

A Freshwater Isopod from Calcutta.

By the Rev. T. R. R. STEBBING, M.A., F.R.S., Sec.L.S.

(PLATE 6.)

[Read 17th January, 1907.]

THE interest of the specimens about to be described lies more in the novelty of their habitat than in any striking features of specific distinction. Dr. Annandale, writing on the 24th October, 1906, says:—"The species is evidently rare, as the three specimens are the only ones I have been able to find in a very large number of sponges examined. The two smaller ones were found last week in the same pond, while the larger one came from a different pond last month. I am working at the freshwater sponges of this district and their inquilines, so that I am very anxious to have the different species found associated with the sponges identified."

It may be noticed that the true limits of the family *Corallanidæ*, to which these specimens belong, have only recently become susceptible of definition through the researches of Mr. Stanley Gardiner in the Maldivé and Laccadive Archipelagoes and those of Dr. Willey at Ceylon. The scarcity of a species often disappears when the attention of naturalists has been directed to it, but for the moment we have the singularity of an apparently rare species of an uncommon family presenting itself under conditions which are not very usual for the order of isopods in general.

Family CORALLANIDÆ.

1904. *Corallanidæ*, Stebbing, in Gardiner's Fauna of Maldivé and Laccadive Archipelagoes, vol. ii. pt. 3, p. 703.
 1904. *Corallanidæ*, Stebbing, Spolia Zeylanica, vol. ii. pt. 5, p. 13.
 1905. *Corallanidæ*, H. Richardson, Bull. U. S. Nat. Mus., No. 54, p. 156.

In her monograph on the isopods of North America, referred to above, Miss Richardson has incorporated in this family a new genus *Tridentella*, and the genus *Nalicora* published by H. F. Moore in 1902. Both of these genera have seven-jointed maxillipeds, the palp being distinctly five-jointed.

Genus TACHÆA, Schiödte & Meinert.

1879. *Tachæa*, Schiödte & Meinert, Naturhist. Tidsskr. ser. 3, vol. xii. p. 284.
 1890. *Tachæa*, Hansen, Vid. Selsk. Skr. ser. VI. vol. v. pt. 3, pp. 288, 314, 397.
 1904. *Tachæa*, Stebbing, in Gardiner's Fauna of Maldivé & Laccadive Arch., vol. ii. p. 703.
 1904. *Tachæa*, Stebbing, Spolia Zeylanica, vol. ii. pt. 5, p. 14.

In the species here described the maxillipeds are decidedly only six-jointed, but the terminal joint is longer than any one of the three joints immediately

preceding it, an unusual relation which supports the opinion that in this genus the diminished number of joints is due to a coalescence of the sixth and seventh.

TACHÆA SPONGILICOLA, sp. n. (Plate 6.)

Front of head bisinuate, with small median process. First segment of peræon with anterior margin not bisinuate; this segment centrally not much longer than any but the seventh. Peræon considerably longer than pleon, of which the first five segments are together shorter than the telsonic segment. This last is as broad as long, apically very broadly rounded in female, partially truncate in male; margins serrate, four setæ and eight spines. Eyes small, dark, widely separated.

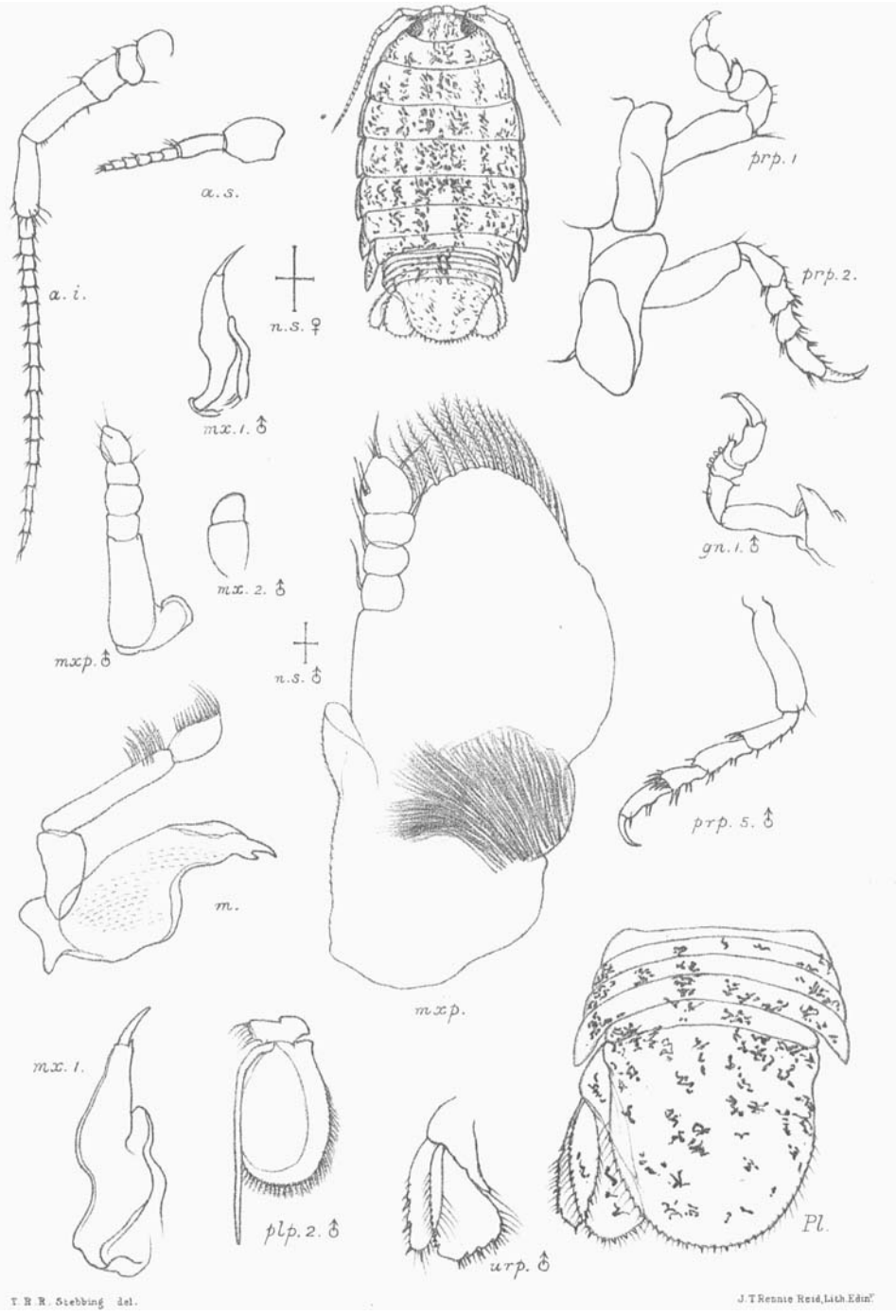
First antennæ having a much dilated first joint, slightly longer than broad, the second (or probably true third) joint being shorter and much narrower; the flagellum of seven short joints overlapping base of fifth joint in the second antennæ. In these the first three joints are short, the fourth a little shorter but stouter than the fifth; the flagellum sixteen-jointed, rather longer than the peduncle.

The mandibles end in a sharp tooth, with another inconspicuous one a little to the rear. The broadest part of the trunk follows the insertion of the palp which is very near the base, the first joint being the broadest, the third the shortest but with the largest number of spines. The surface of the trunk shows fish-scale markings under high magnification.

The first maxillæ have a rounded apex to the inner plate; beyond this the outer plate tapers to its strong single apical tooth. The second maxillæ have an undivided apical plate, as broad as long, broadly rounded distally.

The maxillipeds of the ovigerous female have the vibratory laminae of the first and second joints largely developed, with strong muscles. The lamina of the second joint is distally fringed with long plumose setæ, and is prolonged nearly to the end of the four-jointed palp. The first three joints of the palp are each broader than long, only the terminal joint being rather longer than broad; this, as above suggested, probably representing a union of two joints. One maxilliped in our specimen has a small mite with its mouth placed on the first joint of the palp and its body reaching half across the anterior vibratory plate. The maxillipeds of the male by the absence of the vibratory laminae have a very different appearance from those of the female. The palps, however, differ only slightly. In the female the palp's third joint is rather larger than the second; in the male the reverse is true; in both, the terminal joint is the largest in the palp.

The first gnathopods and two succeeding pairs of limbs are closely alike, with the fourth joint short and the fifth still shorter, the sixth robust, more so in the female than in the male, the trunk of the finger considerably longer than its well-defined unguis. The four following pairs of legs are successively



TACHÆA SPONGILLICOLA, n. sp.

longer, the fourth joint especially gaining in length, the fifth distally fringed with numerous spines.

The second pleopods of the male have the masculine appendix produced almost to a point much beyond the smooth inner plate and the broader and longer outer plate, which is fringed nearly all round with short plumose setæ.

The uropods have the inner angle of the peduncle well produced, apically armed with two setæ; the large inner ramus fringed with setæ and spines, distally truncate with oblique corners; the much narrower outer ramus similarly furnished, a little shorter, with apex obliquely truncate.

The specimens as preserved retain dark stellate markings distributed over the back in a roughly symmetrical pattern, the central group broad with occasional bare spaces, the marginal groups very irregular, and between these and the central group two narrow submedian lines.

The female specimen was 9 mm. long by 4.5 mm. broad; the male 5.75 mm. long by 2.75 mm. broad.

Locality.—Freshwater tank, Calcutta. Dr. Annandale found the specimens described, and a third smaller than either, in the canals of a freshwater sponge, *Spongilla carteri*, Bowerbank *, and to this choice of residence the specific name refers.

The hitherto known species of this genus are *Tachwa crassipes*, Schiödte & Meinert, from coral-reefs at Singapore, and *Tachwa incerta*, H. J. Hansen, of unknown locality. The latter author re-examined, and gave fresh figures and description of, *T. crassipes*, which he supposed to be founded on young specimens, probably of the female sex. His own species was founded on a female specimen, a very old and unfortunately a defective one. It was light brown in colour without dark blotches, but Hansen was uncertain whether that might not be due to the bad state of preservation. It appears to be distinguished from *T. crassipes* chiefly by a slenderer sixth joint in the first three thoracic limbs, and by having the telson distally rounded instead of truncate. In the freshwater species here described it is the male that has the slenderer limbs, but in the shape of the telson this sex agrees with *T. crassipes*, while the female in that respect agrees with *T. incerta*. Hence I am disposed to infer that *T. incerta* is not distinct from *T. crassipes*, and that *T. spongillicola* is a very near relation to the same species, distinguished chiefly by the terminal joint of the maxillipeds, but apparently also by having the limbs somewhat less spiny and the pleon shorter in comparison with the peræon. At some future opportunity it would be interesting to test by experiment whether the freshwater form could support life in sea-water.

* According to later information, the sponge may be a local race of *Spongilla lacustris* (Donati).

EXPLANATION OF PLATE 6.

TACHÆA SPONGILICOLA, sp. n.

n. s. ♀, *n. s.* ♂. Lines indicating natural size of female specimen seen in dorsal view at top of plate, and of male specimen from which some of the appendages are figured.

a. s., a. i. First and second antennæ of female.

m., mx. 1., mxp. Mandible, first maxilla, and maxilliped of female.

mx. 1 ♂, *mx. 2* ♂, *mxp.* ♂. First and second maxillæ and maxilliped of male.

pp. 1., ppp. 2. First and second peræopods of female.

gn. 1 ♂, *ppp. 5* ♂. First gnathopod and fifth peræopod of male.

Pl., plp. 2 ♂, *uwp.* ♂. Pleon of female, with one uropod omitted: second pleopod and uropod of male.

The mouth-organs are magnified to a higher scale than the other appendages.

On a new British Terrestrial Isopod. By ALEXANDER PATIENCE.
(Communicated by the Rev. T. R. R. STEBBING, M.A., F.R.S., Sec.L.S.)

(PLATE 7.)

[Read 17th January, 1907.]

Fam. TRICHONISCIDÆ.

Gen. TRICHONISCUS, *Brandt*, 1833.

TRICHONISCUS STEBBINGI, sp. n. (Plate 7.)

Body oblong oval in form, about two and a half times as long as it is broad. It attains the greatest width about half the total length. Dorsal face convex and very strongly tuberculated, the tubercles being arranged transversely in rows across the segments. Cephalon with the front obtusely rounded; lateral lobes moderately produced, and armed with two small spines on outer edge. Lateral parts of the segments of mesosome edged with very small spicules, which are concealed, however, in a fringe of short hairs; the lateral parts of the three posterior segments prominent, recurved, and acuminate. Metasome with the terminal expansion of last segment broadly and evenly rounded at the tip and armed with four triangular spines, the two central being the largest. Eyes consisting of three visual elements imbedded in dark pigment. Antennulæ with the last joint much longer than the second and having five to seven filaments. Antennæ about one-third the length of body, the flagellum being composed of from four to seven articulations. Left mandible with two, right with one, penicil behind the cutting