of anus in ♂ with 8–9 minute setae; ♀ with 30–34 short setae in each (dorsal and ventral) anal fringe. Vulval margin of ♀ with 11–12 setae.

Table 1 Measurements (in mm) of *Myrsidea pachycephalae* n. sp.

	Males (3)			Females (3)		
	a	b	c	a	b	c*
Head length (L)	0.31	0.31	0.32	0.34	0.34	0.34
Head width (W)	0.42	0.41	0.43	0.48	0.46	0.46
Head index (W:L)	1.35	1.32	1.34	1.41	1.35	1.35
Prothorax length	0.14	0.14	0.14	0.14	0.15	0.15
width	0.27	0.27	0.27	0.28	0.28	0.28
Pterothorax length	0.22	0.22	0.23	0.25	0.25	0.26
width	0.37	0.38	0.39	0.45	0.45	0.45
Abdomen length	0.60	0.60	0.62	0.77	0.74	0.77
width	0.47	0.44	0.46	0.56	0.57	0.58
Total length	1.21	1.22	1.22	1.42	1.37	1.40

* Holotype

Table 2 Number of tergal, sternal and pleural setae in abdomen of *Myrsidea pachycephalae* n. sp.

		Males		Females	
		Mean	Range	Mean	Range
Tergite*	I	16.00 (3)	16	17.00 (3)	16–19
	II	16.33 (3)	16–17	19.33 (3)	19–20
	III	17.00 (3)	15–18	19.00 (3)	18–20
	IV	17.00 (3)	17	17.33 (3)	16–19
	V	15.33 (3)	15–16	16.67 (3)	16–18
	VI	14.00 (3)	14	14.33 (3)	13–16
	VII	11.67 (3)	11–12	13.00 (3)	12–15
	VIII	8.00 (3)	8	8.00 (3)	8
	IX	9.33 (3)	9–10	6.00 (3)	6
Sternite*	III	23.00 (2)	23	25.50 (2)	24–27
	IV	30.00 (3)	26–33	37.33 (3)	35–40
	V	30.67 (3)	28–34	38.00 (3)	37–39
	VI	27.00 (3)	25–29	30.00 (3)	28–31
	VII	8.00 (2)	8	11.00 (3)	10–13
	VIII+IX	13.00 (2)	12–14	12.50 (2)	12–13
Pleurite**	III	6.60 (5)	6–7	8.00 (4)	8
	IV	6.20 (5)	6–7	7.67 (3)	7–8
	V	5.80 (5)	5–6	6.00 (5)	6
	VI	5.83 (6)	5–6	5.67 (6)	5–6
	VII	4.67 (6)	4–6	5.00 (6)	5
	VIII	3.00 (6)	3	3.00 (6)	3

* number of specimens measured, in parentheses

** number of pleurites measured, in parentheses

Type specimens

Ex *Pachycephala pectoralis torquata* Layard, 1875: Holotype ♀ and paratype ♂ (NZAC) and 2 ♂♂, 2 ♀♀ paratypes (NMNZ; ZFMK) Tavuni Island, Fiji Islands, Sep 1975, B. D. Heather. Two ♂♂ paratypes (BMNH) Tutu, Tavuni Island, Fiji Islands, 13 Jul 1973, D. T. Holyoak.

Other material examined (not types)

Ex *Pachycephala pectoralis glaucura* Gould 1845: 3 ♀♀ (QVTA) Flinders I., Tasmania,

Table 3 Length (in mm) of postspiracular setae* of *Myrsidea pachycephalae* n.sp.

		Males		Females	
		Mean	Range	Mean	Range
Tergite	I	0.21 (6)	0.18–0.23	0.20 (4)	0.14–0.26
	II	0.40 (4)	0.36–0.45	0.40 (4)	0.28–0.47
	III	0.15 (4)	0.13–0.16	0.18 (6)	0.15–0.20
	IV	0.42 (5)	0.37–0.45	0.41 (4)	0.40–0.44
	V	0.13 (6)	0.12–0.14	0.16 (6)	0.14–0.18
	VI	0.12 (5)	0.11–0.13	0.16 (5)	0.15–0.17
	VII	0.28 (6)	0.26–0.30	0.31 (6)	0.25–0.45
	VIII	0.38 (4)	0.32–0.44	0.36 (3)	0.35–0.37

* Number of setae measured, in parentheses

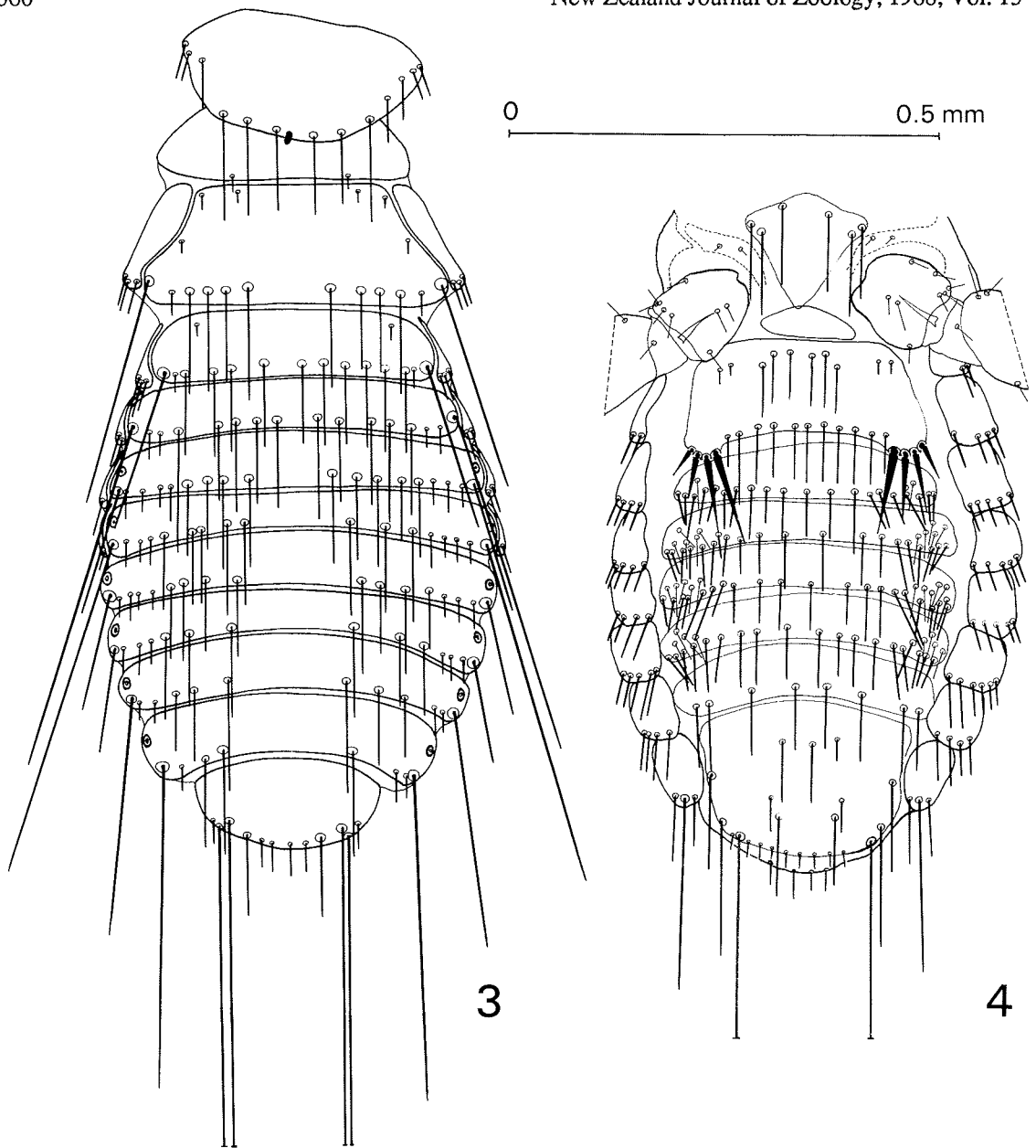


Fig. 3, 4 Male of *Myrsidea pachycephalae*: (3) dorsal view of thorax and abdomen; (4) ventral view of metathorax and abdomen.

Australia, 20 Mar 1966, R. H. Green; 4 ♀♀ (QVTA) Maggs Mt, Tasmania, Australia, 16 Dec 1976, R. H. Green; 1 ♀ (QVTA) same locality, 10 Feb 1982, R. H. Green; 1 ♂ (MAMU) Tasmania, Australia, no date.

Ex *Pachycephala pectoralis ashbyi* Mathews,

1912: 1 ♂, 1 ♀ (NMNZ) Wallaroa Gorge, Carnarvon Range, Queensland, Australia, 5 Jul 1954, Stager & Davidson.

Ex *Pachycephala pectoralis* subspecies: 1 ♂ (BMNH) Ipota, New Hebrides (= Vanuatu), 6 Aug 1971, A. G. Marshall.

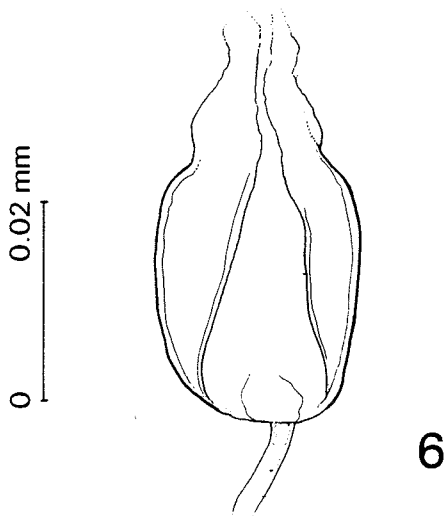
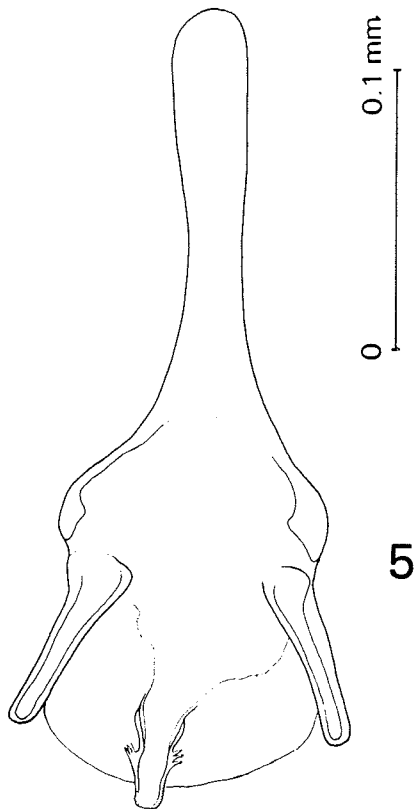


Fig. 5, 6 *Myrsidea pachycephalae*: (5) male genitalia; (6) female bursa.

DISCUSSION

Some morphological differences were found among the samples of *Myrsidea pachycephalae* from the four hosts listed above. These minor differences are mainly quantitative (measurements, number of abdominal setae, length of some setae) and could prove to be sufficient to justify the description of further new species and/or subspecies *should* more lice become available. However, considering that as many as 73 subspecies of *Pachycephala pectoralis* covering an extensive geographical area have been recognised by Mayr (1967), the differences between two populations of *Myrsidea* from any given pair of *P. pectoralis* subspecies might no longer be detectable after the inclusion of further louse populations from other subspecies of this host. Therefore, we strongly suggest that several samples of *Myrsidea* from each of a wide range of *P. pectoralis* subspecies should be critically studied before considering the description of new louse taxa (see Clay 1966: 335–337).

Considering that *M. pachycephalae* is the first species of *Myrsidea* known from the avian subfamily Pachycephalinae, it has not been possible to find closely related species among the many *Myrsidea* taxa described up to the present time. The male genital sclerite (Fig. 5) is similar to those of *Myrsidea karyi* Klockenhoff, 1980, *M. hopkinsi* Bedford, 1939 and *M. pilosotomi* Bedford, 1939 (see Klockenhoff 1980: 117, fig. 5a and 1981: 216, fig. 17cd). However, it could be argued that these morphological similarities are not, by themselves, an indication of close phylogenetic relationship between these species and *M. pachycephalae*.

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Note: I have taken the senior authorship of this paper because my colleague, Heinrich Klockenhoff, died during our joint preparation of the manuscript: R. L. Palma.

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