

8. Description of an Amphipod belonging to the Family Talitridæ, from the Woodbush, Transvaal. By PAUL A. METHUEN, F.Z.S.

[Received July 7, 1912 : Read November 26, 1912].

(Plates X. & XI.*)

Systematic :	INDEX.	Page
<i>Talitriator</i> , gen. nov.		109
<i>T. eastwoodæ</i> , sp. n.		110

A few months ago I received from Miss Audrey Eastwood some Gammarids from streams near Mr. Eastwood's farm, Clearwater, in the Woodbush, Northern Transvaal. Seeing that these are the first Gammarids recorded from the fresh-waters of South Africa other than near the sea, they are of some little interest.

The specimens sent belong to one species and to a family whose members, though they are usually littoral marine forms, have often been recorded from localities far from the sea and at some considerable altitude in other countries.

Thus *Talitrus sylvaticus* has been found in Tasmania up to a height of 760 metres on Mount Wellington, and *Chiltonia* in New Zealand in mountain streams up to 450 metres and more. The genus *Hyalella* is restricted to fresh-waters, occurring according to Stebbing (in 'Das Tierreich') "in depths above the sea-level extending to 4053 metres"; thus in South America, Lake Titicaca supports a number of deep-water forms.

We can probably derive most of the fresh-water species in this family directly from marine ancestors. In the Cape some littoral marine forms do actually ascend for a short way up streams near the coast. But until this record from the Woodbush none had been discovered at any distance from the sea.

I think we can safely say that this new species has been independently derived from a marine form. Though a new genus has been made for its reception, yet it is very closely related to the genus *Talitrus*, in which genus it may have to be included eventually.

The fact that there is an Amphipod in this country which thrives in mountain streams at least in one locality is very suggestive as to what might be done to increase its numbers and range for the purpose of trout food; and I think no one would dispute its value for this purpose.

Genus TALITRIATOR, gen. nov.

Diagnosis.—Like *Talitrus* except for the fifth side-plate and the following characters:—

Antennule is slightly shorter than peduncle of antenna. The

* For explanation of the Plates see p. 112.

fourth joint of the maxilliped is present. Gnathopod I not so long as gnathopod II and not stronger; fifth joint strong and swollen.

TALITRIATOR EASTWOODÆ, sp. n. (Pls. X. & XI.)

Length, not counting antennæ, with pleon bent 7.2 mm.; no striking difference between the male and female.

Antennule (Pl. X. fig. 1).—The third joint slightly the longest. On the surface each joint carries distally two fairly long bristles. On the upper surface opposite the ventral groups of setæ are groups of bristles, shorter than those borne ventrally, each group either of two or three bristles; on the basal joint a single bristle. The last segment, which is very short, carries two stiff bristles. The number of segments is nine or ten.

Antenna (Pl. X. fig. 2).—Penultimate joint of peduncle is nearly twice the length of the proximal joint; the distal nearly twice the length of the penultimate. All the segments of the flagellular part are provided distally with a whorl of bristles, there being four groups generally to each segment, three bristles to each group. The last segment ends in a compact group of fine bristles.

Upper lip (Pl. X. fig. 3) rounded, with numerous hairs at the extremity.

Lower lip (Pl. X. fig. 4).—The lobes with long and short setæ; the mandibular processes, which are fairly well developed, possess minute setæ.

Mandible.—Palp absent: otherwise normal.

Maxillula.—Much as in *Tabitrus*, with nine claw-like toothed-bristles—five larger and four smaller—furnishing the outer plate. The inner plate with two setose spines, and a few hairs proximally along the inner margin. The palp exceedingly small, with hairs on outer margin; it is apparently two-jointed, the distal joint a minute glabrous blunted spine.

Maxilla.—As for *Tabitrus locusta*, normal.

Maxilliped (Pl. X. fig. 5).—Inner plates are remarkable in that they are furnished with three glabrous acorn-shaped processes on each side; they bear also a number of setose spines. The palp is four-jointed.

Gnathopod I (Pl. X. fig. 6).—Coxal plate narrow, with a few spines of unequal size on the ventral margin; the other six joints armed with a few spines on both margins, longest on the fourth joint. Fifth joint swollen. Sixth joint with six stout, slightly curved spines on the posterior margin and one slightly smaller than the other six, together with small bristles at the base of most of these spines.

Gnathopod II (Pl. X. fig. 7).—Coxal plate excavate behind with conical projection; lower border armed with short stout spines. The second joint is not swollen or expanded; it is much longer than any of the other joints. The third joint is narrower than the second, slightly swollen about the middle of anterior

margin; two small spines on posterior margin distally. The fourth joint short, the shape of a rhombus, with setose cushion on posterior margin and two stout bristles just behind the cushion. The fifth joint longer than the third or sixth, broadest at its distal base, and expanded also about the middle; a setose cushion extending along nearly the whole of the free posterior margin; a thickened chitinous enlargement on the distal part of the cushion; four bristles just behind the cushion placed subequidistant apart. The sixth joint nearly as long as the fifth; the posterior margin also with minute setæ. Behind the setose part a number of stout bristles.

Pereiopod I.—Not quite as long as pereiopod II, the coxal plate like that of gnathopod II, excavate behind with conical process. The second joint linear; the third joint shortest and convex behind; the fourth joint linear, broadest distally; the fifth and sixth joints linear. The sixth joint longer and much narrower than the fifth; the last joint small, with claw.

All the joints with spines which are most numerous on the anterior margin of the appendage.

The costegites are rather small lanceolate structures which are twisted and bent inwards; each carries about ten setæ.

Pereiopod III (Pl. XI. fig. 8).—Coxal plate unlike the preceding, bilobed, with a few spines. The second joint swollen, posterior margin convex; the third joint short; the fourth and fifth joints subequal. The fourth joint broadest at its distal extremity and broader than the fifth. The sixth joint linear, narrow, and longer than the fifth. Spines most numerous on the anterior margin of appendage.

Pereiopod IV (Pl. XI. fig. 9): together with pereiopod V considerably longer than the other pereiopods. In general proportion like pereiopod III. The coxal plate is small. The second joint is expanded.

Pereiopod V (Pl. XI. fig. 10).—Coxal plate small and shallow; the second joint much expanded, the posterior border notched behind each small spine. Third joint very short. Fourth, fifth, and sixth joints linear. Numerous spines, especially on anterior margin of appendage.

The Pleopods (Pl. XI. figs. 11 & 12).—The first the longest; the third by far the shortest; the second is intermediate in size.

The Uropods (Pl. XI. figs. 13 & 14).—The first the longest; the second a good deal shorter, and the third minute.

The first and second uropods are armed with stout bristles; on the distal joints these bristles are curved at their distal ends. The distal end of the third uropod is armed with one stout and one very small bristle; it consists of two joints. The basal joint with one large and one smaller bristle.

The Telson (Pl. XI. fig. 15).—Simple, slightly divided at base. It bears two bristles on each side.

EXPLANATION OF THE PLATES.

Talitriator eastwoodæ, gen. et sp. nov.

All the figures have been drawn with the aid of a Camera lucida.

PLATE X.

- Fig. 1. Antennule.
 2. Antenna.
 3. Upper lip.
 4. Lower lip.
 5. Maxillipeds.
 6. Gnathopod 1.
 7. Gnathopod 2.

PLATE XI.

- Fig. 8. Pereiopod 3.
 9. Branchial appendage of Pereiopod 4.
 10. Pereiopod 5.
 11. Pleopod 3.
 12. Sketch of pleon, showing comparative size of appendages.
 13. Dorsal aspect of posterior part of body.
 14. Uropod 3.
 15. Telson.

9. The Genus *Engæus*, or the Land Crayfishes of Australia.
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(Plates XII.—XXV.)*

INDEX.

	Pages
Geographical Distribution and Taxonomy	112-116
Ethology	116-118
Systematic: Five new species of <i>Engæus</i>	118-126

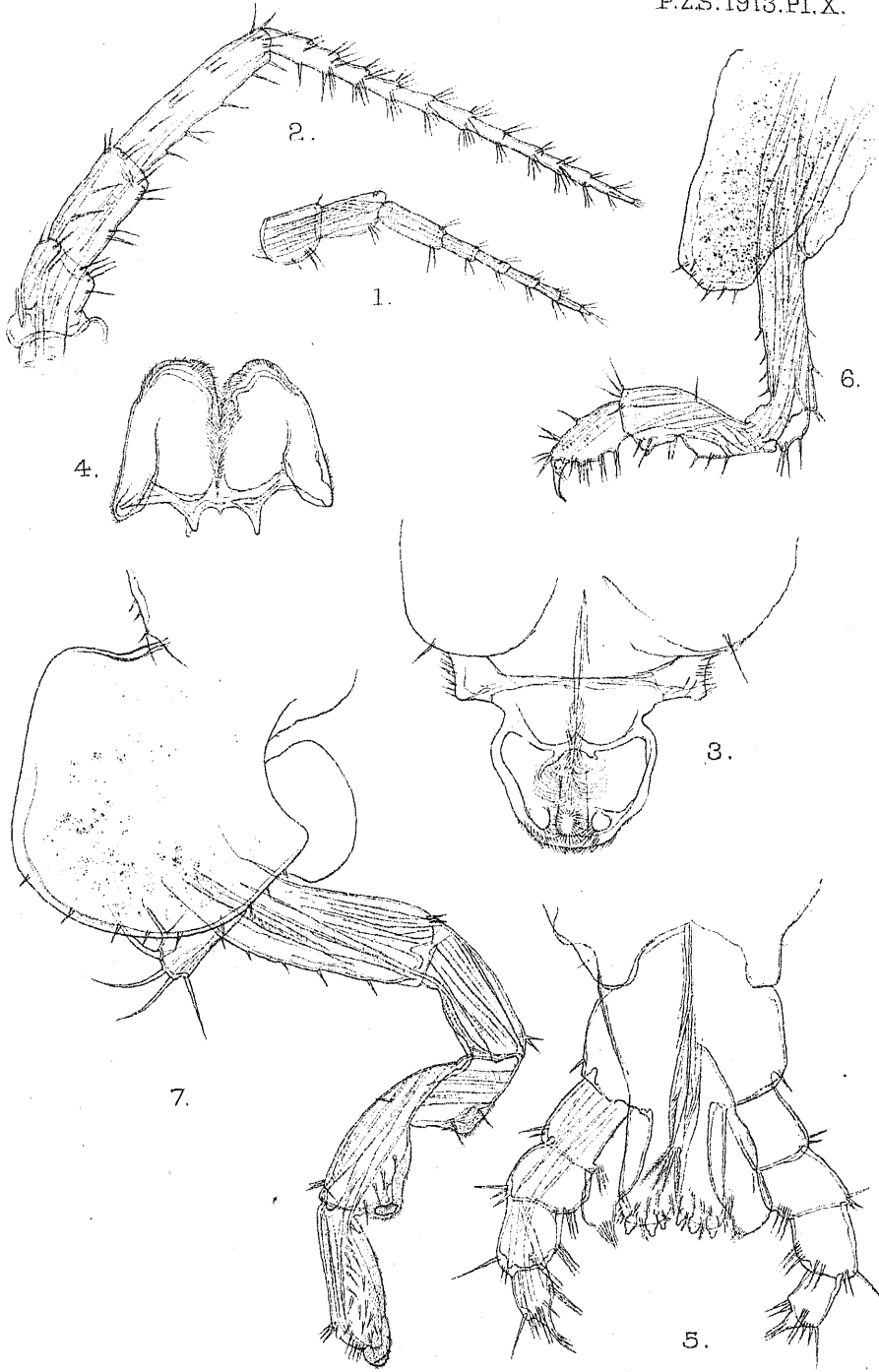
INTRODUCTION.

The existence of burrowing forms of Australian Crayfish, which live in underground tunnels excavated in damp soil, was first made known by Erichson, who described two species from Tasmania and placed them in a new genus, *Engæus*†. Besides the two Tasmanian species, a very large collection of these burrowing Parastacidæ from Victoria has gradually accumulated in the collection belonging to the Melbourne Museum, chiefly through the activity of Messrs. Kershaw and Fulton, and the present memoir is founded on this large collection and also on specimens which one of us obtained in Tasmania in 1907-8.

Before proceeding to the description and classification of this

* For explanation of the Plates see pp. 126, 127.

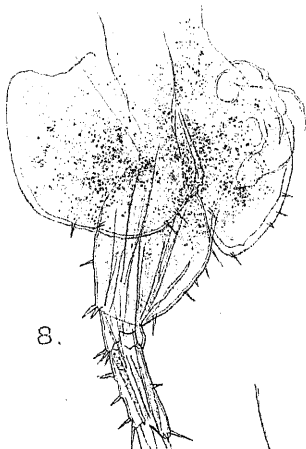
† Archiv f. Naturg. vol. xiii: 1846, p. 102.



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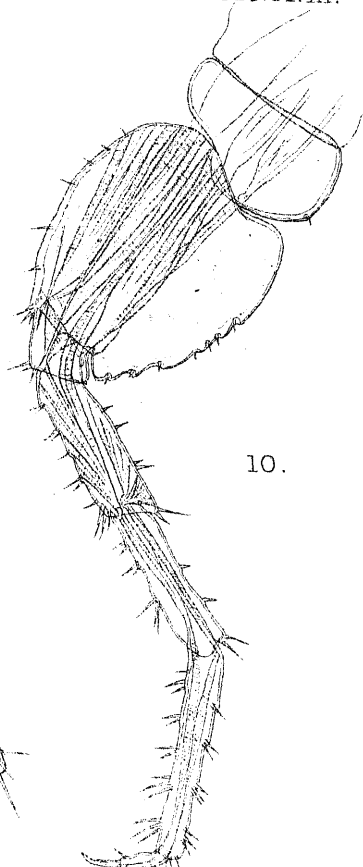
TALITRIATOR EASTWOODÆ.



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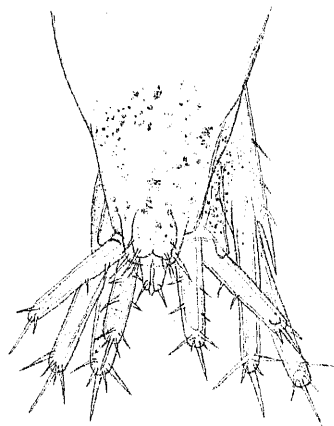
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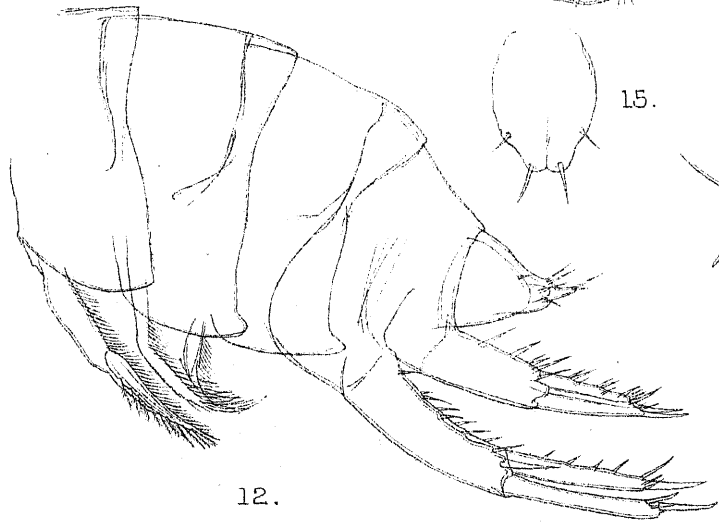
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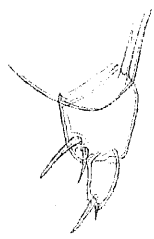
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