

Sur un nouveau Dinemoure provenant du *Scimnus glacialis*.

par

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DINEMOURA ELONGATA Van Beneden.

The Dinemours resemble very closely the Caligiens, at first sight, not only in their cephalic carapace, but also in the divers kinds of appendages which serve to fasten them to their host or to transport them from one place to another. They are always easily distinguished by the elythroïd lamellar appendages which cover a part of the thoracic and post-thoracic regions. It is remarkable that *Caligus productus*, which served at first Rafinesque, and then Latreille, as a type on which to establish this genus, is not a *Dinemoura*. This species has just been recognized by Gerstaecker as a *Nogagus*. Only the ventral surface of the animal had been figured (p.226) the dorsal surface had not been seen, and so the naturalists had a false idea of it.

After having retired the first species of the genus, there still remain 3 and possibly even 4 species, if we include Guerin's *Dinemoura coleoptrata*. These are *D.alata*, found on a shark in the Indian Ocean; *D.affinis* in the ocean near New Zealand, and *D.ferox* of Kroyer, whose origin is not known with certainty.

To these Dinemours we are about to add a new one from the North Sea, living on *Scimnus glacialis* (the Haakalle of the Islanders and of our fishermen), which has already furnished us such a remarkable number of parasites.

Prof. Eschricht sent me the two beautiful specimens which serve for the present description. Certain parts of the body of a *Scimnus* were literally covered so as to take on a scaly appearance. In the midst of them was a *Caprella* which we believe equally new to science and which lives under the same conditions as the Dinemours.

We have many reasons for believing that the *Caprellas* are parasites of the same standard as the *Cyami*, as we have tried to show in a work on that remarkable genus. We have undertaken the investigation of these crustacea, in consequence of a *Chelonius midas*, east ashore at Klemskerke, near Ostend, november last, whose carapace was covered with a large number of these crustacea.

We cite as parasites found up to the present (p.228) time on *Scimnus glacialis*, the remarkable plagiostome fish of the North Sea; *Lernaeopoda elongata* Kroyer, the giant of siphonostomous crustacea, which is ordinarily attached to the eyes; *Onchocotyle borealis* Van Beneden, which lives on the gills; *Onchobotrium perfectum* & *Tetrarhynchus linguatula*, which inhabit the intestine, and finally an *Ascaris*, which fills, with the food, the cavity of the stomach. The *Tetrarhynchus* and *Onchocotyle* like the *Lernaeopoda* are all three giants of their genera and even of the family. We call the new parasite.....

DINEMOURA ELONGATA Van Beneden.

The body is quite straight and the abdomen is twice the length of the carapace; there are two large eyes, close together, occupying the anterior part of the cephalothorax. The body is excessively narrowed behind the elytra, so that the abdomen is pediculate. The egg tubes are straight and 3 or 4 times the length of the body.

Body 20--25 mm. long; egg tubes 70 mm. long

Found on the skin of *Scimnus glacialis*; only the female known.



This species is very similar to *Dinemoura ferox* Kroyer, from which it is distinguished by the post-thoracic region, which is very large in the present species, by the absence of the large antero-lateral angles of the elytra, by the egg tubes, which are always very long, straight and unrolled, by the eyes which are close together, and finally by the considerable difference in the (p. 229) form especially of the first and third mouth-parts, as we shall see in the description which follows.

*Dinemoura elongata* presents, at first sight, all the external characters of a Caligid, with two large brown spots, very close together, near the anterior margin of the carapace. The body is elongated and divided into four quite distinct regions, the carapace, thorax, abdomen and tail. We can distinguish these regions as well dorsally as ventrally. The carapace is much larger than the abdomen, clypeiform as in the Caligids, and showing at the center behind the ordinary depressions in the form of an H. In front on the median line it is slightly invaginate, and on the sides some distance from the antennary invagination are what may be called rudimentary frontal plates.

The posterior angles of the carapace are prolonged in the form of wings and produce on the two sides a deep groove which separates the first thoracic segments. At a little distance from the median groove are two brown spots, close together, representing the eyes.

Behind the carapace is a sort of corselet, relatively narrow, a little wider than long, and strongly narrowed posteriorly. We may say that the last thoracic joint is pediculate. The corselet carries the first three pairs of legs, which are completely concealed beneath it, as well as the maxillae. Behind the corselet, above the fourth pair of legs, are two laminae resembling elytra (p. 230), which are a little longer than wide, with regular borders; they are like the elytra of staphylinid beetles.

The abdomen is as long as the carapace and corselet together, and proportionally narrow; inside of it may be seen the principal viscera.

The line which separates the last thoracic segments, namely the one which carries the lamellar legs below and the elytra above, is not very distinct. The caudal region is made up of two pairs of laminae, placed end to end, the two posterior ones carrying on the outer posterior corners diverse filamentous setae. Ventrally there are also two pairs of laminae; the anterior ones border the anus; they are completely separate, one from the other. The posterior ones are fused on the median line and cover the first ones.

In this description we have considered the carapace as formed of the cephalic and first three thoracic segments, and the posterior part of the body as formed of the last thoracic and the abdominal segments.

We believe it is needless to say that we have not adopted the new nomenclature of Milne Edwards, because the organs and appendages of the lower crustacea have not been sufficiently studied, from the point of view of homology, to enable us to apply to them the nomenclature of the decapods. We propose to study this somewhat in some new embryological works. The appendages are remarkable according to most (p. 231) reports and merit a detailed description. We have represented those on the head in their respective positions around the mouth.

The antennae occupy their usual place; they are 2-jointed; the basal joint is very large and resembles a leaf; it carries on the an-



terior margin 8 veritable brushes, that is to say appendages large at the base, narrow and more or less obtuse, and entirely covered with setae which give it the appearance of a brush such as is used to clean a lamp chimney. The terminal joint is much more slender, of the same size thruout its length, truncate at the tip and carrying on the truncation 6 to 8 spines of different sizes. These antennae are very short and do not project very much beyond the margin of the carapace.

The first pair of maxillae are like those of the Caligids in general. Each is made up of 3 joints, of which the basal is large and armed with a spine at its base; the terminal joint ends in a stout hook, but it is not curved as in most genera. It resembles the neck of a swan and not the segment of a circle; it does not form a pair of pincers with the preceding joint. It is a strong organ of prehension. It is by these appendages exclusively that the parasite remains fastened to the skin of its host after death, and as they separate towards the tip one from the other, it requires considerable effort and sometimes even cutting to detach them. It forms a cable of great strength.

The second pair is usually formed of two joints, long and slender, and of about the same width. The basal joint is lightly invaginated (p.232) on the anterior margin; it has neither process or seta. The terminal joint is recurved at the end, forming almost a semicircle, or rather a curve like a goat's horn. At the base of the curved portion is a sort of claw, covered with a tuft of setae, forming a brush. And at some distance from this brush we find on the same side a button covered with processes.. This button resembles a reservoir placed lengthwise of a trunk or stem. The tip recurves and is covered, especially on the convex margin with fine protuberances in the form of small teeth.

The third part is notably different from the ordinary form; it is very irregularly indented; its diameter is about the same for its entire length, except at the end; in fact on the anterior margin rises a stout knob, and, after examining this organ with the greatest care, it has a truncated appearance. But it is not truncated. One sees at the tip a free joint, large on one side, curved and pointed toward the opposite side and forming with the point a sort of claw. It is exactly like the head of a bird with the beak of a hawk, whose point is received into an excavation. It is a prehensile organ and very strong.

The four pairs of legs differ much among themselves. The first pair is the smallest; each is biramose, setiferous, formed of a large lamina, terminated by a claw and carrying a single lobule covered with plumose setae. Inside and in front is a second lobule carrying similar setae. This pair then is biramose and armed with setae like these of the Caligidae.

The second pair is partly covered by the first (p.233) when at rest. They are more distinctly biramose and each terminal joint carries a row of long plumose setae. The two rami are attached to one large basal joint. It is the pair best adapted for swimming.

The third pair is completely different from the others; it is formed on each side of a rounded lamina, which is joined on the median line to that of the opposite side, and which carries on the external, posterior angle some small setiferous rami.



It is a powerful swimming organ which ought to function effectively during the free life of the animal. In the center on the free border are two small lobules regularly rounded.

The fourth and last pair is still more oddly fashioned; it corresponds to the segment which carries the elytra dorsally, and also looks like them. On each side this pair is formed of 3 laminae, of which the two external ones are very plump; the laminae are completely flattened, without any appearance of setae or filaments, and the external one alone carries some spines on its margin. These laminae have a whitish aspect like the body of the parasite and are completely opaque; they would be called branchial lamellae. Moreover the fourth legs are very different, the one from the other; the three first pairs are biramous and armed with plumose setae, while the last pair is simply lamellar. The other appendages under the carapace are the two palps on either side at the base of the siphon, which are made up of two joints, grafted the one on the other, and the external one is slightly denticulate at the tip. (p.234)

The siphon is elongate, very pointed, split its whole length, and showing within its lumen two long and straight mandibles, and two other organs, shorter and denser, which seem to serve as a sheath. The mandibles are toothed like a saw at the tip. At the base of the second pair of maxillae there is on either side a lobule or lamina just as at the base of each antenna. Then between this lamina and the first maxilla there is still a rounded appendicular organ, carried on a short peduncle, and whose significance is unknown. Possibly this organ fills the function of a sucker.

This new parasite is thus a true Pandarid, by the presence of its elythroid membranous appendages; it is a Dinemoura because the rami of the last legs are foliaceous, and it differs from the other Dinemours especially in the great development of the abdomen.



