

A New *Dicranocentrus* from Thailand, Redescription of *D. fasciatus* Yosii and Records for Two Other Species of Orchesellinae (Collembola: Entomobryidae)

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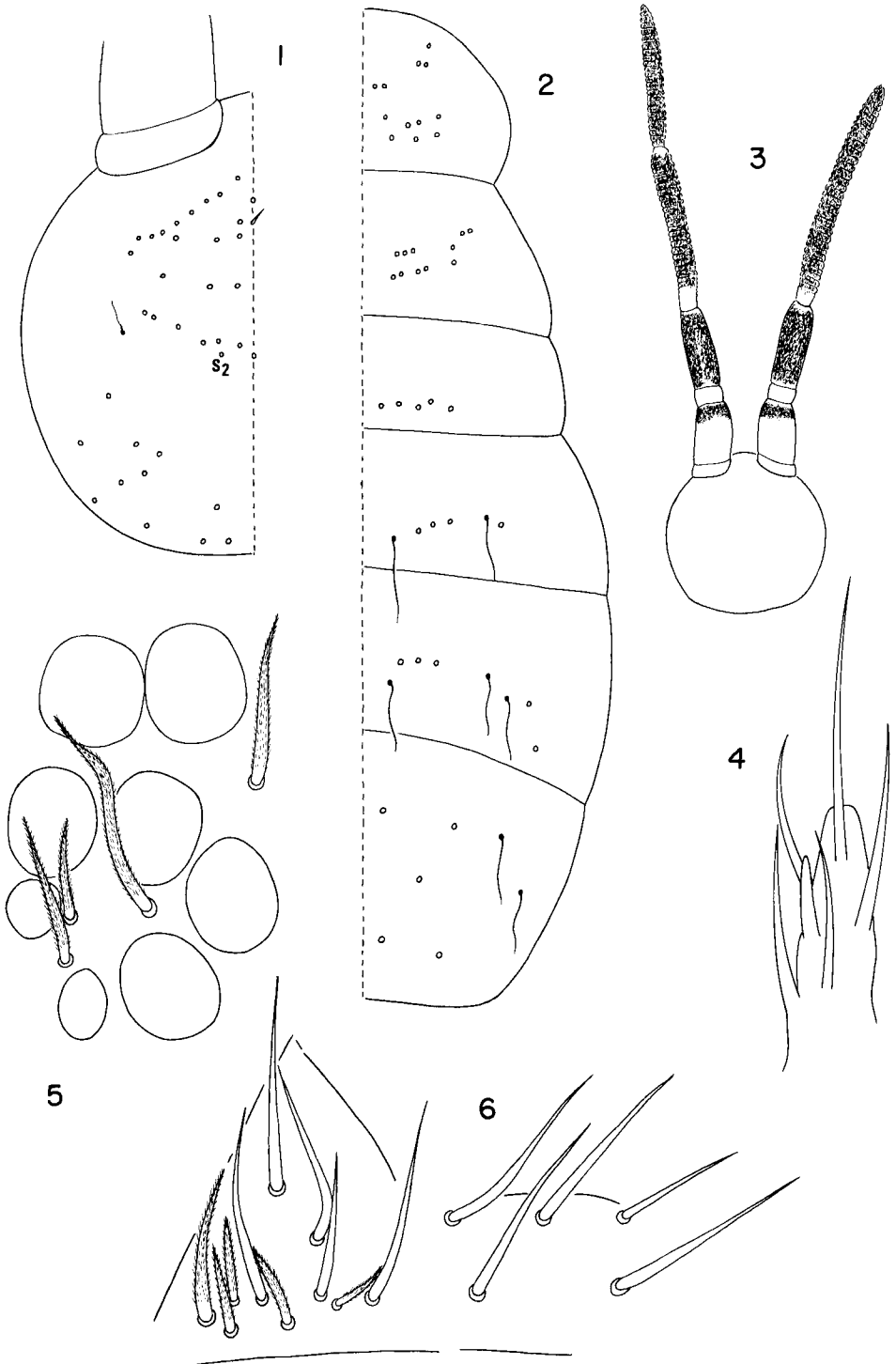
ABSTRACT: *Dicranocentrus yoshiius*, n. sp. is described from a specimen collected near Chiang Mai, Thailand. *Dicranocentrus fasciatus* Yosii, 1961, a species unreported since its description, is redescribed. Remarks on the variation of the coloration of *Dicranocentrus thaicus* Yosii, 1961 are given. *Heteromurus (Alloscopus) tetracanthus* (Börner) 1906 is reported for the first time from Thailand.

The expeditions to Thailand organized by Louis Deharveng (CNRS, Université Paul Sabatier, Toulouse, France) and his colleagues have produced a large number of species belonging to all families of Collembola (Deharveng, 1986; Deharveng et al., 1986). This paper supplements my previous two contributions (Mari Mutt, 1985a, b) describing the Orchesellinae gathered during these visits. All the material studied is deposited in my collection.

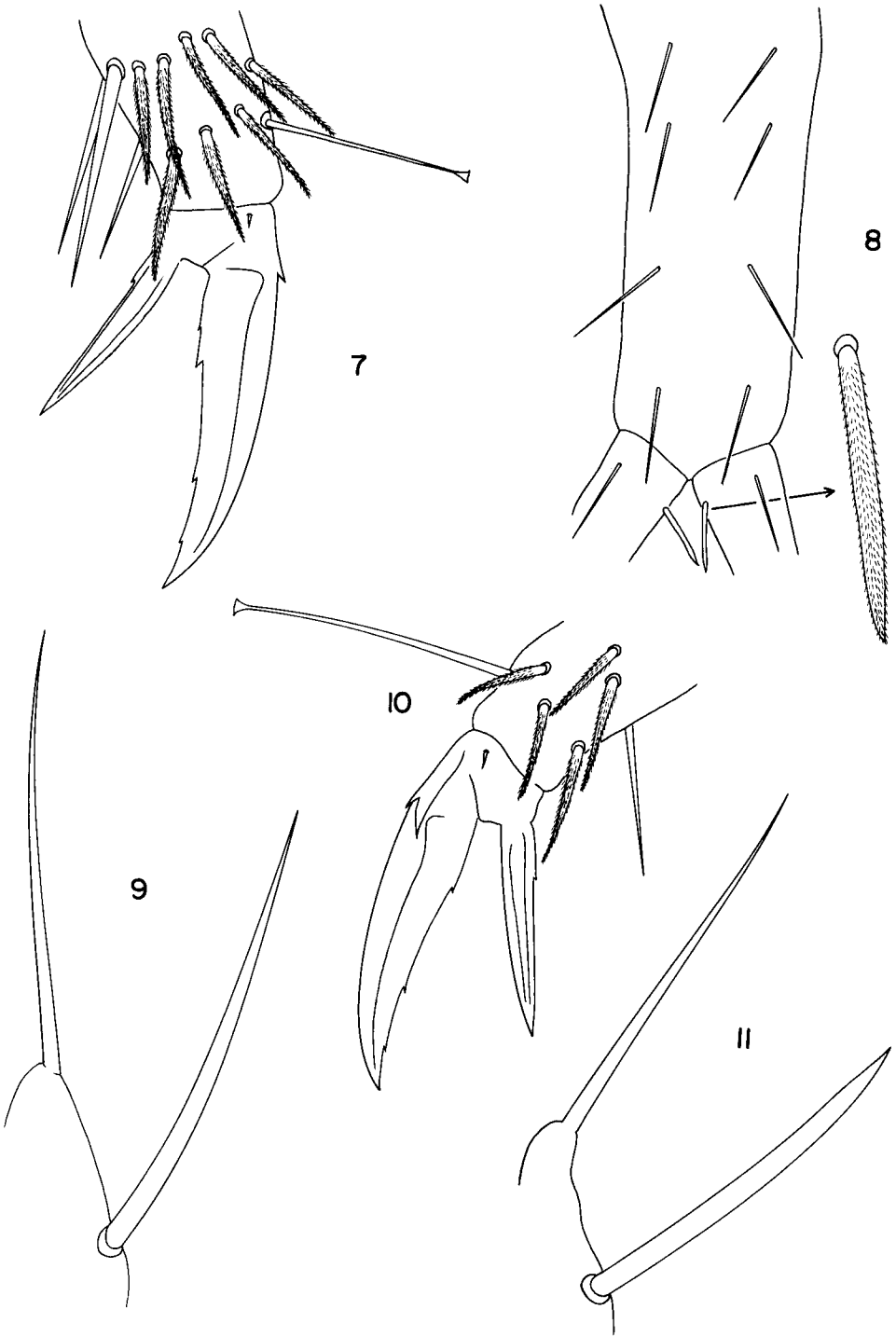
Morphological abbreviations such as Ant. 2, Th. 2, Abd. 2, etc. used in the descriptions stand for second antennal segment, second thoracic segment, etc.

Dicranocentrus yoshiius, new species

Length 2.0 mm. Head and body intensely blue. Ant. 1, Ant. 3, proximal $\frac{2}{3}$ of Ant. 2 and proximal portion of Ant. 4 unpigmented; rest of antenna deep blue (Fig. 3). Legs yellow except for coxae and small spot on apex of hind femur; furcula yellow. Apex of Ant. 6 with large subapical 2- or 3-pointed pin seta. Antennae $3 \times$ length of head. Ant. 5 not much longer than Ant. 6. Head macrochaetotaxy as in Fig. 1, seta S2 present. Eyes g and h reduced; interocular chaetotaxy as in Fig. 5. Prelabral and labral setae smooth. Labral papillae as in *D. fasciatus*, ending in sharp points. Setae of maxillary palp similar in length, subapical seta not as thick as in *D. fasciatus* (cf. Figs. 9, 11). Maxillary lobe with 3 smooth setae. Differentiated seta of outer labial papilla fairly thick, not reaching apex of papilla (Fig. 4). Labial chaetotaxy as in Fig. 6, posterior row without scales. Venter of head with many scales and sharply pointed smooth setae, and with few ciliated setae anteriorly and posteriorly. Near posterior margin of head on both sides of median groove $2+2$ smooth setae. Trochanteral organ rectangular, with 32 smooth slender setae. Distal third of inner margin of all tibiotarsi with 6-7 smooth setae. Outer unguual teeth small. Inner unguual lamellae with a very small tooth anterior to normal paired teeth (Fig. 7). Distal unpaired unguual tooth sometimes extremely reduced. Position of inner unguual teeth identical in all legs. Unguiculus with a minute outer tooth. Tenent hair slender, clavate. Body macrochaetotaxy as in Fig. 2. Anterior face of colophore with some scales and extremely finely ciliated setae, and $2+2$ apical long ciliated setae. Tenaculum with



Figs. 1-6. *D. yoshiius*. 1. Head macrochaetotaxy. 2. Body macrochaetotaxy. 3. Pigmentation of antennae. 4. Outer labial papilla. 5. Eyes and interocular setae. 6. Labial chaetotaxy.



Figs. 7-11. 7-9. *D. yoshiius*. 7. Metathoracic claws. 8. Distribution of smooth setae on dorsum of manubrium; arrow details the large ciliated seta present on the dental lobe. 9. Maxillary palp. 10, 11. *D. fasciatus*. 10. Metathoracic claws. 11. Maxillary palp.

1 seta. Dorsum of manubrium with few scales, many ciliated setae and 4+4 erect smooth setae (Fig. 8); 1 pair of smooth setae on proximal portion of dentes. Dental lobe with a conspicuous ciliated seta. Dental spines absent. Mucro with basal spine. Presence or absence of smooth setae on anal valves could not be determined.

DIAGNOSIS: The only other *Dicranocentrus* that possess head macrochaeta S2 and 5+5 macrochaetae on Abd. 1 are *D. lawrencei* Mari Mutt, 1979 (Solomon Islands) and *D. sundanensis* Schött, 1925 (Malaya, Sarawak, Vietnam). The new species differs from them in the number of posterior head macrochaetae (9 vs. 6), number of posterior macrochaetae on Th. 2 (7 vs. 8), number of macrochaetae between the bothriotracha of Abd. 2 (3 vs. 2), and by its clavate tenent hairs. Absence of dental spines and presence of smooth setae on outer margin of tibiotarsi, coloration, and number of macrochaetae between the bothriotracha of Abd. 3 also distinguish the new species from one or another of the aforementioned species.

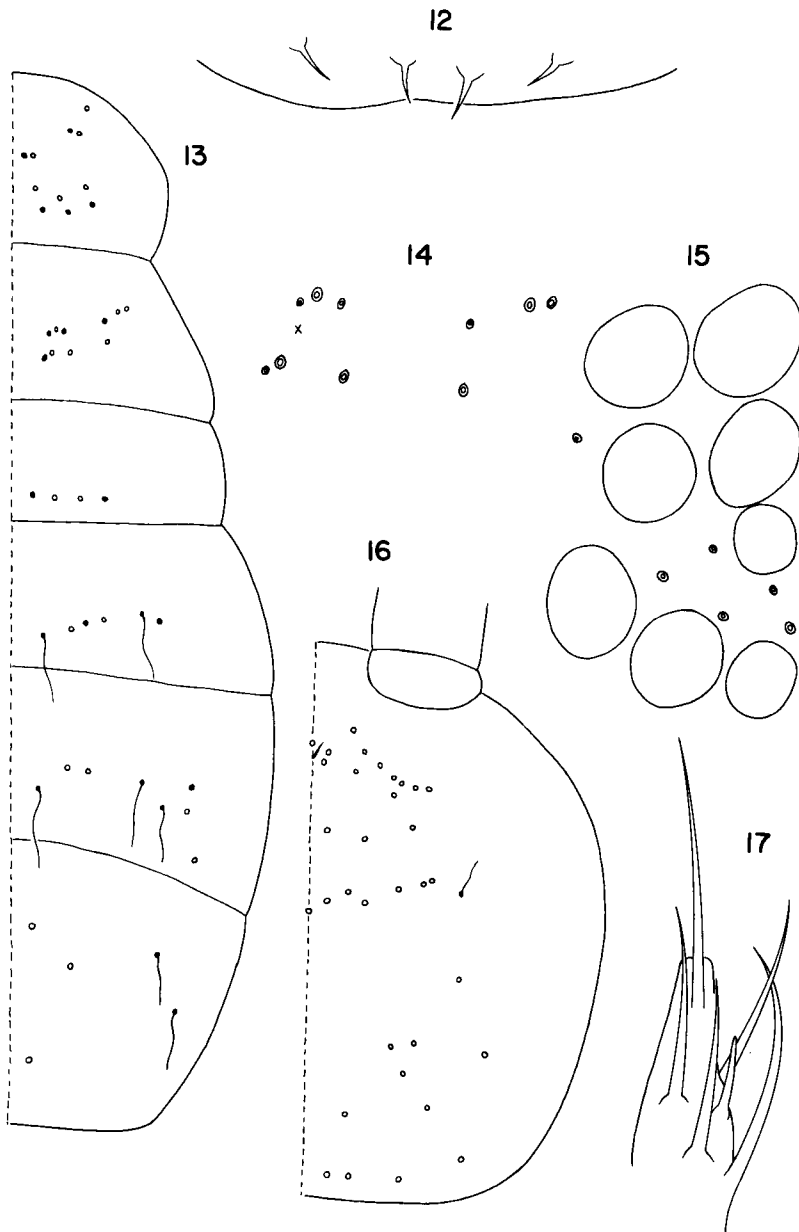
COMMENT: This species is named after Dr. Ryozo Yoshii, who pioneered the study of the Collembola of Thailand.

MATERIAL EXAMINED: Thailand, Chiang Mai, Multhathan, 1330 m, 22.IX.1985, Paitoon Leksewadi, col. Holotype.

Dicranocentrus fasciatus Yosii, 1961

Length to 2.6 mm. Body with transverse bands of pigment on Th. 3, Abd. 3 and posterior portion of Abd. 4 (Yosii, 1961:178, fig. 5A). Pigment also on sides of thorax, on coxae, on femora of hind legs and on all tibiotarsi. Some specimens have reduced pigment on body and only dorsolateral spots remain; others lack all pigment except for sides of thorax and legs. Antennae accidentally missing last 2 segments on specimens in the collection. Head macrochaetotaxy as in Fig. 16. Eyes g and h not greatly reduced; interocular chaetotaxy as in Fig. 15. Prelabral and labral setae smooth. Labral papillae (Fig. 12) ending in sharp points. Subapical seta of maxillary palp thicker than apical seta (Fig. 11); maxillary lobe with 3 smooth setae. Differentiated seta of outer labial papilla short, its apex far behind apex of papilla (Fig. 17). Setae of anterior labial row smooth. Posterior labial row internal to seta e with 4–5 ciliated setae and no smooth setae or scales; setae e and 12 smooth, L1 ciliated. Venter of head with scales, many ciliated setae and an occasional smooth seta in row of setae parallel to posterior margin of labium. Near posterior margin of head, on both sides of median groove, 2+2 finely ciliated setae. Trochanteral organ rectangular, with about 60 smooth slender setae. Tibiotarsi without smooth setae. Outer unguual teeth large. Inner unguual teeth very small; basal teeth and first unpaired tooth displaced proximally in first and second pair of legs. Unguiculus with a minute outer tooth. Tenent hair clavate. Body macrochaetotaxy as in Fig. 13. Anterior face of colophore with scales, 10–16 extremely finely ciliated short setae and 2+2 apical long ciliated setae. Tenaculum with 1 seta. Dorsum of manubrium with scales and ciliated setae, smooth setae absent. Dental lobe with a fairly long erect ciliated seta. Dental spines absent. Mucro with basal spine. Lateral anal valves without smooth setae.

COMMENTS: The body macrochaetae are either long or short (see legend for Fig. 13). Figure 14 details the relative diameters of the insertions of the macrochaetae on Th. 3. In 1981, I pointed out that the disappearance of some or all of the smaller macrochaetae in Th. 2 and Th. 3 of *Dicranocentrus deharvengi* would



Figs. 12–17. *D. fasciatus*. 12. Labral papillae. 13. Body macrochaetotaxy; large open circles represent long setae, small dots represent short setae (the diameter of the insertions is related to the length of the setae). 14. Relative diameters of the macrochaetae of Th. 3. 15. Eyes and insertions of interocular setae. 16. Head macrochaetotaxy. 17. Outer labial papilla.

produce the setal pattern of other species of the genus. Since the same setae are involved in *D. fasciatus*, it seems that some setae are more “dispensable” than others.

MATERIAL EXAMINED: Thailand, Chiang Mai, Multhathan, 720, 1130 and 1330

m, 13.IX.1985, Paitoon Leksewadi, col., 1 specimen on slide and 4 in alcohol. Chiang Mai, Doi Suthep, 1270 m, 5.XI.1985, Löbl, col., 2 on slides. Chiang Mai, Doi Inthanon, 1700 m, 1.VIII.1985, P. Lèclerc, 1 in alcohol.

Dicranocentrus thaicus Yosii, 1961

The specimens at hand match very closely my recent redescription of the species (Mari Mutt, 1985a), except for the presence of more blue color over the body. The pigment is not as intense as in *D. yoshiius* but it is nevertheless conspicuous, especially in individuals which have lost many scales. A large specimen from Multhathan, 1330 m, is uniformly blue over head, body and legs and possesses a median dorsal longitudinal line from posterior half of Th. 2 to posterior margin of Abd. 4, where it broadens to become V-shaped. This median line is flanked on both sides by a fine dorsolateral band that extends from Th. 3 to the anterior third of Abd. 4. In all specimens the dental lobe has many medium-sized ciliated setae but no outstanding seta like the one on the dental lobe of *D. yoshiius* (Fig. 8).

MATERIAL EXAMINED: Thailand, Chiang Mai, Multhathan, 530 to 1530 m, 13.IX.1985 to 22.IX.1985, Paitoon Leksewadi, col., 2 specimens on slides and 28 in alcohol. Chiang Mai, Doi Inthanon, 1700 m, 1.VIII.1985, P. Lèclerc, col., 1 specimen in alcohol. Same but 2500 m, L. Deharveng, 3 in alcohol.

Heteromurus (Alloscopus) tetracanthus, Börner 1906

Specimens agree very closely with my previous reports of this species (Mari Mutt, 1978, 1982, 1985b) but the following variation was observed. A slender sharply pointed pin seta is present on the apex of Ant. 5; it can be distinguished from adjoining smooth setae only by its lack of an insertion. The base of the labium has 1+1, 1+2 or 2+2 small scales. Each lateral anal valve has 3 smooth setae.

MATERIAL EXAMINED: Thailand (new record), Chiang Mai, near Doi Suthep, 3.IX.1985, L. Deharveng, col., 2 specimens on slides and 3 in alcohol.

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