

A new pedunculate cirripede (Thoracica, *Heteralepas*) from the Northeast Atlantic Ocean

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Carriol R.-P. 1998. — A new pedunculate cirripede (Thoracica, *Heteralepas*) from the Northeast Atlantic Ocean. *Zoosystema* 20 (3): 505-509.

KEY WORDS

Crustacea,
Cirripedia,
Thoracica,
taxonomy,
Meteor Seamount,
Northeast Atlantic.

ABSTRACT

A new species of *Heteralepas* is described from waters of 300 m at Meteor Seamount, south of the Azores, in the Northeast Atlantic Ocean. This species possesses a peduncle longer than the capitulum, a carinal crest without protuberances and continuing onto the peduncle, and it lacks scuta.

RÉSUMÉ

Un nouveau cirripède pédonculé (Thoracica, Heteralepas) du nord-est de l'océan Atlantique. Description d'une nouvelle espèce d'*Heteralepas* trouvée par 300 m de fond, sur le banc Météor, au sud des Açores, dans l'est de l'Atlantique nord. Cette espèce possède un pédoncule plus long que le capitulum et une crête carinale, sans protubérances, se prolongeant le long du pédoncule, mais n'a pas de scuta.

MOTS CLÉS

Crustacea,
Cirripedia,
Thoracica,
taxonomie,
banc Météor,
Atlantique (Nord-Est).

INTRODUCTION

The Meteor Seamount was sampled by the *Lesivy* during a trawling survey in August 1990. The expedition was sponsored by the FROM-Bretagne. M. H. Du Buit identified the fish fauna (Du Buit 1991) and provided the specimens of *Heteralepas* for study. This new taxon is the sixth species of *Heteralepas* from the Atlantic Ocean.

SYSTEMATICS

Subclass CIRRIPEDIA Burmeister, 1834
Superorder THORACICA Darwin, 1854
Order PEDUNCULATA Lamarck, 1818
Suborder HETERALEPADOMORPHA

Newman, 1987

Family HETERALEPADIDAE Nilsson-Cantell, 1921

Genus *Heteralepas* Pilsbry, 1907

SPECIES INCLUDED. — The 21 taxa presently attributed to this genus include: *H. cornuta* (Darwin, 1851); *H. japonica* (Aurivillius, 1892); *H. lankesteri* (Gruvel, 1900); *H. belli* (Gruvel, 1902); *H. microstoma* (Gruvel, 1902); *H. gigas* (Annandale, 1905); *H. ovalis* (Hoek, 1907); *H. tenuis* (Hoek, 1907); *H. rex* (Pilsbry, 1907a); *H. cygnus* Pilsbry, 1907b; *H. nicobarrica* Annandale, 1909; *H. vetula* Pilsbry, 1909; *H. dubia* Broch, 1922; *H. hataii* Hiro, 1937; *H. utinomii* Newman, 1960; *H. mystacophora* Newman, 1964; *H. luridas* Zevina, 1975; *H. adiposa* Zevina, 1982; *H. fulva* Zevina, 1982; *H. smilius* Ren, 1983; plus the new species described here: *Heteralepas meteorensis* n.sp.

DIAGNOSIS. — "Inner rami of cirri V and VI atrophied; articles of cirri (except cirrus I and inner rami of V and VI) rectangular; cirri long; lesser curvature of cirri supporting large pair of setae and one or two smaller pairs from the same origin; greater curvature supporting a few unpaired setae." (Newman 1960).

***Heteralepas meteorensis* n.sp.**

(Fig. 1)

TYPE MATERIAL. — The types and additional specimens are deposited in two places, the Laboratoire de Zoologie-Arthropodes, Muséum national d'Histoire naturelle, Paris [holotype MNHN-Ci2689; paratypes MNHN-Ci2690 (specimen opened) and MNHN-

Ci2691 (dissected, appendages preserved in alcohol); additional specimens MNHN-Ci2692 (1 specimen) and MNHN-Ci2693 (a small colony of about 15 adults)] and the Laboratoire de Biologie marine du Collège de France, Concarneau [additional material (a colony of several tens of adults)].

ETYMOLOGY. — Named for the Meteor Seamount, the type locality.

TYPE LOCALITY. — Meteor Seamount, south of Azores Islands (30°N - 28°30'W), at 300 m depth, living on *Callogorgia* sp. (Alcyonaria).

DIAGNOSIS

Peduncle obviously longer than capitulum; capitulum lacking scuta; distinct carinal crest, without protuberances, continuing onto the peduncle.

DESCRIPTION

Specimens yellow pink in alcohol. Capitulum globular, laterally compressed, carinal margin broadly convex with carinal crest extending from orifice over the capitulum to the base of peduncle; scutal crest absent; lacking valves. Orifice between one fourth and one third height of capitulum; lips slightly crenulate. Peduncle long, annulated, two to four times length of capitulum (Table 1), cylindrical, with diameter equal to capitulum width.

TABLE 1. — Measurements (in cm) of capitulum and peduncle.

		Holotype MNHN-Ci2689	Paratype MNHN-Ci2690	Paratype MNHN-Ci2691
capitulum	height	1.6	1.8	1.2
	depth	1.4	1.7	1.2
	width	0.7	1	0.8
peduncle	length	3.4	7.2	3.1
	diameter	0.7	1-1.3	0.8

Labrum slightly bullate, anterior portion with tufts of short fine setae, crest with twenty-five small, sharp teeth; palps nearly triangular, superior margin with numerous long spines.

Mandible with four teeth including inferior angle, covered with short spinules; lower margin of first tooth with few spinules and some minute setae; lower margin of second and third teeth with several tiny spinules; upper margin of

second, third and fourth teeth with tiny spinules. Superior margin of mandible with tuft of long thin spinules and tuft of shorter spinules, inferior margin supporting row of numerous short thin spinules.

First maxilla notched; portion above notch with a single strong spine; notch supporting a long spine below and two long spines above with a short spine and two long thin spines between; lower cutting edge with long and some shorter spines; short spines in two groups along superior margin, tuft of few spinules near base of first major spine, brush of spinules along inferior margin; surface clothed with numerous spinules arranged in rows.

Second maxilla broadly rounded; distal portion

TABLE 2. — Number of articles of right cirri (I-VI) and caudal appendage (ca) from the paratype MNHN-Ci2691.

	I	II	III	IV	V	VI	ca
Inner ramus	19	59	77	87	23	26	14
Outer ramus	30	68	83	90	93	92	

with tufts and rows of long thin pinnate spinules; proximal portion with a tuft of very long pinnate spinules.

Inner rami of cirri V and VI atrophied (Table 2). Lesser curvature of cirrus V supports one pair of long, one pair of short, and one pair of minute setae, from nearly common base on each segment. At base of long pair of setae, a very short

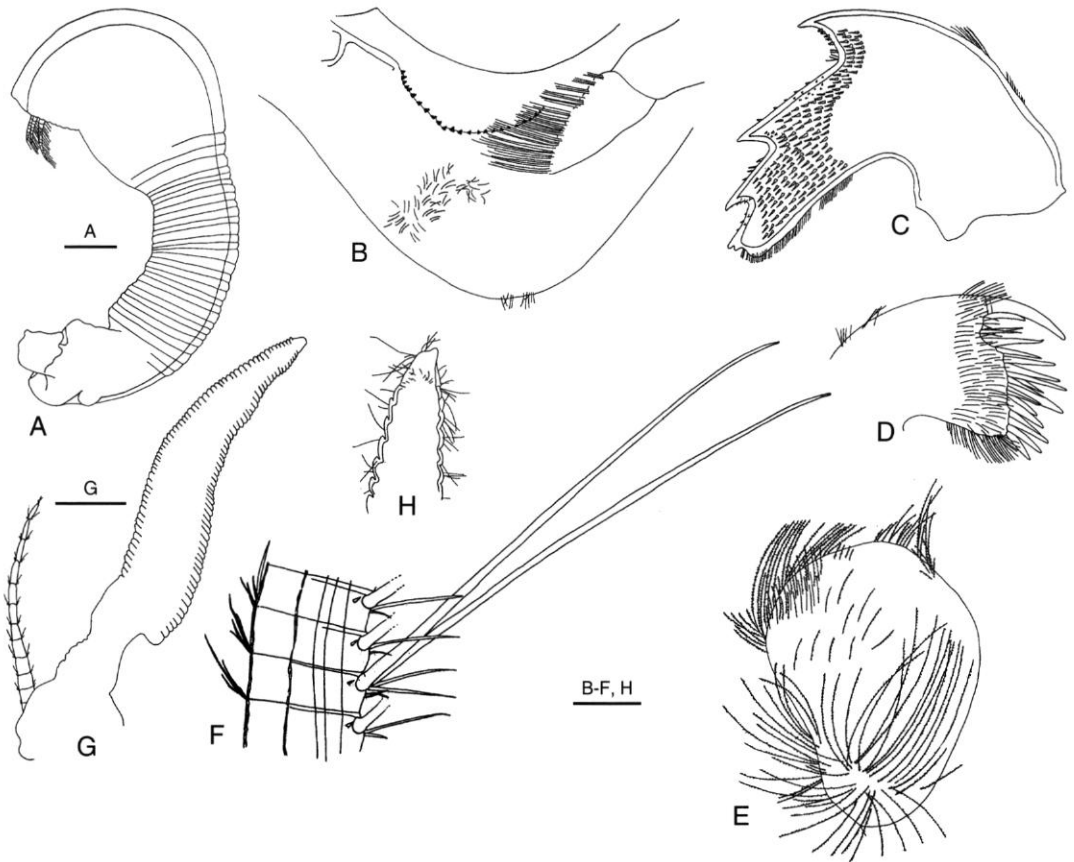


FIG. 1. — *Heteralepas meteorensis* n.sp.; A, holotype MNHN-Ci2690; B-G, paratype MNHN-Ci2691; B, labrum and right palp; C, mandible; D, first maxilla; E, second maxilla; F, intermediate article of outer ramus of cirrus V; G, penis and caudal appendage; H, distal part of penis. Scale bars: A, 4 mm; B-F, H, 0.5 mm; G, 1 mm.

TABLE 3. — Species of the genus *Heteralepas* of the world ocean.

<i>Heteralepas</i>	Western Atlantic	Eastern Atlantic	Eastern Pacific	Indo-Pacific
<i>H. cornuta</i>	West Indies, North Caroline	Western Africa	Chile	Adaman Sea, Philippines
<i>H. japonica</i>	—	—	—	Japan, China, Indo-Malaysian waters, Philippines, Australia, New Zealand
<i>H. lankesteri</i>	West Indies, Brazil	—	—	—
<i>H. belli</i>	Cuba	—	—	—
<i>H. microstoma</i>	—	Madera	—	—
<i>H. gigas</i>	—	—	—	Malaysia
<i>H. ovalis</i>	—	—	—	Malaysia
<i>H. tenuis</i>	—	—	—	New Guinea
<i>H. rex</i>	—	—	—	Hawaii
<i>H. cygnus</i>	—	—	California	—
<i>H. nicobarica</i>	—	—	—	Nicobar Islands
<i>H. vetula</i>	—	—	—	Japan
<i>H. dubia</i>	—	—	—	New Zealand
<i>H. hataii</i>	—	—	—	Japan
<i>H. utinomii</i>	—	—	—	Tasmania
<i>H. mystacophora</i>	—	—	Southeast Pacific	—
<i>H. luridas</i>	Caribbean	—	—	—
<i>H. adiposa</i>	—	—	—	Japan
<i>H. fulva</i>	—	—	Southeast Pacific	—
<i>H. smilius</i>	—	—	—	China
<i>H. meteorensis</i> n.sp.	—	South of Azores	—	—

spinule arises. Greater curvature supports graded series of three or four short setae at each articulation.

Caudal appendage of fourteen articles with thin setules at distal margins (Table 2).

Penis weakly annulated, slender, tapering gradually throughout its length; covered with numerous long, soft setae.

DISCUSSION

Zevina (1982) divides the *Heteralepas* in two groups: those with the peduncle obviously longer than the capitulum and those with the peduncle shorter. *Heteralepas meteorensis* n.sp. belongs to the first group. It differs from *H. gigas* by lacking scuta. The carinal crest without protuberances distinguishes *H. meteorensis* n.sp. from *H. fulva* and *H. nicobarica*. *H. meteorensis* n.sp. cannot be confused with *H. cygnus*, in which the carinal crest does not continue on the peduncle.

DISTRIBUTION

Heteralepas attains greatest diversity in the Indo-

Pacific (Zevina 1982; Ren 1983; Rosell 1991): among the twenty-one species of which this genus consists (Table 3), sixteen are exclusively from Indian and Pacific Oceans and four are exclusively from Atlantic Ocean. Only one species, *H. cornuta*, is known from both the Atlantic and Pacific Oceans. *H. meteorensis* n.sp. is along with *H. microstoma* and *H. cornuta* (the latter two from Madera and Western Africa respectively). *H. cornuta* also occurs in Western Atlantic Ocean (West Indies, North Caroline) as does *H. luridas* (Caribbean), *H. lankesteri* (West Indies, Brazil) and *H. belli* (Cuba).

Acknowledgements

I wish to thank J. S. Buckeridge (UNITEC Institute of Technology, Auckland, New Zealand) and an anonymous reviewer for several useful comments on the manuscript, D. Defaye (Laboratoire de Zoologie-Arthropodes, Muséum national d'Histoire naturelle, Paris, France) who kindly lent me her microscope, B. Battail (Laboratoire de Paléontologie, Muséum national

d'Histoire naturelle, Paris, France) who translated me some Russian texts and C. Norrthon who duplicated my drawings.

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Submitted on 29 October 1997;
accepted on 3 April 1998.