

the former is strikingly flattened out; on the other hand, *Pereionotus testudo* (Montagu) and *Icridium fuscum*, Grube, which come very near to Guérin's species, agree with *Iphigenia typica* in having the depressed Isopod-like body; the maxillipeds of *Icridium fuscum* are said to have a three-jointed palp, agreeing in this respect with the maxillipeds figured by Mr. Thomson for his species, but not agreeing with a specimen of *Iphigenia typica* sent me by Mr. Chilton, in which the maxilliped-palps are four-jointed; the mandibles in this specimen agree with those which Grube describes, in having four teeth to the cutting edge and no visible palp; in regard to the pleon Grube's species is very distinct from Thomson's; until, however, the mouth organs of the genera referred to have been more fully described and figured, and the anomalous character of the pleon in Grube's *Icridium* has been either established or disproved, the relation of these remarkable forms to one another must remain very uncertain.

## 1883. GRAEFFE, ED.

Biologische Notizen über Seethiere der Adria. Ueber die Fauna der Schlamm-region der Adria. Bolletino della Società adriatica di scienze naturali in Trieste. Volume ottavo. Trieste, 1883. pp. 85-89.

The two species of Amphipods recorded from this mud-region are "*Ampelisca Gaimardi* Kroyer," and "*Phoxus plumosus* Kroyer." Professor Graeffe regards these two species as strongly supporting his view that the mud-dwellers have suffered degradation of the visual organs owing to the character of their habitat.

"The Crevettines or Gammaridæ," he says, "to which division these Amphipods belong, generally exhibit sessile eyes, that is, the pair of eyes is situated wholly in the cephalothorax. A part of the chitin-layer of this is bulged out, and provided with facets, which are more or less clearly developed. Behind this faceted corneal-surface there is a pigment-layer, which envelops the elements of the arthropod-eye, crystal-cone, and rhabdom-layer of the retina. The optic-nerves which provide for this eye, are derived from a special cerebral-knot or ganglion.

"In *Ampelisca* this corneal-part of the eye is only provided with two facets, which points to an arrested development of it, as these facets, to which the refracting and sentient retina-rods correspond in number are multiplied with the development, the growth of the animal. In *Ampelisca Gaimardi*, moreover, the pigment of the eye is little developed, so that one may well maintain that this species possesses a degraded pair of eyes.

"In *Phoxus plumosus* this degradation has advanced still further, since here no corneal part whatever is to be seen, and in the place of the eye there is only a faint yellowish pigment-fleck remaining. This species is to be reckoned among the totally blind animals."

On the subject of the eyes in *Ampelisca*, see Note on Della Valle, 1888 (p. 1651).

## 1883. HERRMANN, G.

Sur la spermatogénèse chez les Crustacés édriophthalmes. In *Compt. Rend.* Tome 97. pp. 1008-1012. Also in *Journ. Micr. Paris.* Année 7. pp. 588-590.

According to this author "verläuft die Spermatogenese bei *Ligia*, *Idotea*, *Sphæroma*, *Gammarus*, *Talitrus* in ganz anderer Art als bei den Podophthalmen und erinnert bis auf das sehr frühe Verschwinden des 'nodule céphalique' in auffallender Weise an die der Selachier. Das Spermatozoid bleibt unbeweglich (vergl. Bericht f. 1879. p. 418 u. 1882. II. p. 21)." *Zool. Jahresbericht für 1883.*