Annals and Magazine of Natural History

Series 9

ISSN: 0374-5481 (Print) (Online) Journal homepage: <http://www.tandfonline.com/loi/tnah15>

XLIX.—The type-specimens of *Pœcilasma carinatum*, Hoek (Cirripedia)

W.T. Calman D.Sc.

To cite this article: W.T. Calman D.Sc. (1918) XLIX.—The type-specimens of *Pœcilasma carinatum*, Hoek (Cirripedia), *Annals and Magazine of Natural History*, 1:6, 401-408, DOI: [10.1080/00222931808562335](https://doi.org/10.1080/00222931808562335)

To link to this article: <http://dx.doi.org/10.1080/00222931808562335>

Published online: 04 Sep 2009.

Submit your article to this journal [↗](#)

Article views: 1

View related articles [↗](#)

XLIX.—*The Type-specimens of Pœcilasma carinatum, Hoek (Cirripedia)*. By W. T. CALMAN, D.Sc.

(Published by permission of the Trustees of the British Museum.)

IN the Report on the Cirripedia of the 'Challenger' Expedition, Hoek described two species of *Pœcilasma* (*P. carinatum* and *P. gracile*) differing from all those referred to the genus by Darwin in having the sides of the carina expanded below. Pilsbry, in 1907, transferred these species to Hoek's genus *Megalasma*, placing them in a new subgenus, *Glyptelasma*, with *M. subcarinatum*, Pilsbry, as the type-species. Annandale, more recently (1916), has transferred *Glyptelasma* to *Pœcilasma*, believing that the included species have more affinity with that genus than with *Megalasma*.

A re-examination of the type-specimens of *P. carinatum* and of the specimen described by Gruvel in 1901 reveals certain omissions and errors in the original descriptions which deserve to be noticed, since they affect not only the specific but also the generic and subgeneric definitions.

Megalasma (Glyptelasma) carinatum (Hoek).

Pœcilasma carinatum, Hoek, Rep. 'Challenger' Cirripedia, 1883, p. 44, pl. i. figs. 8-10, pl. ii. fig. 1, pl. vii. figs. 6, 7; id. 'Siboga' Exp., Cirripedia Pedunc. 1907, p. 5, pl. i. fig. 1; Gruvel, Trans. Linn. Soc. London, Zool. viii. 1901, p. 157, pl. xvii. figs. 9-16.

Megalasma (Glyptelasma) carinatum, Pilsbry, Bull. U.S. Nat. Mus. lx. 1907, p. 93; id. Proc. Acad. Nat. Sci. Philadelphia, lix. 1907, p. 416.

Material examined.—Hoek, in his 'Challenger' Report, mentions six specimens of this species. One, from Station 24, off Culebra Island, is no longer in the collection. From Station 344, off Ascension Island, he records "Three specimens and two very small ones." The bottle bearing the label of this station now contains six specimens ranging from 1.75 mm. to 14 mm. in length of capitulum. The largest of these is represented by the capitular valves (the carina and one scutum separated from the others) and by a partially dissected body with ovigerous lamellæ still attached. Since the capitular length of this individual is that indicated by Hoek for his largest specimen, and since it appears to have furnished the material for most of his figures and much of his description, I have selected it as the holotype.

With regard to Hoek's figure of the entire animal there is some difficulty. He says (Chall. Rep. p. 45):—"Capitulum
Ann. & Mag. N. Hist. Ser. 9. Vol. i. 27

... in the largest specimen narrower than in the smaller ones. Fig. 8 (pl. i.) represents one of the smaller ones." The figure, however, measures 28 mm. in length of capitulum, and as it is stated to be "magnified two diameters," it would correspond exactly in this dimension with the largest of the type-specimens. Its width represents an actual measurement of 8.5 mm., which is considerably greater than that of any of the specimens. It does not seem possible, therefore, to identify this figure with any individual specimen, although in the form of the scutum, and particularly in the angle formed by its basal and occludent margins, it shows a certain similarity to the second in point of size among the type-specimens. This individual, of which the capitulum measures 9 mm. in length, is described separately below.

The Museum also possesses * the remains of the specimen described and figured by Gruvel, as well as a number of other specimens from the same locality ("off coast of Cuba") which were seen but not examined in detail by him (Gruvel, *t. c.* p. 159). Some error has crept into Gruvel's measurements of his specimen. He gives the length of capitulum as 14 mm. and its width as $4\frac{1}{2}$ mm., and his statement that it is about three times as long as wide has been copied by Pilsbry, who regards this as the chief character distinguishing the species from his *M. subcarinatum*. The statement, however, is in conflict with Gruvel's own camera drawing of the outline (*t. c.* pl. xvii. fig. 9) and with the specimen itself. When the valves are placed together the capitulum measures about 13 mm. by 6 mm., a proportion which agrees well with Gruvel's drawing.

Description of Holotype.—Valves covered with a fine nearly colourless cuticle, without setæ. Lines of growth well-marked, with finer concentric ridges between; radial striations very fine, but distinct. Scutum (fig. 1, A) twice as long as wide, occludent margin convex, tergal margin straight, carinal margin convex above, deeply concave below, basal margin forming an even curve with occludent margin, with the chord of which it makes a very obtuse angle; basicarinal angle acute and recurved. Ridge from umbo to apex well-marked, curved, distant from occludent margin except near the ends; ridge from umbo to carino-tergal angle low and rounded but distinct. A small umbonal tooth on inner surface of both valves and a basal area which is radially and

* Unfortunately the history of these specimens is incomplete, and the indications of locality and depth quoted by Gruvel from the labels cannot now be confirmed.

concentrically striated (fig. 1, B). *Tergum* (fig. 1, A) with carinal margin rather less than half as long as occludent margin and inclined towards it above. *Carina* (fig. 1, A, C) evenly arcuate, upper portion narrow, its transverse width above not more than one-twelfth of the length of the valve; sides expanded in the lower third; septum concave, the

Fig. 1.

Megalasma (Glyptelasma) carinatum (Hoek), holotype.

A. Valves of the capitulum, lateral view. B. Basal angle of scutum, inner surface. C. Carina, inner surface.

lateral lobes projecting as seen from the side; basal margin forming a slightly convex curve with that of the scutum when the valves are in their natural position and viewed from the side.

Dorsal surface of prosoma provided with long *filamentary appendages* arranged in two series (cf. fig. 3). The exact

number of these is difficult to ascertain and the arrangement is not quite regular, but at least ten appendages can be counted on one side, the most anterior attached close to the point of origin of the mantle-fold.

The mouth-parts and the first pair of cirri have been removed. The *second cirrus* is present on the right side; it has the rami subequal in length, each with sixteen segments. The *fourth cirrus* has, on the middle segments, five pairs of spines, and the posterior setæ are shorter than the segments. The posterior cirri and the caudal appendages are wanting.

Measurements of Holotype.—

	mm.
Length of capitulum (approx.)	14
Breadth "	6·5
Length of scutum	12
Breadth "	6
Length of tergum (apex to scuto-carinal angle)....	7·25
Length of carina	9·5
Width " (near apex)	0·8
Width " (at base, approx.)	1·2

Fig. 2.

Outlines of scuta from two paratypes of *Megalasma (Glyptelasma) carinatum* (Hoek). The larger from a specimen of capitular length 8·5 mm., the smaller from one measuring 6·5 mm.

Variation.—The paratypes, which are all much smaller than the holotype, differ from it more or less in the outline of the scutum (fig. 2). The basal margin is straight or even slightly concave, and its junction with the occludent margin at the umbo is marked by a distinct angle; the angle formed

with the chord of the occludent margin is always very obtuse. The convexity of the occludent margin varies considerably, as shown in the figures, and so also does the curvature of the carinal margin. The median ridge of the carina stops a little short of the base, forming a tooth which is most prominent in the smallest specimens.

Fig. 3.

Megalasma (Glyptelasma) carinatum (Hoek). Specimen from coast of Cuba. Body, from the side, to show dorsal filamentary appendages, first cirrus, and caudal appendages.

In the specimen figured by Gruvel the outline of the scutum differs only very slightly from that of the holotype; Gruvel's figures represent rather too sharp an angle between the basal and occludent margins. The other specimens from the same locality show considerable variation in this respect;

the basal margin may form a continuous curve with the occludent margin or it may meet it in a distinct angle at the umbo; the angle which it forms with the chord of the occludent margin varies, although it is always noticeably greater than a right angle; the basal margin may be straight or slightly concave or convex; and it may be equal to or shorter than the base of the carina.

In Gruvel's specimen and in the others that have been dissected the filamentary appendages (fig. 3), although varying in number, resemble those found in the holotype; there are usually some six or seven pairs of very long appendages on the anterior part of the tergal surface of the prosoma, followed by a number of shorter ones, some of which may, as in the specimen figured, be reduced to papillæ.

The asymmetry of the mandibles observed by Hoek and again found in Gruvel's specimen is by no means constant; as a rule, both mandibles have three teeth in addition to a bidentate inner angle, but smaller intermediate teeth may be developed in some or all of the intervals between the larger teeth.

The rami of the first pair of cirri (fig. 3) have respectively ten and eleven segments, at least one of the proximal segments being, as usual, very indistinctly defined. The posterior cirri in large specimens have a small sixth pair of spines in addition to those observed in the holotype. The caudal appendages (fig. 3) may exceed one-fourth of the length of the peduncle of the sixth cirrus.

The largest of the specimens from the coast of Cuba measures 23 mm. in length and 10.5 mm. in breadth of capitulum.

Megalasma (Glyptelasma) sp.

The specimen here recorded was found, as mentioned above, among the syntypes of *P. carinatum*. The capitulum measures 9.5 mm. in length by 4.6 mm. in width. It differs from all the specimens described above in the following characters:—

(1) The cuticle of the capitulum is everywhere beset with short fine setæ.

(2) The straight basal margin of the scutum is at right angles to the chord of the occludent margin, and is a little longer than the concave basal margin of the carina.

(3) There are no filamentary appendages.

(4) The caudal appendages are extremely short, not more

than one-twelfth of the length of the peduncle of the sixth cirri.

The mandible has three teeth and a forked inner angle; the first cirri have eight segments in each ramus; the posterior cirri have four or five pairs of spines on the middle segments, the proximal pair very small.

This specimen doubtless represents a species distinct from *M. carinatum*, but it is not so easy to be sure that it is distinct from some of the other species of the subgenus, in which the appendages have not been described. Since it is solitary and probably immature, it seems inadvisable to distinguish it by a new specific name.

General Remarks.

In establishing the genus *Pœcilasma*, Darwin stated the filamentary appendages were absent (*Lepadidæ*, p. 100), and the statement is repeated by Gravel and by Annandale. Hoek does not mention these structures, and Pilsbry (*Bull. U.S. Nat. Mus.* ix. 1907, p. 82) merely says of *Pœcilasma* "No lateral filaments at bases of the cirri," and does not mention the character under *Megalasma*. There is evidently considerable diversity as regards these appendages in the species referred to *Glyptelasma*, and in some species they are absent altogether, as they are in *Pœcilasma*, s. str. They may furnish characters valuable for the discrimination of species in this group, subject to the caution suggested by their known variability in size and number in the species of *Lepas* (Darwin, *Lepadidæ*, pp. 70-71).

Annandale's transference of the subgenus *Glyptelasma* from *Megalasma* to *Pœcilasma* is not supported by the facts here recorded. Apart from the carina, *Megalasma* is distinguished from *Pœcilasma* by the form of the scuta, in which, as Pilsbry expresses it, "there has been a rotation of the basal margin of the scutum through 90°, bringing it in line with the occludent margin." The specimens discussed above show intermediate stages between those in which the basal margin is at right angles to the chord of the occludent margin and those like the holotype of *M. carinatum*, in which the two margins form a continuous curve. From these to the typical forms of *Megalasma* the change is very slight, and I therefore follow Pilsbry in including the species of *Glyptelasma* in that genus.

M. subcarinatum, Pilsbry, the type of the subgenus, does not differ greatly from *M. carinatum* in the proportional

width of the capitulum, but in some of the other characters mentioned by Pilsbry it seems to be quite distinct. The basal width of the capitulum is relatively greater, the basal margin of the scutum appears to be at right angles to the chord of the occludent margin, the carina is straighter, and the width of its upper part is about one-sixth of its length. No details are given as to the appendages.

L.—On new Hymenoptera of the Family Evaniidæ in the British Museum. By ROWLAND E. TURNER, F.Z.S., F.E.S.

Hyptiogaster rufa, Westw.

Fœnus rufus, Westw. Ann. & Mag. Nat. Hist. (1) vii. p. 537 (1841). ♂; Westw. Trans. Ent. Soc. London, (2) i. p. 222 (1851). ♀.

Hyptiogaster macrochela, Kieff. Ann. Soc. Ent. France, lxxx. p. 180 (1911). ♂.

Hyptiogaster arenicola, sp. n.

♀. Ferruginea; vertice fascia transversa nigra; valvulis terebræ nigris, tertio apicali flavidulis; alis hyalinis, venis fuscis, stigmate ferrugineo.

Long. 14–16 mm.; terebræ long. 6 mm.

♂. Feminæ similis, vertice fronteque nigris.

Long. 16–17 mm.

♀. Head fairly large, broader than the thorax; the posterior margin distinctly raised and broadly emarginate, separated from the eyes by a distance equal to about one-third of their length. Vertex and front coarsely punctured-rugose; the face below the antennæ less coarsely punctured-rugose, punctured in the middle; a triangular tubercle between the antennæ. Clypeus somewhat shining, microscopically punctured, with sparse larger punctures intermingled, the apical margin almost straight. Second joint of the flagellum a little longer than the third, more than four times as long as the first; posterior ocelli separated from each other by a distance equal to two-thirds of the length of the second joint of the flagellum, a little nearer to the eyes than to each other. Neck short; pronotum not produced at the angles; thorax coarsely rugose; the mesonotum distinctly margined both anteriorly and laterally, the anterior margin straight; pleuræ less coarsely rugose; median segment rugose-reticulate