

TWO NEW SPECIES OF *HETEROMURUS* FROM SULAWESI UTARA (CELEBES) AND A NEW RECORD FOR *H. TENUICORNIS* BÖRNER (COLLEMBOLA: ENTOMOBRYIDAE)

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Abstract.—*Heteromurus (Heteromurtrella) greensladeae* and *H. (H.) affinis* are described from material collected in various localities in Sulawesi Utara (Celebes). *Heteromurus (Alloscopus) tenuicornis* is reported for the first time from Sulawesi.

Through the kindness of Ms. Penelope Greenslade, Australian National Insect Collection, Canberra City, I have been able to study the complete collection of *Heteromurus* gathered by her and her colleagues during a 1985 visit to Sulawesi Utara (Celebes). The material includes two new species of the holotropical subgenus *Heteromurtrella* and one species of the Oriental subgenus *Alloscopus*.

Unless otherwise stated, all the specimens studied were collected by Ms. Greenslade. Holotypes and most paratypes of the new species are deposited in the Australian National Insect Collection. Some paratypes and several specimens of *Heteromurus tenuicornis* Börner are in my collection.

***Heteromurus (Heteromurtrella) greensladeae*, new species**

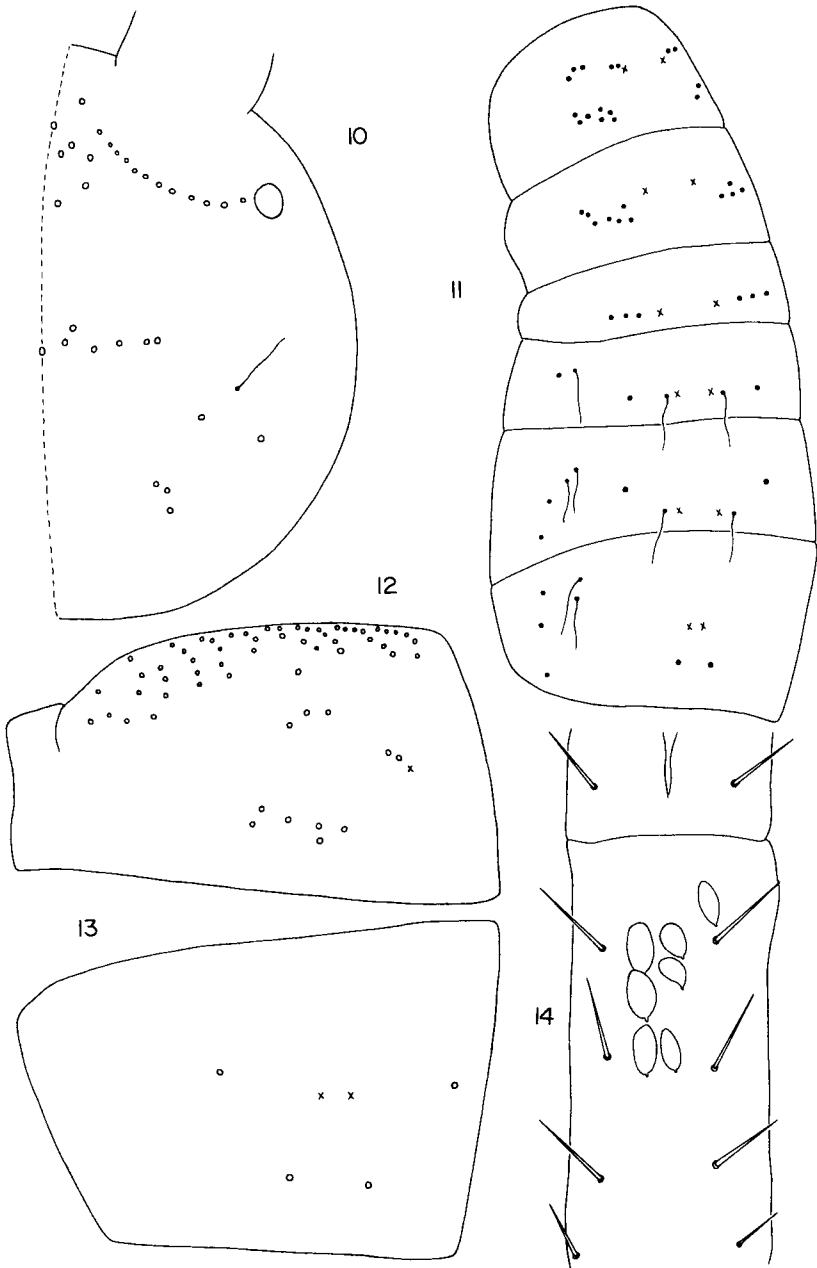
Description. Length to 1.8 mm. Light orange pigment dispersed over head and body (Fig. 1) or pigment restricted to eye patch. Apex of fifth antennal segment without a retractile papilla or pin seta but with 1 conspicuous, apically dilated J-shaped seta (Fig. 5). Head macrochaetotaxy as in Figure 10. Eyes 1+1. Prelabral and labral setae smooth. Outer labral papillae domelike, inner papillae conelike (Figs. 3, 4). Setae of anterior labial row smooth; posterior row with 2 ciliated setae, 3 smooth setae and 2 scales (Fig. 9). Basal seta of maxillary palp slightly thicker than apical seta (Fig. 7). Differentiated seta of outer labial papilla short and thick (Fig. 2). Along cephalic groove 2+2 smooth setae (postlabial quadrangle) and near posterior margin of head 2+2 or rarely 3+3 ciliated setae; other setae on venter of head smooth or ciliated. Body macrochaetotaxy as in Figure 11. All tibiotarsal setae ciliated. Unguis with basal pair of winglike teeth and no unpaired teeth (Fig. 6). Unguiculus with large outer tooth. Dorsum of manubrium with many scales, ciliated setae and 4+4 smooth erect setae (Fig. 14); 2 similar smooth setae on base of dentes. Dental spines absent. Mucro (Fig. 8) without basal spine.

Diagnosis. This new species, and the one described below, are the only members

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Figs. 1-9. *Heteromurus (Heteromurtrella) greensladeae*. 1. Habitus and distribution of light orange pigment. 2. Outer labial papilla. 3-4. Labral papillae; 3. anterior view, 4. ventral view. 5. Apex of fifth antennal segment. 6. Metathoracic claws. 7. Maxillary palp. 8. Mucro. 9. Labial chaetotaxy.





Figs. 10-14. Figs. 10, 11, 14. *Heteromurus (Heteromurtrella) greensladeae*. Figs. 12, 13. *H. (H.) affinis*. 10. Head macrochaetotaxy. 11. Body macrochaetotaxy (setae on anterior margin of Th. 2 omitted) and distribution of pseudopores (x). 12. Macrochaetotaxy of second thoracic segment. 13. Macrochaetotaxy of fourth abdominal segment. 14. Distribution of smooth setae and some scales on dorsum of manubrium.

of the subgenus *Heteromurtrella* with labial scales. *Heteromurus greensladeae* is similar to *H. nitens* Yosii 1960, a species described from the Tonga Islands and whose labial chaetotaxy is unknown. The unguis of *H. nitens* has an unpaired inner tooth that is absent in specimens of *H. greensladeae*.

Material examined. Sulawesi Utara (Celebes), Dumoga-Bone National Park, '1440' camp, 211 m, 2-7.x.1985, pitfall traps, leaf litter and moss. Holotype and 5 paratypes on slides, 29 paratypes in alcohol. Dumoga-Bone National Park, Mogananipa summit, 1,008 m, 22-24.ix.1985, pitfall traps, leaf litter and moss, 9 paratypes on slides and 34 in alcohol.

***Heteromurus (Heteromurtrella) affinis*, new species**

This species is identical to *H. greensladeae* except for two details of the body chaetotaxy. The second thoracic segment of *H. affinis* lacks the innermost posterior macrochaeta present in *H. greensladeae* (cf. Figs. 11, 12) while the fourth abdominal segment has an extra macrochaeta that is absent in *H. greensladeae* (cf. Figs. 11, 13). These differences may be minor and could simply reflect geographic variation but until both setal patterns are found within a population or intermediate forms appear I prefer to regard both forms as separate species.

Material examined. Sulawesi Utara (Celebes), G. Muajat, 1,760 m, 16.ix.1985, H. Huitbregts col., holotype and 4 paratypes on slides, 2 paratypes in alcohol. G. Muajat, below summit, 1,780 m, 1985, Hornabrook, col., 1 paratype on slide. Danau Mooat, nr. Kotamobagu, 1,200 m, viii.1985, Hornabrook, col., 1 paratype on slide. As preceding but collected 11.ix.1985 by P. Greenslade, 1 paratype on slide.

Heteromurus (Alloscopus) tenuicornis Börner

This species was previously known from Indonesia (Java and Sumatra), the Philippine Islands (Luzon), Micronesia and Hawaii. In the Philippine Islands the species exists in two forms (Mari Mut, 1985). The Sulawesi specimens belong to the form with labial setae M1 and e smooth, and all setae on the venter of the head also smooth. Specimens of this Philippine form also possess 4+4 smooth setae on the manubrium. In some Sulawesi specimens there seem to be only 2+2 smooth manubrial setae but other individuals possess at least 3+3 setae.

Material examined. Sulawesi Utara (Celebes), Dumoga-Bone National Park, 200-300 m, 27.ix-7.x.1985, pitfall traps, 2 specimens on slides and 4 in alcohol. Hogs Back, 492 m, litter, 24.ix.1985, 2 specimens on slides and 6 in alcohol. As preceding but at 400-500 m, 14.x.1985, 1 specimen on slide. The Maze, second stream, under stones, 9-10.x.1985, 2 specimens on slides.

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