

A NEW VARIETY OF *PLEUROCRYPTA GALATHEAE* FROM THE NORTHUMBERLAND COAST.

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In August of last year (1921) when shore collecting close to St Mary's Island (Northumberland) I secured a specimen of *Galathea squamifera*, which proved to be parasitised by an adult female *Pleurocrypta*, carrying a male attached to the underside of the abdomen.

Since the specimen appears to coincide completely neither with *Pleurocrypta galathea* as described by Bonnier nor with the *P. longibranchiata* of Sars, and since also properly authenticated records of these parasites are distinctly rare from British coasts, a short record of its chief characteristics would appear to be useful.

A striking feature of the female is its perfect bilateral symmetry. This, though not a diagnostic character—the degree of asymmetry in Bopyrids being usually subject to variation according to the particular position occupied by the parasite in the gill chamber—is of considerable interest physiologically since the present specimen

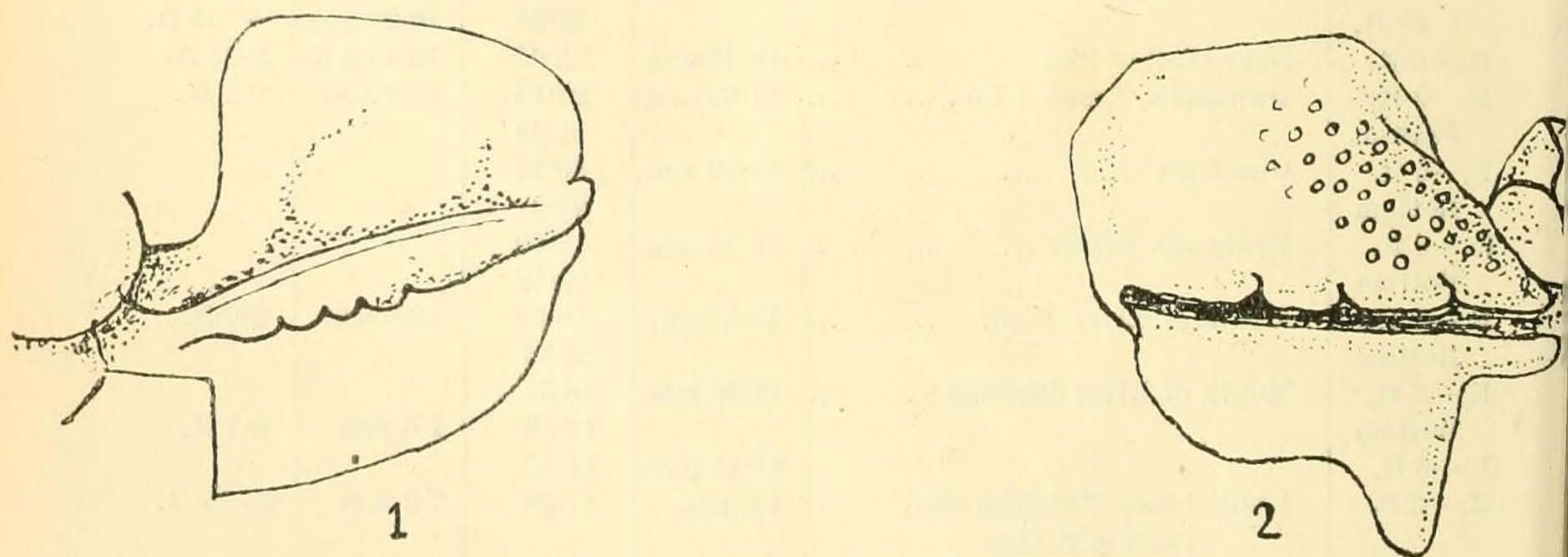


FIGURE I.

PLEUROCRYPTA GALATHEAE.

1.—Inner aspect of first right oostegite.

2.—Outer aspect of same.

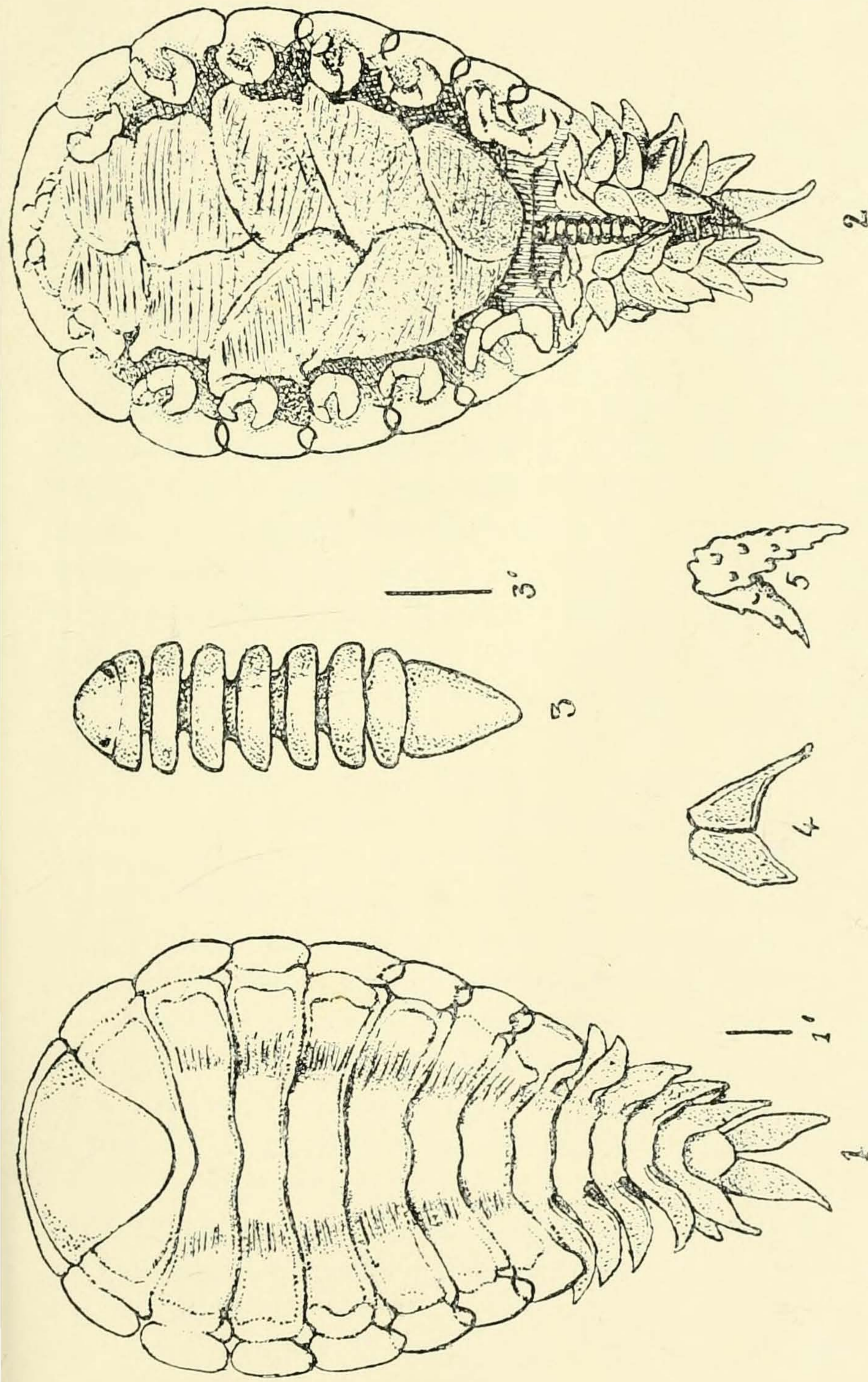


PLATE I.

PLEUROCRYPTA GALATHEAE var. *NORTHUMBRIENSIS*.

- 1.—Dorsal surface of female. 1' equals one mm. under same magnification.
- 2.—Ventral surface of female.
- 3.—Dorsal surface of male. 3' equals half mm. under same magnification
- 4.—Pleopods of female specimen here described.
- 5.—Pleopods of specimen figured by Bonnier.

was fully grown and had exerted sufficient pressure upon the left gill-cover of the host to cause it to become conspicuously deformed. Of greater importance for the determination of the species is the character of the pleopods, which are flat, leaf-like and perfectly smooth (Pl. I., Fig. 4) in contrast to those figured by Bonnier for *P. galathea*, which are markedly tuberculate and appear to be cylindrical rather than lamellar (Pl. I., Fig. 5) The first pair of incubatory plates differ from those of Bonnier's specimen in certain points of detail, the importance of which, however, it is not intended to stress.

British records of *Pleurocrypta galathea* on *Galathea squamifera* include those of Loughrin from Polperro, of the Rev. A. M. Norman from the Shetlands and of Tattersall from the west coast of Ireland. The form figured by Bate and Westwood as *Phryxus longibranchiatus* from *G. squamifera*, which Sars has described as a distinct species *Pleurocrypta longibranchiata*, is regarded by Bonnier as merely the young form of *P. galathea*. Bate and Westwood also refer to the Rev. Norman's announcement of this same form *Phryxus longibranchiatus* as occurring upon a specimen of *Pagurus thompsoni* dredged from Tynemouth, 1863, but this is almost certainly an error—as Norman himself later admitted—due to confusion of this form with a species of *Pseudione*, probably *P. hyndmanni*. Dr. W. T. Calman has very kindly compared my specimen with those of *P. galathea* in the Norman collection, labelled as from Starcross (Devon), from Jersey and merely as "British," and states they all differ from my own in general appearance and in having the pleopods conspicuously more tuberculated.

There is room for confusion in connection with the identification of Epicarid parasites as a result of the difference of opinion among specialists as to whether a particular species is or is not definitely restricted to a single species of host. Giard and Bonnier take the first view, Sars and Hansen the second. Thus, as already noted, Sars ascribes to *Galathea squamifera* a second species of parasite *P. longibranchiata*, in addition to the one (*P. galathea*) already admitted. Tattersall, who has taken both forms from separate individuals of *G. squamifera*, inclines to agree with Giard and Bonnier that they are really one and the same species. The fact that Sars' *P. longibranchiata* is distinctly smaller than *P. galathea* also points to its being a young form of the latter. In any case, the authority

of Giard and Bonnier is such as to make one extremely hesitant of establishing new species, and I will therefore content myself with recording provisionally the specimen in my possession as a variety of the type species, viz., *Pleurocrypta galathea*, var. *north-umbriensis*.

A summary of such characters as are generally used for diagnosis is appended.

The female measures from the frontal margin of the cephalon to the extremities of the uropods 13 mm. Colour, yellowish white, unpigmented; form, perfectly symmetrical with pyriform outline, the fact that the pleura of the right side are bent slightly backwards being the only evidence of the pressure exerted by the carapace of the host; thoracic somites uniformly decreasing in width from the third to the first, and from the third to the seventh; lateral cuticular extensions of the thoracic somites (pleura) leaf-like, semi-transparent, longer than the somite itself and overlapping, the posterior portion of each pleuron overlapping the anterior portion of the one immediately following. The margins of the somites immediately proximal to the pleura marked by crescentic or reniform cuticular bosses which are continued as longitudinal ridges along the posterior margin of each segment; pleura developed on the first five segments of the pleon and slightly wider than the segments themselves, somewhat crescentic in shape and semi-transparent. Antennules, antennae and maxillipeds normal, pereopods completely concealed beneath the pleura. Outer surface of first pair of incubatory plates (Fig. 1) subdivided into an anterior and a posterior portion by a deep groove or hollow fold; the anterior portion with its surface covered with small tubercles and its posterior margin (bordering the fold) somewhat crenate, the posterior portion, which in the natural position is concealed beneath the incubatory plates immediately following, with its surface smooth, and prolonged behind into a blunt tongue-like process. Inner surface of the first pair of incubatory plates similarly subdivided by a prominent transverse crest ("crête interne" of Bonnier), showing a short series of three or four shallow digitations at its proximal end, but not, as in Bonnier's specimen, bordée de petits tubercules arrondis placés sur plusieurs rangs; five pairs of flattened pleopods on either side, triangular in shape with elongated apices (which, in the

case of the two anterior pairs, are used for clasping the male), and smooth, non-tuberculate surfaces; a single pair of elongate, triangular uropods, with sharp apices.

The male measures 2.1 mm. in length, and corresponds closely with Bonnier's description. Head rounded; eyes distinct; the seven thoracic segments all approximately of same size; pleon unsegmented, terminating in a roundish apex. Antennules and antennae three-jointed, terminating in a bunch of short, stiff hairs; pereopods normal, the terminal claw (dactylopodite) most highly developed on the most anterior appendages and gradually decreasing in importance. Pleon without appendages.

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