Contr. biol. Lab. Kyoto Univ., Vol. 29, pp. 83-87 Issued March 31 2000

Sulobella yoshii, a New Genus New Species of Lobellini (Collembola: Neanurinae) from South Sulawesi, with Comments on the Tribe Lobellini

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ABSTRACT The new genus *Sulobella* is proposed for a new species of Lobellini, *S. yoshii*, found in South Sulawesi. It is characterized by (i) a large size; (ii) a flattened body; (iii) a plurichaetosis of the ordinary chaetotaxy which affects the head and all body tergites including abd. VI, (iv) the presence of supplemental S-setae on the tergites from th. I to abd. V; (v) reduced mouthparts, and (vi) the absence or weak development of dorso-internal tubercles.

KEY WORDS Collembola / Neanurinae / Sulobella / Lobellini

Introduction

Recent field studies have shown that the island of Sulawesi hosts a rich fauna of Neanurinae, but none of its species has ever been described (Deharveng, 1987 and unpublished data). All taxa we have seen so far belong to Lobellini and Paleonurini. Their affinities are clearly with Southeast Asia, as no representative of the typically austral genera *Australonura, Ectonura, Hemilobella,* or *Phradmon* has been found in Sulawesi. The many specimens available include a remarkable large, flat Lobellini species, collected in the southern forests of the Lompobatang mountain, in South Sulawesi. It represents the new genus that we describe below, characterized by unusual chaetotaxic features.

Sulobella new genus

Type species: *Sulobella yoshii* n. gen., n. sp. from South Sulawesi.

Lobellini of large size. Red alive, white in alcohol. Three black eyes on each side of the head. S-chaetotaxy with supernumerary setae from th. I to abd.V: one on dorso-external tubercle of th.I, one on dorso-lateral tubercle of thorax II and III, one on lateral

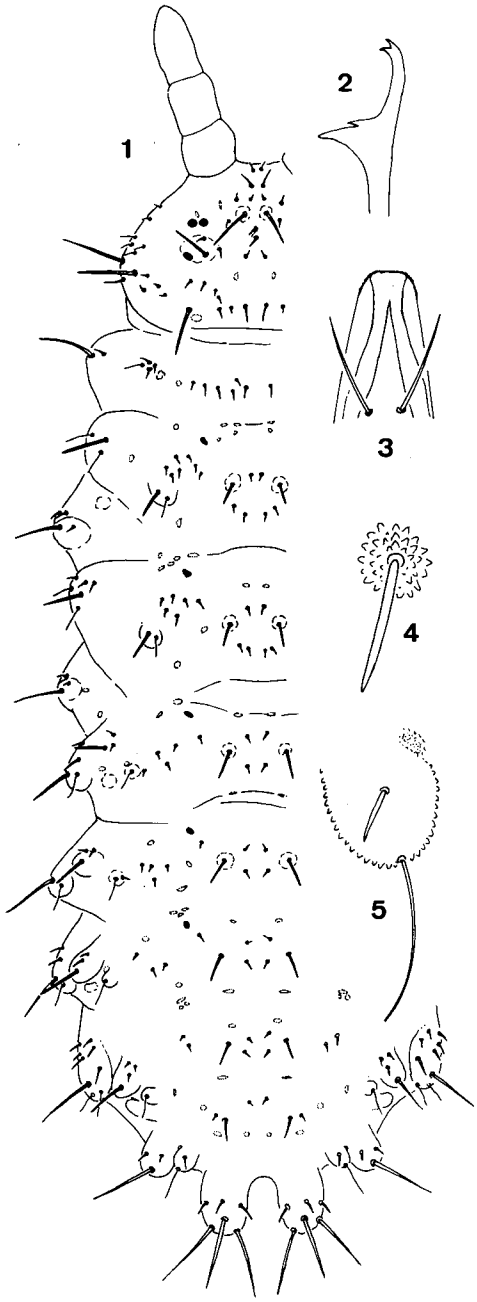

Fig. 1. Dorsal chaetotaxy. Black spot: pseudopore-like structures. Dotted line: muscle attachment.
Fig. 2. Mandible.
Fig. 3. Apex of labrum in dorsal view.
Fig. 4. Di macrochaeta of abd. I.
Fig. 5. S-seta and short macrochaeta of De tubercle of abd. V.

tubercle of abdomen I to III and of abd. V, and 2 on lateral tubercle of abd. IV (formula: 1,3+ms,3/2,2,2,3,2). Ordinary chaetotaxy plurichaetotic on tergites and head. Ant. IV with eight subequal, rather thin S-setae. Dorso-internal tubercles of head and body absent or barely distinct; the De and DL and the lateral tubercles are well developed on the posterior part of the body. Dorso-external S-setae of abd. III to V isolated on a small tubercle with at most 1 of the De setae. Tubercles De, DL and L very near each other on abdominal tergites, particularly on abd. III and IV. Abd. VI strongly bilobed. Tubercles indicated by swollen integument, with a slight or indistinct increase in secondary granule size but without reticulations. Labrum elongate-truncate, with 2 distal setae. Maxilla styliform, mandible thin with four teeth. Seta M present on the tibiotarsus. Claw with one inner tooth.

Etymology: The name of the genus refers to the region where it has been collected.

***Sulobella yoshii* new species**

The terminology and abbreviations used in the description are those of Deharveng (1983) and Deharveng & Weiner (1984). Type material deposited in Indonesia (Museum Zoologicum Bogoriense collection, holotype, 1 paratype) and in the senior author collection (Laboratoire d'Ecologie Terrestre, Université Paul Sabatier, Toulouse, France, 2 paratypes).

Body length: 2.4 to 2.9 mm. Body flattened, linear, with sixth abdominal tergite having two elongate lobes (Fig. 1). Colour: red in life, white in alcohol. Eyes black, 3+3, subequal. Dorso-internal tubercles absent or weak, the De, DL and L ones well marked and laterally displaced. Abd. VI prominent and strongly bilobed, not hidden by abd. V. Ordinary dorsal setae of four kinds: (i), mesochaetae thin, smooth and acuminate, mainly on the lateral part of the head; (ii) long and (iii) short macrochaetae, thick, straight, very slightly sheathed, blunt, except the lateral ones which are tapered at the apex (Fig. 4); (iv), short setae thick and blunt (Fig. 5) and more numerous than normal; there are no thin and acute mesochaetae on the tergites. S-setae thin, slightly shorter than the closest macrochaetae (Fig. 5); several supernumerary S-setae on th. I to abd. V (Table 1).

Head. S-setae of ant. IV long, moderately thick, bent, subequal; apical bulb slightly trilobed and not prominent. Buccal cone moderately elongate; labrum long, truncate-rounded at the apex, with 2 distal setae (Fig. 3). Maxilla styliform; mandible thin, quadridentate (Fig. 2). 3+3 large pigmented ocelli. Only the poorly developed ocular tubercle can be seen on head. Supernumerary setae mainly of the (Di, De) group of setae (Fig. 1, Table 1).

Postcephalic chaetotaxy as in Fig. 1 and Table 1 with numerous supernumerary setae. No Di macrochaeta on abd. V. Seta M present on tibiotarsus. Claw with a strong internal tooth.

Holotype: Female, Indonesia: Sulawesi Selatan, Gunung Lompobatang near Lembanna, alt. 1550 m, by hand, Deharveng & Bedos leg. (sample INDO-113).

Paratypes: 3 specimens, ibid.

Remarks: The number of supernumerary S-setae in *Sulobella* is larger than in any

other Lobellini. In the genus *Hyperlobella* Cassagnau 1988, *H. kraepelini* (Börner, 1906) and *H. gedehensis* (Yoshii, 1976), also have supernumerary S-setae on tergites (Cassagnau, 1983, 1989), but unlike *Sulobella* lack them on th. I. They also differ from *Sulobella* in lacking styliform mouthparts, dorsal ordinary plurichaetosis, and having convex bodies, as well as other details of chaetotaxy. At least one other species of *Sulobella* exists in Sulawesi, in the Dumoga-Bone national park, but there is insufficient material to describe it. In addition, specimens collected in the Maros karst differ from

Table 1. Chaetotaxy of *Sulobella yoshii* n.sp.

Dorsal head chaetotaxy

	Tubercle	Number of setae	Type of setae	setae
CL	–	4	Mc	F
			me	G
An	–	4	ML	B
			me	C,D,E
Fr	–	3-5	me	A,O
Oc	+	3	ML	(1)
			me	(2)
Di, De	–	7-9	Mc	Di1
			ML	De1
			me	(5-7)
DL, L, So	–	>16-17	ML	(2)
			Mc	(1-2)
			me	>11*

*4-5 internal, 1-2 posterior, >6 anterior setae

Ventral head chaetotaxy

Vi	6
Ve	>8
Labrum	?/2,2
Labium	11,0x
Ant. I-II	7,11-12
Ant. III	?16+5S
Ant. IV	8S+i+or+12 mou

Post-cephalic chaetotaxy

	Di	int	De	DL	L	Scx2	Cx	Tr	Fe	Ti
Th. I	5–6		3–5+S	4	–	0	3	6	?	19
Th. II	4		6–10+S	4–6+2S+ms	5	?	7	6	?	19
Th. III	4		6–10+S	4–5+2S	5	?	8	6	?	18
Abd. I	3	1	4-6+S	4	3-5+S	TV = 4+4				
Abd. II	3	1	4–5+S	4	5–6+S	Ve = 4 (Ve1 absent, or 1 uneven seta)				
Abd. III	3	1	3–5+S	3–4	6–7+S	Fu = 5 me, 0 mi Ve = 4				
Abd. IV	3		2+S	4–5	9–11+2S	Ve = 7		VL = 5		
Abd. V	(2)–3		0–1+S	5–6	6+S	Ag = 3+3		VL = 2–3		
Abd. VI	----------10–13----------					Ve = 14–15		An = 3 mi		

*Int: intermediate setae

the typical material of Mount Lompobatang in several small chaetotaxy characters. As polymorphism is likely to be associated with plurichaetosis, additional material would be necessary to determine the taxonomic status of the Maros populations.

Etymology: The species is named in honor of Prof. Riozo Yoshii for his fundamental contributions to the knowledge of Southeast Asia collembolan fauna, and to collembolan systematics in general.

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