

II. — A CONTRIBUTION TO OUR KNOWLEDGE OF THE SIGALIONINAE.

BY DR. R. HORST. (WITH TWO TEXTFIGURES).

Though our knowledge of the *Sigalioninae* much increased in the last years thanks to the assiduous investigations of Mc Intosh, Pruvot et Racovitza <sup>1)</sup>, Darboux, Willey a. o., yet there still reigns a good deal of confusion about the exact diagnosis of the genera. *Sthenelais simplex* Ehl. <sup>2)</sup> f. i. has rightly been ranged by Augener among the genus *Leanira* <sup>3)</sup>; *Leanira Giardi* Darb. <sup>4)</sup> according to the investigations of Marenzeller belongs to *Sthenelais* <sup>5)</sup> and *Thalenessa stylolepis* Willey <sup>6)</sup> will prove, as I presume, to be a species of *Sigalion*. Partly this may be ascribed to the circumstance, that only a few of the investigators could dispose of a large material and therefore must borrow their knowledge from the often inadequate descriptions of others; but it may also have been caused thereby, that there was no agreement about the characters, that offer a thrustworthy criterion for the distinction of the genera. However von Marenzeller in his critical account of the genus *Leanira* <sup>7)</sup> has given us a clear review of the various often inexact ideas of the authors regarding this matter and stated that besides the presence or absence of the tentacle (median antenna) and the situation of the lateral antennae (on the prostomium or on the buccal segment), the structure of the ventral bristles furnish „das ausschlaggebende Moment”, to distinguish the different genera <sup>8)</sup>.

As the Siboga-expedition collected representants of this group at no less as 37 stations <sup>9)</sup>, I could dispose of a rather large material and I had the opportunity to corroborate as well as to extend the investigations of von Marenzeller. Not only I could examine several species of the genera hitherto known, except one: *Eusthenelais* McInt.; but I met with a worm, dredged at Stat. 2 in Madoera-strait, that in my opinion belongs

1) Faune des Annélides de Banyuls, Archiv. de Zoologie expériment. 3e Sér. Vol. III, 1895, p. 339.

2) Ehlers, Florida-Anneliden, 1887, p. 60.

3) West-Indische Polychaeten, Bull. Museum Comp. Zool. Harvard College, Vol. 43, p. 91.

4) Darboux, Recherches sur les Aphroditiens, Bull. Scient. France et Belgique, t. 33, 1900, p. 123.

5) Polychâten des Grundes, 1902, p. 7; Fauvel, Polychètes Hirondelle et Princesse-Alice, p. 30.

6) Ceylon Pearl-oyster Fisheries, IV, Polychaeta, 1905, p. 261.

7) loc. cit. p. 8.

8) Unfortunately a „lapsus calami” has crept into his account; for he says „ausserdem characterisirt Mc Intosh seine Gattung (*Thalenessa*) noch durch die Bemerkung, dass der unpaare Stirnfühler sehr kurz sei, dass zwei Antennen (unsere Fühler-wimperpolster) vorhanden etc.,” whereas the lateral antennae of *Thalenessa* have nothing to do with antennal ctenidia.

9) A full account of these worms will be published in the Siboga-expeditie, Polychaeta errantia.

to a new genus, intermediate between *Leanira* and *Psammolyce*, and therefore may be called *Euleanira*.

*Euleanira Ehlersi* <sup>1)</sup> nov. gen. n. sp.

One of the three specimens has a length of about 15 mm., and the number of its segments amounts to 65. The head is rounded, nearly as long as broad, provided with two pairs of semilunar eyes, situated closely behind its frontal border; the anterior of them are somewhat larger than the posterior ones. Between the eyes the tentacle arises with a short basal joint, provided with two small auriculate ctenidia; its distal part measures about one and a half the length of the head. The buccal segment bears two tentacular cirri, the dorsal of which is a third longer than the tentacle, whereas the ventral is a third shorter than the dorsal one. At the innerside of the basal part of the tentacular cirri a short, digitiform appendage is situated, that presumably represents the lateral antenna. The palps are long and slender,

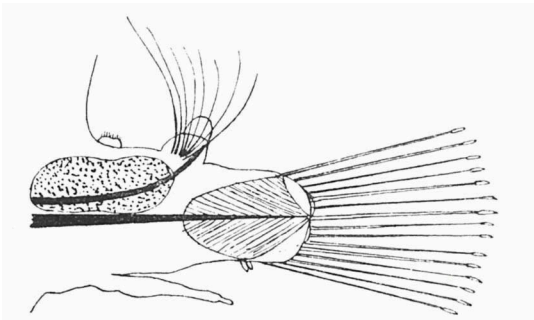


Fig. 1.

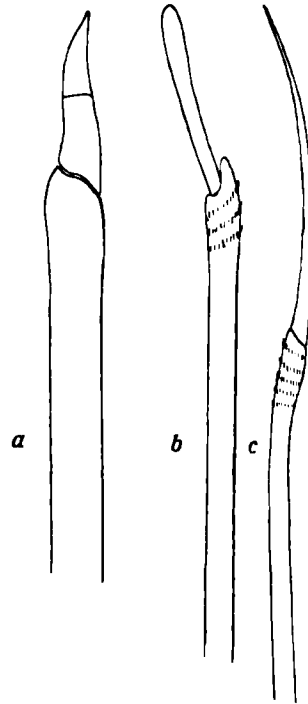


Fig. 2.

smooth, tapering distally, about three or four times longer than the tentacular-cirri. The scales have a rounded trapezoidal shape, with a sinuated external border and the scar of attachment lying in the centre; they are translucent, whereas a broad, semilunar, brown-red spot consisting of large polygonal cells occurs on their internal half. A typical foot (fig. 1) consists of a large, cylindrical neuropodium, provided with a rounded anterior and posterior lip; the first-named is somewhat narrower than the last one. Between them a fascicle of setae emerges, that consist of a long, smooth shaft and a

1) Named in honor of Prof. Ehlers, who celebrated this year his eightieth birth-day.

short, knife-shaped appendix (fig. 2 a), the internal cavity of which appears to be divided in two compartments by a transverse septum. However in the dorsal and ventral part of the fascicle some of the bristles have a cylindrical appendix, with an obtuse, club-shaped end, whereas their shaft bears a couple of denticulated rows near its distal extremity (fig. 2 b). In the anterior segments (2<sup>d</sup>, 3<sup>d</sup> and 4<sup>th</sup>) this appendix of the setae is longer and more slender; even in the dorsal and ventral part of the fascicle it is curved, sickle-shaped, resembling the neuropodial bristles of the second parapodium of *Psammolyce flava* Kinb., whereas 5 or 6 denticulated rows occur at the distal end of their shaft (fig. 2 c). No stylodes are present, but some cylindrical papillae, as in *Psammolyce*, occur along the border of the foot. Especially in the third segment they are rather numerous. The notopodium of the foot is small, papilliform and shows a fascicle of fine, capillary setae, provided with spirally arranged whorls; on its dorsum occurs one cushion-shaped ctenidium. A slender ventral cirrus, showing a constriction at a short distance from its end, does not reach to the extremity of the foot. In the anterior segments the ventral cirrus is longer and more slender, extending to or beyond the distal end of the foot. On the 3<sup>d</sup> segment the first branchia appears as a small triangular appendix.

I do not hesitate to propose a new genus-name for this worm; for it cannot be ranged among *Psammolyce*, that is characterized by the presence of cheliform bristles, a long dorsal cirrus on the third segment and by the absence of ctenidia, nor among *Leanira*, that possesses pectinate-canaliculate setae and stylodes.

The genera of Sigalioninae may be easily recognized by the following key:

Median antenna (tentacle)	absent . . . . .	<i>Sigalion</i> Aud. & M. Edw.											
	Lateral antennae inserted on the prostomium . . . . .	<i>Euthalenessa</i> Darb.											
" " present		Ctenidia present { <table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td>neuropod. setae with cheliform appendix</td> <td>appendix mono- and multi-articulate . . .</td> <td><i>Sthenelais</i> Kinb.</td> </tr> <tr> <td>neuropod. setae with pectin. canaliculate appendix</td> <td>appendix only multi-articulate.</td> <td><i>Eusthenelais</i> Mc Int.</td> </tr> <tr> <td>neuropod. setae with pectin. canaliculate appendix</td> <td></td> <td><i>Leanira</i> Kinb.</td> </tr> <tr> <td>neuropod. setae with knife-like appendix</td> <td></td> <td><i>Euleanira</i> Horst.</td> </tr> </table>	neuropod. setae with cheliform appendix	appendix mono- and multi-articulate . . .	<i>Sthenelais</i> Kinb.	neuropod. setae with pectin. canaliculate appendix	appendix only multi-articulate.	<i>Eusthenelais</i> Mc Int.	neuropod. setae with pectin. canaliculate appendix		<i>Leanira</i> Kinb.	neuropod. setae with knife-like appendix	
neuropod. setae with cheliform appendix	appendix mono- and multi-articulate . . .		<i>Sthenelais</i> Kinb.										
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neuropod. setae with pectin. canaliculate appendix			<i>Leanira</i> Kinb.										
neuropod. setae with knife-like appendix		<i>Euleanira</i> Horst.											
	Lateral antennae fused with the buccal segment	<i>Leanira</i> Kinb.											
		Ctenidia absent . . . . .	<i>Psammolyce</i> Kinb.										

In the preceding key the name of *Thalenessa* was substituted by *Euthalenessa*, as proposed by Darboux <sup>1)</sup> and as has been approved by von Marenzeller <sup>2)</sup> and Ehlers <sup>3)</sup>; for the genus *Thalenessa* was established by Baird <sup>4)</sup> in 1868 for *Sigalion Edwardsi* Kinb., a species which has proved to belong in fact to the genus *Sigalion*, because the tentacle is absent. It was therefore at variance with the rules of nomenclature, that Mc Intosh afterwards gave that name to a group of Sigalioninae, with a short tentacle. The name of *Stenolepis* Willey <sup>5)</sup> has been omitted, while I believe that it cannot be maintained; for in 1905 the English author has united under that name those *Leanira*-species, that are characterized „by the presence of a long tentaculum impar born upon a ceratophore, which is provided with a pair of spatulate appendages”, suggesting that the true *Leanira*-species were distinguished „by the presence of a very small tentaculum impar, inserted directly upon the prostomium, not born upon a ceratophore”. This suggestion, in my opinion, is not correct, for Ehlers says about *Leanira hystricis* <sup>6)</sup>, that the tentacle emerges from the middle of the cephalic lobe and consists of a cylindrical basal joint and slender terminal part; also *Lean. tetragona* (Oerst.) <sup>7)</sup>, one of the eldest described species of *Leanira*, shows a tentacle with conspicuous ceratophore and ctenidia. Therefore I think it not to be permitted to divide the species of *Leanira* into two groups, on account of the length of the tentacle and the absence or presence of antennal ctenidia.

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1) loc. cit. p. 79.

2) loc. cit. p. 8.

3) Die bodensässigen Anneliden der deutschen Tiefsee-Expedition, 1898—99, p. 52.

4) Journal Linnean Society, Zoology, Vol. IX, 1868, p. 34.

5) loc. cit. p. 259.

6) Zeitschr. f. Wissensch. Zoologie, Bd. XXV, 1874, p. 35, Pl. II, figs. 5—11.

7) Malmgren, Nord. Hafs-annulater, p. 88, pl. XI, fig. 14.