

RESUSCITATION OF *TRICHORYPHA* SCHÖTT, 1893 (COLLEMBOLA : ENTOMOBRYIDAE)

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INTRODUCTION

The genus *Trichorypha* is long known to be a synonym of *Paronella* Schött, 1893. It was established by Schött (1893) with the type-species *Trichorypha atrofasciata* simultaneously with two other genera, viz. , *Paronella* and *Campylothorax* from Cameroons, Africa. He understood the striking difference in the mucronal structure of *Paronella* and *Trichorypha* and thus established the genus.

Schäffler (1898) considered *Trichorypha* as identical with *Paronella*. Schött (1901), however, opined that a precise investigation is needed to confirm Schaffer's contention. In the same publication, he further mentioned that *T. atrofasciata* possessed 8+8 ocelli and not 6+6, as noted by him earlier (Schött, 1893) [*vide*, foot-note, p. 322].

Schött (1903, 1927), however, synonymised *Trichorypha* with *Paronella* and thus treated the species *atrofasciata* under *Paronella*. Denis (1933), Womersley (1934) and Salmon (1964, 1965) accepted this synonymisation of *Trichorypha* with *Paronella* and they placed *atrofasciata* under the genus *Paronella*.

Schött's (1903) justifications as to the synonymisation of *Trichorypha* with *Paronella* are not sound. It is now evident from this study that Schött was not aware of many outstanding characters possessed by *Paronella fusca* (type species of *Paronella* Schött, 1893) which are altogether absent in *Trichorypha* (Mitra, 1992). *Trichorypha* Schött, as the present study on the basis of syntypes of *Trichorypha atrofasciata* reveals, is a good genus in the possession of many characteristics which do not agree in any way either with *Paronella* or *Dicranocentruga*. A few of such characters are as follows : (i) large paronelline body facies with antennae longer than body; (ii) extra ocular structure absent; (iii) absence of distinct spines on manubrium and dentes being armed with single row of dental spines transiting distally into stiff setae; (iv) number and nature of macrochaetae anteriorly on the anterior face of ventral tube and (v) structure of ungues and mucrones.

Trichorypha is a valid genus and it is to be resuscitated owing to the nature of scalesclothing body, absence of flexed obliquely truncated macrochaetae (achaetoc body), absence of extra ocular structure in addition to the other characters, mentioned above. A redefinition of the genus is given below.

Genus *Trichorypha* Schött, 1893 (Status Nov.)

Trichorypha Schött, 1893, *Bih. Svenska, Ak.*, **19**(2) : 1-28; 1903, *Redögorelse för Allmänna Laroverken I Linköping. Eksö och Vadstena*, Underläsaret 1900-1903 : III-XVI.

Trichorhypha Handschin (*lapsus* for *Trichorypha*), 1925, *Treubia*, **6** : 225-270.

Tricorypha Salmon, 1964, *Bull. Roy. Soc., N. Z.* (7)**2** : 145-644; Salmon, 1965, *Bull. Roy. Soc., N. Z.*, (7) **3** : 645-651 (*lapsus* for *Trichorypha*).

Material : 3 slide-preparations (Nos. 1239-1241) of Schött from the Swedish Museum Natural History, Stockholm, Sweden (Syntypes).

Redefinition : Large species with paronelline body facies cf. the species of *Callyntrura*; antennae longer than body; frontal spines absent; ocelli 8 + 8, arranged in two longitudinal parallel rows; extra ocular structure absent; thorax normal, not humped; unguis and unguiculi long, slender; unguis with paired inner teeth, small, unpaired distal teeth moderately developed, external basolateral teeth small; unguiculi sublanceolate; tenent hair slender, clavate; ventral tube well developed with 4 distinct macrochaetae anteriorly on its anterior face; manubrium subequal to dentes; mucro short, broad, almost triangular in outline and with four teeth; manubrium without spines, dentes with an inner row of spines transiting distally into stiff setae; dental scale appendage absent; body clothed with hyaline typical scales with round apices; flexed obliquely truncated macrochaetae absent.

Type-species : *Trichorypha atrofasciata* Schött, 1893, by monotypy.

DESCRIPTION OF THE TYPE-SPECIES*Trichorypha atrofasciata* Schött, 1893

1893. *Trichorypha atrofasciata* Schött, *Bih. Tillk. Svenska. Vet. Akad. Handl.* **19**(2) : 1-28.

1903. *Paronella atrofasciata* Schött, *Redögorelse för Allmänna Laroverken I Linköping. Eksö och Vadstena*. Underläsaret 1902-1903, pp. III-XVI; 1927, *Medd. Linköping högre allm. laroverks Redögörelse*, pp. 1-39; Denis, 1933, *Boll. Lab. Zool. Portici.* **27** : 222-322; Womersley, 1934a, *Ann. Sth. Afr. Mus.*, (3), **30** : 441-475; Salmon, 1964, *Bull. Roy. Soc. N. Z.* (7)**2** : 145-644.

Material : Slide No. 1239, labelled as "*Paronella atrofasciata* H. S. Kamerun, furcula" Slide No. 1240, labelled as "*Paronella atrofasciata* Schött, Kamerun, Ommatidia" Slide No. 1241, labelled as "*Paronella atrofasciata* Kamerun, Tibiotarsus" from the Swedish Museum (Natural History), Stockholm, Sweden (All syntypes).

Colouration : Ground colour yellowish, blue-black patches present laterally on Ths. II, III, Abds. I, II; Abd. IV anteriorly with certain longitudinal strands of same pigment uniting posteriorly with a blue-black patch on each side of the segment; postocular region with a blue-black patch on either side; antennae and legs lightly pigmented.

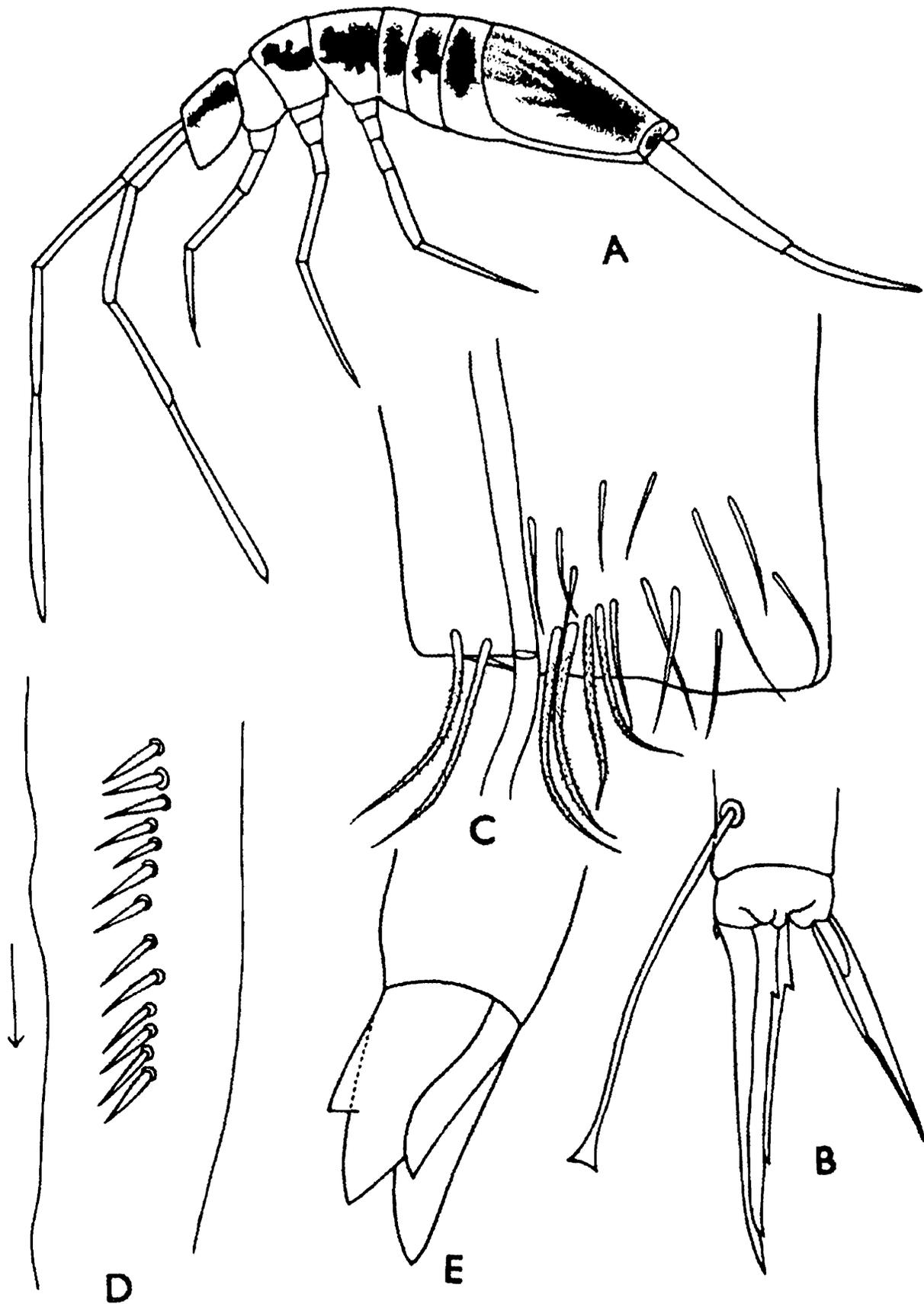


Fig. 1. Structural details of *Trichorypha atrofasciata* Schött. (A) profile; (B) footcomplex of leg III; (C) chaetotaxy of the anterior face of ventral tube; (D) a portion of dentes showing arrangement and nature of spines; (E) mucrone (All from syntypes examined).

Clothing : Body clothed with larger rounded, elongate or oval hyaline scales; setae of any kind absent on Th. III and Abd. I; Th. II, Abds. II, III, IV with some localised, short setae (presence of these can be determined from the sockets only) [Text Fig. 2].

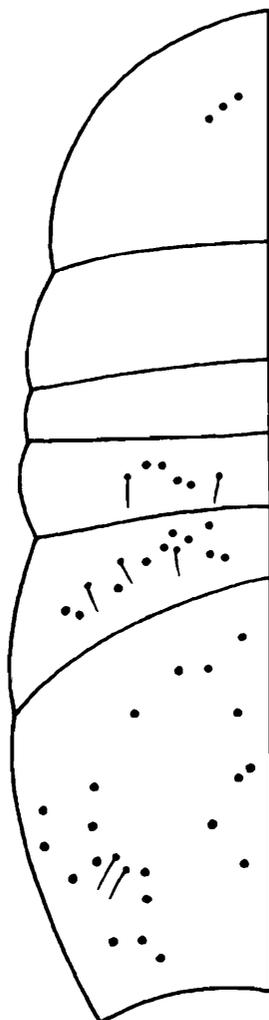


Fig. 2. Chaetotaxy of Ths. II, III and Abds. I-IV of *Trichorypha*.

Head : More or less pear-shaped in outline dorsally; 8 + 8 ocelli in 2 dark ocellar patches, each group of ocelli arranged in two longitudinal parallel rows, ocelli G and H reduced; extra ocular structure absent; frontal spines absent; antennal segments not complete in the material examined.

Thorax : Prothorax reduced, mesothorax little less than half of the metathorax; legs similar, tibiotarsi not segmented; unguis slender, elongate, inner paired basal teeth and 2 distal unpaired teeth small, moderately developed, external basolateral teeth reduced; unguiculi sublanceolate, inner truncate-angle little pronounced; tenent hair long, slender, clavate (Fig. 1, B); trochanteral organ not seen.

Abdomen : Abds. I and II sub-equal in length, Abd. III little longer than abds. I and II; Abd. IV more than four times the length of Abd. III; ventral tube well developed, anterior face of ventral tube anteriorly with 4 conspicuous, ciliated macrochaetae, rest of the anterior and posterior faces with long, slender, apparently smooth setae (Fig. 1, C); manubrium sub-equal to dentes, without

spines; dentes with an inner row of spines, spines transit distally (Fig. 1, D); mucro short, broad, rectangular in outline, with 4 teeth; dental scale appendage absent.

Length (excluding appendages) : 3 mm.

Type specimens : Schött (1893) did not select any type of *Trichorypha atrofasciata*. Examination of 3 slides at disposal, as mentioned in material, indicates that all such material came from the type-locality. It is not known from the literature that Schött ever examined any other freshly collected material other than the specimens on which he (Schött, 1893) based the description of the species. However, the name *Paronella atrofasciata* is inscribed on each of the 3 slides examined and this appears to be a subsequent amendment of the name-labels on the slides. The investigator takes here an opportunity to designate the Slide No. 1239, on which the furcula is mounted, as the lectotype of the species.

Type-locality : Bonge, Cameroons ("Kamerun" of Schött, 1893), Africa.

Comparisons : The genus is known by its type-species only.

Interrelationships : *Trichorypha* though occurs in Africa, it shows little resemblance to the other African genera viz. *Paronella*, *Dicranocentruga* and *Campylothorax* in the absence of E. O. S. It resembles apparently to *Dicranocentroides* in a few characters like the absence of extra ocular structure and frontal spines and in the presence of relatively broad mucrones. However, the dentition of mucrones in the two genera is altogether different. Further, *Trichorypha* differs from *Dicranocentroides* in the possession of a clothing of typical scales and in achaetotic body. *Trichorypha* is distinct from *Bromacanthus*, *Lepidonella* and *Microparonella* in its mucronal structure and in the nature of arrangement of ocelli. Furthermore, the body facies and chaetotaxy of ventral tube in *Trichorypha* make it distinct from those related genera.

SUMMARY

Trichorypha Schött (1893) is not a synonym of *Paronella* Schött (1893). Examination of the syntypes of *Trichorypha atrofasciata* (type species) proves that *Trichorypha* is a valid genus and differs from *Paronella* in its paronelline bodyfacies, absence of manubrial spines and in the nature of a dental spines transiting distally into stiff setae, absence of extra ocular structure and other important morphological features radically different from *Paronella*. *Trichorypha*, therefore, is resuscitated in this investigation as a valid genus.

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