







Notes on British Copepoda: Change of Names.

By THOMAS SCOTT, LL.D., F.L.S.

IN the 'Fifteenth Annual Report of the Fishery Board for Scotland' (1897), part iii. p. 150, I described a species belonging to the Copepoda under the name of *Delavalia mimica*; but though it exhibited a close affinity with the genus *Delavalia*, especially in the structure of the mandibles and of the fifth pair of thoracic feet, the structure of the first pair more nearly resembled those of *Nitocra* or *Ameira*, the inner branches of that pair being composed of three instead of two joints. In my remarks on the species I referred to this difference; but because the species had such a general resemblance to *Delavalia* it was provisionally ascribed to that genus.

During recent years many specimens of this species, both from the Scottish and English coasts, have been examined,

and they all agree in showing the marked difference in structure of the first pair of thoracic feet mentioned above, and I now propose to remove this species to another genus rather than modify that to which it was provisionally ascribed. The following is the name and definition of the genus:—

BEATRICELLA *, T. Scott, gen. nov.

Definition of the genus.—Similar to *Delavalia*, G. S. Brady, in general appearance. Antennules eight-jointed. Outer ramus of the antennæ three-jointed. Mandibles as in *Delavalia*, the terminal branch of the mandible-palp being furnished with a long, curved, and moderately stout seta. Other mouth-appendages as in *Delavalia*.

Both branches of the first pair of thoracic feet three-jointed; inner branches longer than the outer ones, first joint longer than or subequal to the second and third joints. The second to the fourth pairs as in *Delavalia*. Fifth pair foliaceous and somewhat similar to those of the genus mentioned.

Beatricella mimica, T. Scott.

1897. *Delavalia mimica*, T. Scott, Fifteenth F. B. Report, part iii. p. 150, pl. i. figs. 1-9.

In this species the first joint of the inner branches of the first pair of thoracic feet are as long as the entire length of the three-jointed outer branches, but the second and third joints are very short, being together scarcely half as long as the first joint. The fifth pair resemble those of *Delavalia reflexa*, G. S. Brady, but the basal joint bears interiorly a group of three tolerably short and stout spines and a small spiniform seta. The fifth pair in the male are smaller than those of the female; the basal joint is armed interiorly with a single moderately large and broad spine of a somewhat peculiar shape; it is broad and flattened rather than round, and with the sides parallel except near the distal end, where they rapidly converge and form a triangular extremity; a minute seta springs from each of the lateral angles at the distal end, while the apex is extended to a fine point; the secondary joint is small, subovate in form, and bears three spines on the oblique distal end of the outer margin, a moderately long seta at the apex, and a smaller one on the inner margin.

* Named in compliment to Miss Beatrice Sprague, daughter of Dr. T. B. Sprague, Edinburgh,—a successful student of the Scottish freshwater Entomostraca.

Remarks.—In *Beatricella mimica* the first pair of thoracic feet have a close resemblance to those of certain species of *Dactylopusia* and *Ameira*; hence the specific name.

Habitat.—Firths of Forth and Clyde, Moray Firth, vicinity of Plymouth, &c., but not very common*.

Delavalia Normani, T. Scott, nom. nov.

1899. *Delavalia Giesbrechti*, var., T. Scott, Seventeenth F. B. Report, part iii. p. 254, pl. xiii. figs. 20–22.

A few specimens of a *Delavalia* were obtained at Hunterston, Firth of Clyde, in the autumn of 1898; they resembled to some extent a species previously described by T. and A. Scott under the name of *Delavalia Giesbrechti*, but differed in one or two points, and notably in the absence of the peculiar tail-setæ which are so characteristic of *D. Giesbrechti*; but as it was considered that the differences observed might, to some extent at least, be due to difference in *habitat*, and as only one or two specimens had been noticed, they were recorded simply as "*Delavalia Giesbrechti* var."

Subsequently, however, it was ascertained that the Rev. Canon A. M. Norman had collected the same form at Salcombe, South Devon, in 1875, and again in 1903, as well as at other places on the coasts of Devon and Cornwall. The examination of these additional specimens showed that the differences previously observed were constant and not due to difference in local surroundings; this form should therefore be regarded as a distinct species, and the name I propose for it is *Delavalia Normani*.

In this species the two-jointed inner branches are only slightly longer than the outer, the first joint is robust and rather more than half the length of the second, while the second is not only more elongated than the first, but is also distinctly narrower and tapers slightly towards the distal extremity; the apical seta, which is fully longer than the second joint, is moderately stout and spiniform, and there are three setæ on the inner margin of the second and one on the first joint.

In the fifth pair in the female the basal joint is short and furnished interiorly with four tolerably long plumose setæ along its lower edge; they are arranged in pairs, one pair being near the inner angle, the other close behind the

* A second species—*Delavalia (Beatricella) æmula*, T. Scott,—in which the three joints of the inner branches of the first pair of thoracic feet are nearly of equal length, is described in the Eleventh Report of the Fishery Board for Scotland, pt. iii. p. 204, pl. iv. figs. 36–47 (1893).

secondary joint, so that there is a comparatively wide space between the two pairs. The secondary joint, which is lamelliform and with nearly parallel sides, is about one and a half times longer than broad, the width slightly increasing toward the distal end; it is provided with five setæ, one on the outer margin and four round the distal extremity; the marginal seta, which springs from a notch on the outer edge, is stout and spiniform; the outermost and innermost of the four apical setæ are of moderate length, but the other two are short.

The furcal joints, which are rather shorter than the last abdominal segment, are comparatively widely apart and also somewhat divergent.

THOMPSONULA, T. Scott, gen. nov.

My friend the late Mr. I. C. Thompson, of Liverpool, whose interesting discoveries have added so much to our knowledge of the Copepod fauna of the British Islands, described in 1899, under the name of *Jonesiella hyæncæ*, a somewhat curious form that had recently been observed in some collections from Port Erin Bay, Isle of Man. This form was also subsequently obtained in the Firth of Forth and at some other places around our shores, and its distribution as now known is fairly extensive.

Although this form was included in the genus *Jonesiella*, G. S. Brady, it differs from the typical members of that genus in one or two important particulars, and especially in the structure of the first pair of thoracic feet. In the generic definition given by Professor Brady the inner branches of the first pair are described as "two-jointed, and bearing long terminal setæ, but no claws"; in *Jonesiella hyæncæ*, on the other hand, the inner branches are distinctly three-jointed. In my remarks on this species in the 'Eleventh Annual Report of the Fishery Board for Scotland,' part iii. p. 203 (1893), it is stated that "these differences may render it necessary to modify the generic description or to remove *Jonesiella hyæncæ* to another genus"*. I now propose to adopt the latter of these suggestions, and have named this new genus after my late friend.

Definition of the genus Thompsonula.—Somewhat similar

* It is interesting to note that Mr. I. C. Thompson also realized the difficulty referred to here, but was inclined "to slightly modify an existing genus rather than make a new one."

to *Jonesiella* in general appearance. Antennules (anterior antennæ) short and composed of six joints. Antennæ (posterior antennæ) with the outer ramus well developed, three-jointed, middle joint short. Mandibles distinctly two-branched. First pair of thoracic feet with both branches three-jointed, the inner being more elongated than the outer branches; other thoracic feet somewhat similar in structure to those of *Jonesiella*.

Thompsonula hycenæ (I. C. Thompson).

1889. *Jonesiella hycenæ*, I. C. Thompson, Proc. Biol. Soc. Liverpool, vol. iii. p. 193, pl. ix. figs. 1-10.

1893. *Jonesiella hycenæ*, T. Scott, Eleventh F. B. Report, pt. iii. p. 202, pl. iii. figs. 1-6.

In this species the basal joint of the short six-jointed antennules is very stout and comparatively large; it extends forward, while the remaining joints curve outwards, so that the last three are nearly at right angles to the basal joint. The rostrum, which extends forward between the basal joints of the antennules, reaches to beyond the extremity of these joints. The furcal joints are extremely short, and as the last abdominal segment is tolerably broad, the posterior has an abruptly truncated appearance.

Further particulars concerning this interesting species will be found in the papers referred to above.

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