MINISTRY OF COMMERCE AND INDUSTRY, EGYPT

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NOTES AND MEMOIRS No. 16

THE FISHERY GROUNDS NEAR ALEXANDRIA

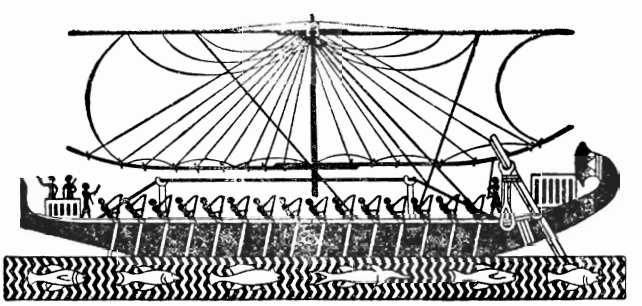
VIII.—PANTOPODA

(With 3 Figures)

BY

Dr. H. HELFER

Berlin-Lichterfelde



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The Fishery Grounds near Alexandria (Egypt)

VIII. Pantopoda

BY

Dr. H. HELFER, *Berlin-Lichterfelde*

Of the Pantopoda collected by Professor Dr. A. STEUER in autumn 1933 near Alexandria and sent to me for determination — altogether 11 specimens— two were larvæ, more or less developed.

The examination of the animals which were all very small showed —as far as they were developed— that they belonged to the following species :

Pallene brevirostris Johnston	2	specimens.
Pallene spectrum Dohrn	2	,,
Amnothea magnirostris Dohrn	1	,,
Tanystylum conirostre (Dohrn)	4	,,
not completely developed	2	,,
altogether	11	specimens

About the two larvæ I can give my judgment with all reserve (see later) as they stood the transport from Rovigno to Berlin very badly like the rest of the animals, all of them were considerably damaged and some of them had lost most of their extremities, a circumstance that rendered it still more difficult to determine these tender objects.

During the first six weeks of the investigations near Alexandria, no Pantopod at all was to be seen, the first animal had been taken in the beginning of October, the rest were found in November.

Smallness of the individuals and greater frequency towards autumn had also been observed in other groups. The few places

where Pantopods had been found were near the coast in depths down to 11 fathoms (*Fig. 1*). They are altogether forms which had already been recorded from the Mediterranean, especially from the Gulf of Naples by DOHRN (1881).

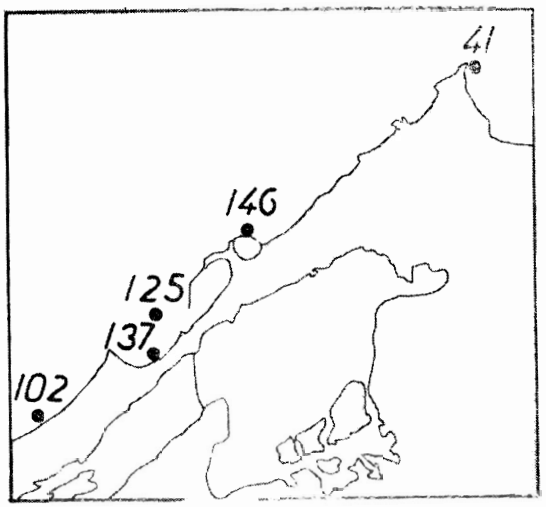

FIG. 1.

1. *Pallene brevirostris Johnston.*

We take it for granted that with SCHIMKEWITSCH (1929) we can regard *Pallene emaciata* described by DOHRN —the characteristics of which agree with our two specimens— as synonym with *Pallene brevirostris*. One is, indeed, inclined to do so with regard to all statements and figures.

One of the two specimens possesses only the two posterior ambulatory legs at the right and one damaged extremity III (oviger) at the right side.

2 specimens, ♂.

Locality: Station 102, 7-11-1933. 5-6 fathoms, on Cystosira. Stony bottom. Surroundings: Brown algæ (Cystosira), green algæ (Caulerpa, Halimeda).

2. *Pallene spectrum Dohrn.*

DOHRN had established this species with reservation and observed, that on account of certain characteristics it is to be placed between the two species *Pallene phantoma* Dohrn and *Pallene emaciata* Dohrn, which had been described at the same time. Our specimens, too,

show such characteristics of which I cite the proboscis which is little longer than broad (in *P. Phantoma* " doppelt so lang als breit," in *P. emaciata* " $\frac{1}{2}$ mal so lang als breit ") and the first segment with lengthened neckpiece (not as long as at *P. phantoma* but much longer than at *P. emaciata*). I refer to DOHRN's exact figures. The females are characterized by a swollen fourth joint of the ambulatory legs.

Also the rest of the statements indicate that *Pallene spectrum* can exist as a species as long as there are no necessary reasons for its suppression.

2 specimens ♀.

Locality: Station 125, 13–11–1933. 6 fathoms. On Amphioxus-bottom; stony, yellow sand, little algæ.

2*a*. *Larva of* (?) *Pallene spectrum Dohrn.*

This larva (*Fig.* 2) shows a rather advanced state of development, but its determination, however, will not be a definite one. Though it shows the anterior part of the body characteristic for *P. spectrum* with long neck part, short, broad and blunt proboscis and plump

FIG. 2.

chelipeds, richly beset with hairs, and the ambulatory legs typical of this species and behaired in the characteristic way, yet the incomplete development, especially of the anterior extremity, forbids a definite decision.

Extremity I: The spiny cheliped situated before the mouth, as mentioned before, already well developed and also the extremities IV and V show an advanced state of development. Extremity VI, that is the third pair of ambulatory legs may be completely developed,

but being missing or broken off no exact assertion can be given to this. The last pair of ambulatory legs is in sprouting, distinctly grown out in the length of coxa I–III of the preceding pair of ambulatory legs, but it does not yet show any joints. There is a longer spine at the distal end of coxa III, femur and tibia I and II of the ambulatory legs. In the middle of the tibia there are long spines. At the propodus, we find long spines at the inside, on the claw and by-claw, as well as other hairs and spines of different length.

Locality : like that of 2.

Though the locality has nothing to do with the systematic position yet in this case the supposition is possible that this specimen may belong to *P. spectrum*, particularly so, that the Pantopod-fauna being very scarce here and the specimen having been fished together with the adult *P. spectrum* treated before.

3. *Ammothea magnirostris Dohrn.*

The following characteristics and other reasons make us assume that this specimen belongs to the above species : the proboscis that appears larger at the end than at the base, on account of its striking lips, —the pyramid-shaped tubercles usually with long spines,— the position of the prolonged ducts of cement glands some distance from the distal end of the fourth pair of ambulatory legs. The much prolonged base of extremity I deludes at first sight a three-jointed leg. At extremity II I count 8 joints only (DORHN counts 9). Extremity III is normal again, its terminal joints show the plumed spines, a terminal claw is missing, The terminal joint of the ambulatory legs provided with a claw and two by-claws and richly beset with spines is strongly curved. The rich trimming with spines of coxa I–III is striking. The segmentation is distinct at two parts of the body, the segments are partly melted.

Locality : of this ♂ like that of 2.

3*a*. *Larva of* (?) *Ammothea sp.*

I am sorry to say that this specimen, of a breadth of about half a mm., had been lost after having been transported from one medium into another, while being covered with a slide with all precautions, it could not be found any more. For this reason it was not possible to make a picture or a drawing of the larva. However, and for the sake of completing my subject, I will give a short description

of this individual, based on the notes and sketches made beforehand; I am well aware, though, of the doubtful value of such a procedure.

Extremity I surpasses by far the proboscis. Paired cement glands are distinct; also the spinning spine at the basal joint of the cheliped. The jaws of the cheliped are denticulate at the inner side and cross over each other a little.

Extremity II with terminal spine and by-spine (*Fig. 3 a*); near the insertion of the end-spine there is an especially strong spine.

Extremity III like extremity II.

The first pair of ambulatory legs is perfectly developed, consisting of 8 joints, Coxa I–III short, femur nearly as long as the three coxæ together, tibia I a little shorter, tibia II a little longer than the femur. Then follow the tarsus as a short interjoint and the propodus which is a little curved and about as long as tibia I. It is provided at its inner side with three very strong spines and at the end with a claw and two by-claws.

The second pair of ambulatory legs is not completely developed; one can, however, recognize the joints distinguishing themselves: coxa I–III, femur and tibia are distinct, also claws and by-claws are already developed.

At both sides of the somewhat split abdomen (*Fig. 3 b*) the beginnings of a further pair of legs appear in the form of turnings up, which carry a very strong spine.

Fig. 3

According to these statements, the larva was about stage V of development, the first pairs of ambulatory legs being well developed already, the second and third legs of the larva, however, not yet having disappeared.

It was the more difficult to identify this animal, that no other Pantopods had been found at the same locality.

Locality : Station 146, 15-11-1933. 10-11 fathoms.
Together with Caulerpa, Halimeda, Posidonia and Dasycladus.

4. *Tanystylum conirostre* (*Dohrn*).

(*a*) 1 ♂, 2 ♀, The latter carry 30-40 big eggs in a lump, at one of the ♀ the fourth joint of the ambulatory legs is much swollen on account of the eggs which it contains. The animals give no chance for further remarks besides these.

Locality : Station 41, near Abukir, 14-10-1933.
In shallow water on crags ; brown algæ, green algæ, Caulerpa.

(*b*) 1 ♂, much damaged. Only four ambulatory legs remained.

Normally, extremity II has 4 joints in this species. One may still recognize the separate joints melted into one in irregular segments, especially in the second long joint. It is for this reason perhaps that Dohrn writes (p. 160) : " Extremität II vier-bis fünfgliedrig ? " In the figure showing it (Pl. VIII, *Fig. 4* and especially 5) the segmentation is distinct only between the first and second joint.

Locality : Station 137, 14-11-1933. 4-5 fathoms.
Dark sandy bottom. Much Caulerpa, little brown algæ and Cymodocea.

Literature

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