

XXXVI.—On several new species of Crustaceans allied to Saphirina. By HARRY D. S. GOODSIR, M.W.S., late Conservator of the Museum of the Roy. Coll. Surg. Edinburgh, Assist. Surgeon in H.M. Arctic Exploring Ship Erebus.

ONE of the most striking features in the structure of this peculiar form of Crustacean is the double eye in a single dark spot.

The antennæ are similar in form to those of the *Isopoda*, being either filiform or almost truncate, the general form of these organs in the *Isopoda*, and by no means like those of the *Monoculi*, which are setaceous and very often dilated in the middle. As in the *Isopoda*, they are short, being generally about as long as one-half of the breadth of the body.

The animals here referred to have a projection from the mesial line of the carapace, analogous to the rostrum, generally found in the *Monoculi*, and in the extremity of this rostrum the eye is generally situated.

The first segment of the body is in all cases longer than the remaining segments combined, and in some instances the lateral edge is curved inwards and downwards, so as to give it the appearance and form of a carapace. The remaining segments of the body are small, gradually decreasing from the second to the terminal.

In several species the terminal abdominal segment is provided with a jointed pedicle on each side, which is armed at the extremity with spines, and in some species this structure is exactly similar to *Monoculus*. The anterior extremities are very short, so much so as not to be seen extending beyond the edge of the body; generally however one or more joints of the last pair of legs are seen posteriorly.

The most striking character in this order of animals is the double extremities, a character common to the *Stomapoda* and *Monoculi* as well as this form of Crustaceans. As in *Stomapoda* the two terminal filaments arise from one common pedicle, the external one being much longer than the internal; the former also is chelate and three-jointed, the latter four-jointed. The number of joints however in these legs varies. The legs arising from the carapace (first thoracic legs) are not double, or if so, one of the terminal filaments is obsolete.

These animals are very active in their habits, and swim about in company with the other forms of the family *Pontia*.

Body depressed as in the *Isopoda*; posterior thoracic legs double.

*Sterope ovalis*. Plate XI. fig. 11.

Rostrum not prominent; antennæ unarmed, three- or four-

jointed. Eye situated behind the rostrum, rhomboid, transverse. Posterior pair of legs showing only one joint from the posterior and lateral edge of the body, armed on the lateral edges with strong spines, the two terminal spines being strongest.

*Description*.—Body ovoid, rather dilated, anteriorly quite smooth. The anterior segment of the body as large as the whole of the remaining segments, and having the lateral edges surrounded with a narrow border. This animal is very active and swims about with great rapidity. It is exceedingly minute, not being larger than a mere point.

*Sterope armatus*. Plate XI. fig. 9.

Rostrum very prominent, rounded, and one-third the whole breadth of the body; antennæ six-jointed, and armed at the extremity and on the anterior edge with a series of robust long spines. Eye not apparent.

*Carrillus oblongus*. Plate XI. fig. 12.

Rostrum one-eighth the breadth of the whole body, prominent, rounded at the extremity, with the eye very small, and situated almost upon the anterior edge; anterior edge of body hollowed out on either side of the rostrum. Antennæ clavate and eight-jointed, very little longer than half the breadth of the body, unarmed, last joint pointed. Abdominal legs delicate, and armed at the extremities only with one or more spines. Abdominal segments of body taper gradually.

*Sterope interruptus*. Plate XI. fig. 10.

Rostrum prominent, one-tenth the breadth of the whole body, pointed. Eye large, and filling almost the whole of the rostrum. Anterior edge of the body hollowed out on either side of the rostrum. Posterior thoracic legs strong, spined, and serrated on the external edges. Three strong short spines arise from each side of the abdominal portion of the body, and a strong pedicle armed with three spines arises from the posterior edge of the last abdominal segment on each side of the mesial line.

*Zaus spinatus*. Plate XI. fig. 1.

Antennæ three-jointed. A spine arises from the anterior edge of the carapace on each side of the mesial line, one from the base of each of the antennæ. Abdominal pedicles three-jointed, distal one armed at its extremity with three robust strong spines, the central ones longest.

EXPLANATION OF PLATE XI.

*Fig. 1.* *Zaus spinatus*, magnified.

*Figs. 2, 4, 5, 7, 8.* Organs of locomotion.

*Fig. 6.* One of the first antennæ.

Fig. 9. *Sterope armatus*.

Fig. 10. *Sterope interruptus*.

Fig. 11. *Sterope ovalis*.

Fig. 12. *Carrillus oblongus*.

Fig. 13. Second thoracic leg of *Carrillus oblongus*.

Fig. 14. First abdominal extremity of *Carrillus*.

Fig. 15. Second abdominal extremity.

XXXVII.—On the Fructification of the genera *Clathrus* and *Phallus*. By M. MAURICE LESPIAULT\*.

THE REV. M. J. BERKELEY, in a notice published in 1839†, described the fructification of *Phallus caninus*, Huds. (*Cynophallus caninus*, Fries); he demonstrated by delicate observations, that, in this genus, until then wrongly separated from the *Hymenomyces*, or rather the *Basidiosporæ* of Lévillé, the spores were supported on basidia, as in the *Boleti*, the *Agarici*, and other mushrooms of the same class. Mr. Berkeley thence presumed that an analogous organization must be found in all the *Phalloideæ*, but no further recent observations had as yet supported this hypothesis.

M. Corda, whose analyses have thrown so much light on the intimate structure of Fungi, denies the existence of the basidia in the genus *Phallus*: “*Spore in strata congestæ, mucò primum firmo dein diffulente immersæ, simplices, basidia nulla*‡.” (Anleitung, p. 119.)

The investigations of botanists on this subject have not gone further; the fructification of the genus *Clathrus* is still more imperfectly known. Nor can we be surprised, when the analysis of these mushrooms presents such great difficulties.

It is, in fact, not sufficient to subject to examination individuals little developed or inclosed in their volva; the substance which contains the fructiferous organs must be firm and of an almost fleshy consistence. As soon as it has begun to soften, the spores are displaced, and the basidia disappear. It is moreover very difficult, even with the aid of a perfectly fine-pointed lancet, to remove very thin sections of a mucilage which yields to the slightest pressure: we are therefore obliged, in order to obtain

\* Translated from the *Annales des Sciences Naturelles* for July.—The position which *Clathrus cancellatus* should occupy in the class of the *Basidiosporæ*, and the mode of insertion of the spores of this curious plant, have been already established by Mr. Lévillé, but, notwithstanding the priority and accuracy of the observations of M. Lévillé, we think the memoir of M. Lespiault, who has extended his researches to other plants of the group of the *Phalloideæ*, will be read with interest.—(*Ed. Ann. des Sci. Nat.*)

† Annals of Natural History, vol. iv. p. 155.

‡ There is no question here of the *Phallus caninus*, which has become the type of a new genus.