

A redescription of *Myrsidea serini* (Mallophaga: Menoponidae), a parasite from passerine birds

H. F. KLOCKENHOFF*

Zoologisches Forschungsinstitut und Museum
Alexander Koenig
Bonn, Federal Republic of Germany

Abstract *Myrsidea serini* (Séguy, 1944) is redescrbed and illustrated from 2 syntypes and additional material collected from the type host (*Serinus serinus*), and from *Serinus canaria* domesticated form, *Carduelis chloris chloris*, *Carduelis carduelis britannica*, *Carduelis carduelis parva*, and *Emberiza citrinella caliginosa*. The syntype male is designated as lectotype.

Keywords *Myrsidea serini*; redescription; lectotype; passerine hosts

INTRODUCTION

Specimens of *Myrsidea* were received for study from the National Museum of New Zealand. They were collected from *Carduelis chloris chloris* (Linnaeus, 1758), *Carduelis carduelis britannica* (Hartert, 1903), *Emberiza citrinella caliginosa* Clancey, 1940, and from *Serinus canaria* (Linnaeus, 1758) domesticated form. These passerines were introduced into New Zealand from Europe about 100 years ago (Niethammer 1971). As specimens of *Myrsidea* from most of the above hosts in Europe were not available, the New Zealand material was compared with specimens collected from *Serinus serinus* (Linnaeus, 1766) (Morocco), *Carduelis carduelis parva* Tschusi, 1901 (Spain), and *Serinus canaria* (Linnaeus, 1758) domesticated form (England), which were received from the British Museum (Natural History). Comparison of these lice with the description and 2 syntypes of *Myrsidea serini* (Séguy, 1944) shows that they are all conspecific.

The differences in quantitative morphological characters of these *Myrsidea* populations were examined for statistical significance by t-test. This revealed a number of significant differences in measurements, but only a few in chaetotaxy, which is of higher taxonomic value in this genus (Klockenhoff et al. 1979, Klockenhoff 1980). In addition, a t-test led to similar results when the lice from the *Carduelinae* hosts were compared with those from *Emberiza*.



Fig. 1 *Myrsidea serini* (Séguy, 1944). Male lectotype.

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*Deceased; requests for reprints of this paper should be directed to R. L. Palma, National Museum of New Zealand, Private Bag, Wellington, New Zealand

As the number of hosts for *Myrsidea serini* is now larger, and as Séguy's description needs corrections and additions, the species is redescribed here.

Abbreviations used for depositories

BMNH—British Museum (Natural History), London, England;
 MNHN—Muséum National d'Histoire Naturelle, Paris, France;
 NMNZ—National Museum, Wellington, New Zealand;
 NZAC—New Zealand Arthropod Collection, Entomology Division, DSIR, Auckland, New Zealand;
 RLCP—R. L. C. Pilgrim Collection, housed in NMNZ;
 ZFMK—Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, Federal Republic of Germany.

Myrsidea serini (Séguy, 1944) (Fig. 1–4)

Menopon serini Séguy, 1944. Faune de France 43: 80, fig. 84 (type host: *Serinus serinus* (Linnaeus, 1766)).

Myrsidea serini (Séguy, 1944): Hopkins & Clay, 1952: 233.
Liquidea serini (Séguy, 1944): Złotorzycka, 1964: 169, 176.

Diagnosis. Hypopharynx reduced. Shape of prosternal and metasternal plates as in Fig. 3A and 4B. Posterior margins of abdominal terga I–III in the female only slightly convex. Male genitalia as in Fig. 2A. Sclerite of male genital sac as in Fig. 2B.

Table 1 shows the range of measurements of specimens examined. All values and measurements in text are given as (mean, S.D., sample size).

Chaetotaxy of head. Head seta 10 (see Clay 1966, fig. 1) in ♂ and ♀ usually slightly shorter than seta 11; length of seta 10 in ♂, 54–86 µm (67.8, 7.904, 22), in ♀ 54–88 µm (72.7, 7.413, 30); length of seta 11 in ♂ 59–86 µm (77.3, 6.135, 22), in ♀ 72–95 µm (83.1, 6.741, 30); ratio 11/10 in ♂ 0.84–1.37 (1.15, 0.131, 22), in ♀ 0.89–1.33 (1.15, 0.113, 30). Number of gular setae in ♂ 8–10 (8.48, 0.664, 23), in ♀ 8–10 (8.67, 0.702, 35).

Chaetotaxy of thorax. (Fig. 3A, 3C, 4A, 4B) Setae on the posterior margin of the pronotum in ♂ 6 (n=23), in ♀ 5–6 (5.97, 0.169, 35). Setae on the posterior margin of the metanotum in ♂ 11–15 (12.39, 0.941, 23), in ♀ 9–15 (12.09, 1.039, 35). Pleurites of metathorax in ♂ with 2–4 (3.08, 0.474, 40), in ♀ with 2–5 (3.27, 0.587, 70) short stout setae. Number of metasternal setae (Fig. 3A, 3E) in ♂ 5–6 (5.95, 0.200, 25), in ♀ 5–8 (6.06, 0.410, 35). Number of setae in femoral brush in ♂ 12–19 (15.53, 1.235, 45), in ♀ 14–21 (16.48, 1.380, 64).

Chaetotaxy of abdomen. (Fig. 3A, 3C, 4A, 4B). In ♂ and ♀, postspiracular setae on segments III, V, and VI shorter and finer than those on other tergites (Fig. 3C, 4A). Number of tergal, sternal, and pleural setae as in Table 2. Sternite I without setae

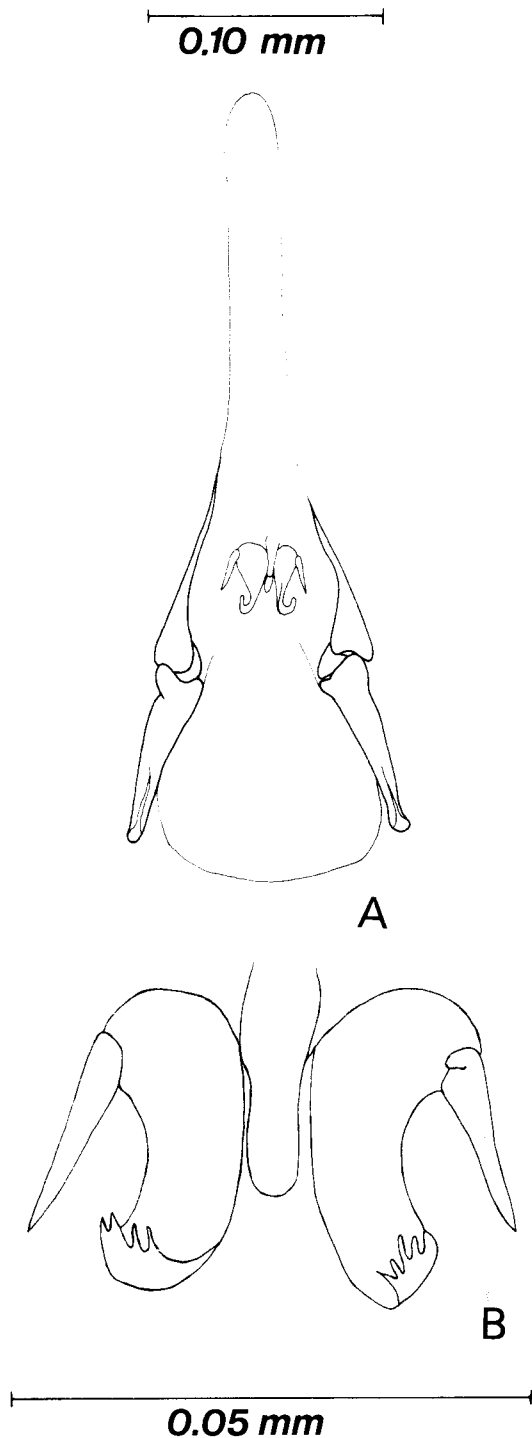


Fig. 2 *Myrsidea serini*. A, male genitalia; B, sclerite of male genital sac.

Table 1 Measurements (in mm) of *Myrsidea serini*.

	Males (n=25)			Females (n=35)		
	Mean	S.D.	Range	Mean	S.D.	Range
Head length (L)	0.29	0.008	0.27–0.30	0.30	0.008	0.27–0.31
Head width (W)	0.37	0.011	0.34–0.39	0.41	0.015	0.36–0.43
Head index (W:L)	1.31	0.037	1.25–1.38	1.35	0.032	1.28–1.41
Prothorax length	0.14	0.007	0.12–0.15	0.16	0.011	0.14–0.19
width	0.25	0.008	0.23–0.26	0.27	0.014	0.22–0.29
Pterothorax length	0.20	0.010	0.18–0.22	0.24	0.015	0.21–0.28
width	0.35	0.014	0.32–0.37	0.44	0.020	0.40–0.47
Abdomen length	0.67	0.029	0.60–0.71	0.86	0.029	0.80–0.92
width	0.48	0.024	0.42–0.52	0.63	0.030	0.57–0.70
Total length	1.24	0.041	1.11–1.30	1.50	0.062	1.41–1.65

Table 2 Number of tergal, sternal, and pleural setae in abdomen of *Myrsidea serini*.

		Males			Females		
		Mean	S.D.	Range	Mean	S.D.	Range
Tergite*	I	17.52 (25)	1.558	13–20	17.09 (35)	1.291	13–19
	II	19.84 (25)	1.675	15–23	17.65 (34)	1.309	15–20
	III	19.24 (25)	1.665	16–23	17.09 (35)	1.067	15–20
	IV	17.58 (24)	1.059	15–19	15.23 (34)	1.186	13–18
	V	17.48 (23)	1.410	15–20	14.62 (34)	1.155	12–16
	VI	16.18 (22)	1.622	14–20	12.09 (34)	1.264	10–15
	VII	15.17 (24)	1.404	12–18	9.66 (35)	1.055	8–12
	VIII	12.22 (23)	1.503	10–16	8.00 (34)	0.246	7–9
Sternite*	III	21.00 (25)	1.915	18–25	23.31 (35)	1.997	18–25
	IV	33.46 (24)	2.395	27–38	36.06 (34)	2.073	32–41
	V	34.17 (24)	2.258	30–38	36.24 (34)	2.807	30–42
	VI	25.96 (24)	2.312	21–31	25.94 (35)	3.342	12–32
	VII	16.22 (23)	2.255	12–20	15.00 (35)	1.909	11–19
	VIII+IX	10.96 (25)	0.958	9–13	8.11 (35)	1.105	6–10
Pleurite**	III	6.62 (37)	0.594	6–8	6.73 (48)	0.736	5–9
	IV	6.24 (37)	0.723	5–8	6.08 (49)	0.672	5–8
	V	5.28 (32)	0.581	4–6	5.13 (48)	0.489	4–7
	VI	4.52 (33)	0.565	4–6	4.84 (45)	0.366	4–5
	VII	3.86 (35)	0.494	3–5	4.04 (50)	0.402	3–5
	VIII	3.00 (36)	0.000	3	2.96 (49)	0.199	2–3

*, number of specimens measured, in parentheses

**, number of pleurites measured, in parentheses

(♂, ♀); sternite II with 7–12 (9.35, 1.265, 23) in ♂, and 7–13 (9.94, 1.482, 34) in ♀, setae on the surface, and with 8–16 (11.34, 1.522, 24) in ♂, and 9–14 (12.59, 1.328, 34) in ♀, setae on the posterior margin; both sexes usually with 4 spine-like setae

in aster — ♂ 3–4 (3.90, 0.306, 49); ♀ 3–4 (3.96, 0.200, 70) (Fig. 3A, 4B). Number of setae near vulval margin in ♀ 7–14 (9.36, 1.759, 35). Internal opening of anus in ♂ with 8–11 minute setae (8.46, 0.905, 25).

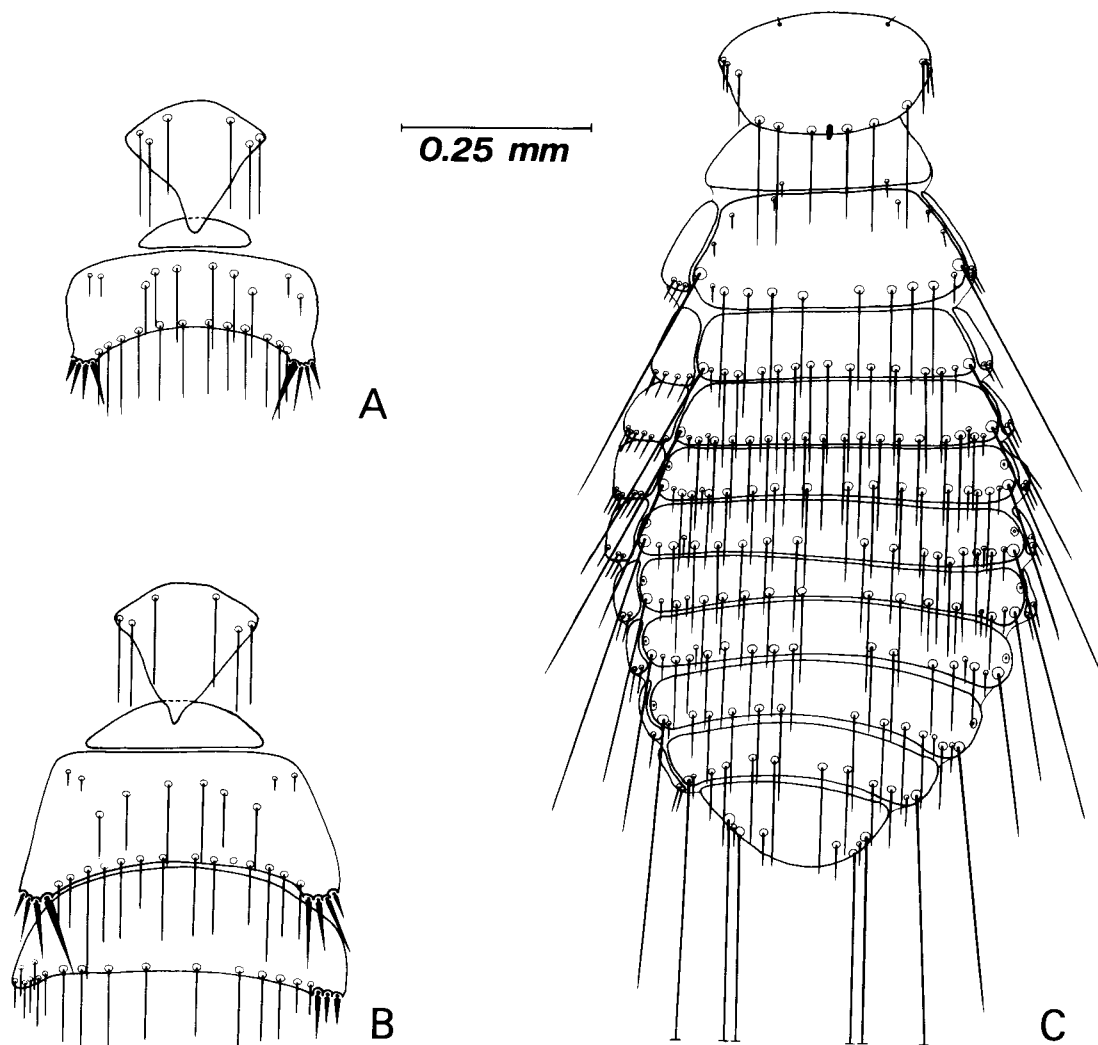


Fig. 3 *Myrsidea serini*. A, male metasternal plate and abdominal sternites I-II; B, metasternal plate and abdominal sternites I-III of female paralectotype; C, male thorax and abdomen — dorsal view.

Designation of lectotype. In the collection of the Muséum National d'Histoire Naturelle, Paris, there is 1 slide with 2 syntypes of *Myrsidea serini*. The 2 labels on 1 side of the slide read: "*Serinus canaria serinus* (L.), *Menopon* ♂♀ *serinus*, TYPES, P.T.O.". On the reverse of the slide there is a third label, added by Dr T. Clay, which reads: "*Myrsidea serini* (Séguy, 1944) T. Clay designated, LECTO-TYPE ♂". Because Dr Clay (1983, pers. comm.) did not publish the designation of the lectotype and as I agree with her proposal, I herewith designate

the same male (Fig. 1) as lectotype of *Myrsidea serini* (Séguy, 1944), and the female mounted on the same slide, as paralectotype.

Material examined. Ex *Serinus serinus*: Lectotype ♂ and paralectotype ♀ (MNHN); Morocco, Oct 1953, 1♀, Meinentzhagen coll. 11953 (BMNH). Ex *Serinus canaria*: Christchurch, New Zealand, 20 Dec 1944, 2♂, 2♀, and 2 May 1977, 1♂ (RLCP); London, England, Oct 1951, 8♀ (BMNH). Ex *Carduelis chloris chloris*: Upper Hutt, New Zealand, 6 Jul 1973, 1♂, 2♀ (NMNZ, ZFMK); Lyttelton, New Zealand, 29 Oct 1980, 4♂, 1♀ (RLCP);

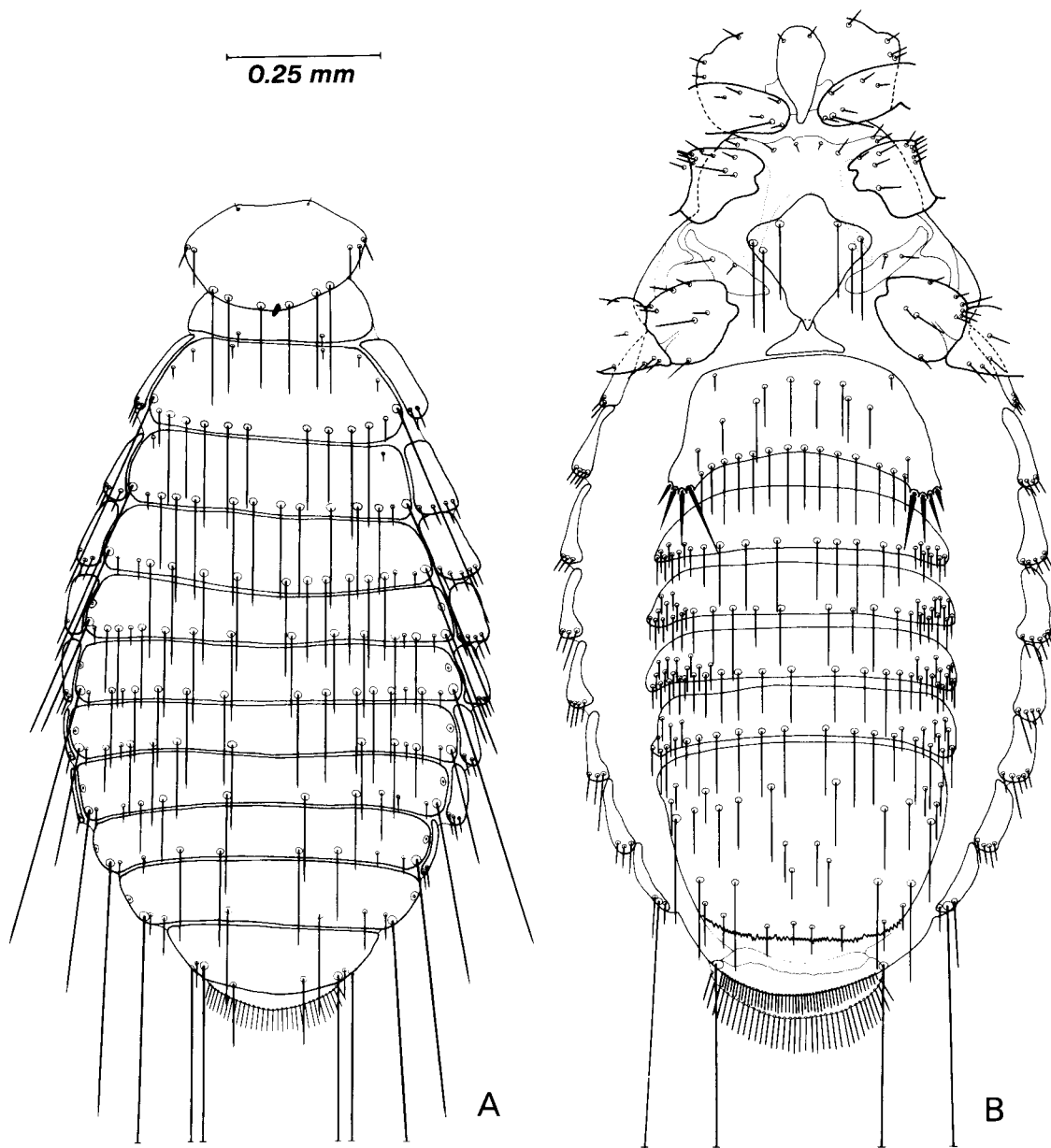


Fig. 4 *Myrsidea serini*, female thorax and abdomen. A, dorsal view; B, ventral view.

Christchurch, New Zealand, 18 Jul 1981, 2♂, 6♀ (RLCP).
 Ex *Carduelis carduelis britannica*: Upper Hutt, New Zealand, 9 Jan 1974, 1♀ (NMNZ). Ex *Carduelis carduelis parva*: Spain, 6–7 Apr 1961 2♂, 2♀, 1962–325 (BMNH).
 Ex *Emberiza citrinella caliginosa*: Raoul I., Kermadec Is, New Zealand, 26 Oct 1972, 3♂, 4♀, and 11 Nov 1972, 8♂, 8♀ (NZAC, RLCP, ZFMK).

DISCUSSION

The genital sclerite in the lectotype of *Myrsidea serini* differs from Séguy's drawing of the same feature (see his fig. 84c and Fig. 2B, this paper). Also, there are differences between the female chaetotaxy

illustrated by Séguy and the material examined (see his fig. 84a, and Fig. 4A, 4B, this paper). The unusual aster of spine-like setae in the female sternite III shown by Séguy in his fig. 84b, is situated on 1 side only of the paralectotype (see Fig. 3B); no other female in the material examined has such a structure on sternite III.

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