

On *Obesiella lyonsiellæ*, a new Genus of Copepod Crustacean.

By W. G. RIDEWOOD, D.Sc., F.L.S.

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THE specimens described in this paper were taken from the suprabranchial cavities of a single specimen of the deep-sea Lamellibranch *Lyonsiella*, dredged by the 'Challenger' from a depth of 1600 fathoms at Station 147 (off Crozet Is., W.N.W. of Kerguelen Is.).

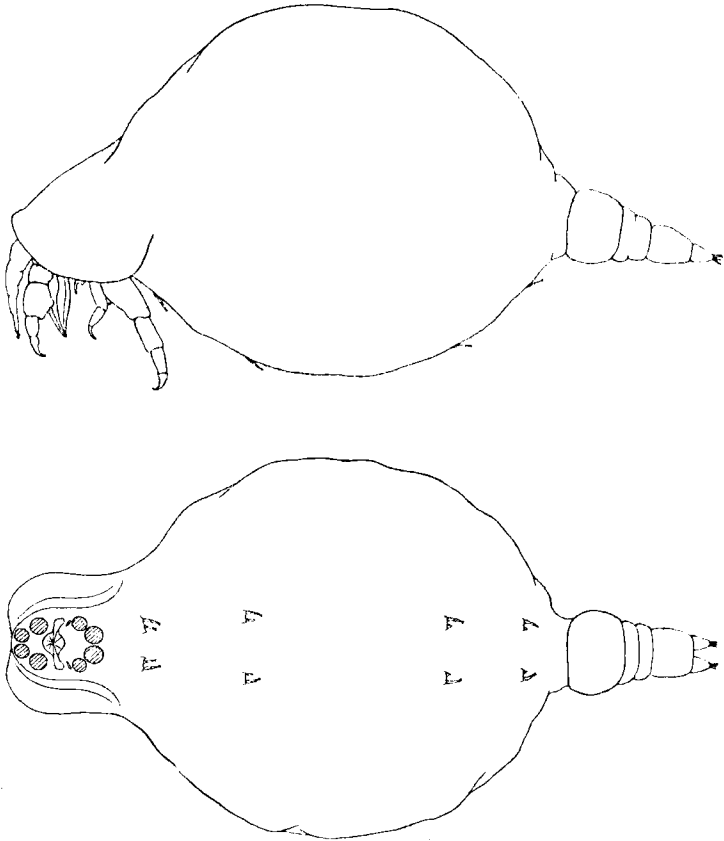
All the specimens were females. Seven of them were perfect, but there were fragments of five more, so that there must have been twelve in the two suprabranchial cavities. They were so closely packed that the passage of water through the suprabranchial cavities must have been a matter of considerable difficulty. Five of the specimens remain preserved in alcohol, and these and the nine microscope-slides prepared from the others are in the Natural History Museum, London. The specimens measured 2.3 mm. in total length, and 1.4 mm. in maximum breadth across the thorax.

Their most remarkable feature is the great inflation and loss of external segmentation of the thoracic region, and the reduction in size of the thoracic appendages. The head has the appearance of being provided with a hood, owing to the presence of a dependent flap on each side. There are no eyes. Six pairs of cephalic appendages are present, and four thoracic. The abdomen is indistinctly divided into four segments, the last bearing a pair of caudal rami, short and papilliform, with four or five short setæ. The mouth is extremely small, and set upon the pointed summit of an oral cone, into the conformation of the sides of which the third pair of appendages enter.

The first pair of appendages (antennæ) are of moderate size, flexible, and indistinctly segmented. The terminal fourth is rod-like, sometimes bent upon the rest of the limb, and terminated by a few short setæ.

The second appendages (second antennæ) are slightly longer than the first. There are five segments, the proximal one being mostly concealed in a side view by the margin of the hood. The terminal joint is a strong curved claw.

The third appendages (mandibles) are greatly reduced, being represented only by their basal segment, which extends inwards and downwards and fuses with the sides of the oral cone.



Obesiella lyonsiellæ.—From the left side and from below. $\times 38$.

In the lower figure the cephalic appendages are represented as cut off short.

The fourth appendages (maxillæ) are very small. The inner ramus is a flexible palp, and is terminated by two or three setæ; the outer has the form of a shallow eminence rising from the end of the ridge which represents the basal portion of the appendage. This is the only cephalic appendage in which any trace of the outer ramus is discernible.

The fifth appendages (first maxillipedes) are three-jointed, the terminal joint being a curved claw. They are the smallest of the three pairs of clawed appendages.

The sixth appendages (second maxillipedes) are the longest of the head appendages. There are four segments, the terminal one having the form of a sharp claw and being incompletely divided across.

The four pairs of thoracic appendages are biramous, but very small. The outer ramus is two-jointed, the proximal being larger than the distal joint. The jointing is not well marked in the two posterior pairs. Three or four short setæ occur at the tip of each outer ramus.

The inner rami, which arise from a basal ridge at a little distance from the outer rami, are also two-jointed. In the first thoracic appendages the distal joint is larger than the proximal and bears a few setæ. There is a papilla on the basal segment of the appendage lying to the inner side of the inner ramus. In the second pair the distal joint is larger than the proximal and has no setæ. In the third and fourth pairs the terminal joint is much smaller than the proximal and is incompletely divided from it. It has no setæ.

The genus falls naturally within the family Ascomyzontidæ. It differs from *Nicthoë*, Aud., in having the mouth set on a conical projection. It resembles *Ascomyzon*, Thorell, and *Uperogcos*, Hesse, in having five joints to the second cephalic appendages, and differs from *Asterocheres*, Boeck, which has four joints, and from *Dyspontius*, Thorell, *Artotroqus*, Boeck, *Platythorax*, Hesse, and *Ceratrichodes*, Hesse, which have three. It differs from *Uperogcos* and resembles *Ascomyzon* in that the oral cone is long and the second cephalic appendages are not antenniform; but it differs from *Ascomyzon* in that the first cephalic appendages are of moderate length and indistinctly segmented, whereas in *Ascomyzon* they are long and 20-jointed.

The extreme reduction of the four pairs of thoracic appendages is doubtless intimately associated with the swelling of the thorax, and is probably not shared by the male.
