

Valenciennes, M. A.:

1835-50. Ichthyologie des îles Canaries, ou histoire naturelle des poissons rapportés par MM. P.-B. Webb et S. Berthelot et décrits par M. A. Valenciennes.

ADDITIONS TO PREVIOUSLY REVISED ORDERS OR FAMILIES
OF FISHES OF THE MUSEU MUNICIPAL DO FUNCHAL
(STOMIATIDAE, ASTRONESTHIDAE, PARALEPIDIDAE)

No. IX, Art. 24.

By G. E. MAUL

The constant influx of specimens, particularly those taken from the stomachs of *Aphanopus carbo* Lowe, is greatly increasing the number of species recorded from Madeira. In the present paper five species will be considered, three of which are new to Madeira and one new to science.

FAMILY STOMIATIDAE

Genus *Stomias* Cuvier, 1817

Stomias boa (Risso)

Figs. 6, 7 & 8A. Tabs. 22-24.

Owing to the locality and morphological characters, the following specimen is likely to belong to the form based on Risso's specimen described in "Ichthyologie de Nice, Paris 1810", the typical form *Stomias boa boa*. For the synonymy of this we refer to Ege, 1954, Genus *Stomias* Cuv., Dana-Report No. 5, p. 14.

One specimen, 131mm. S.L. Reg.No. 5096. From stomach of *Aphanopus carbo* Lowe. 8.II.1955. The skin is somewhat damaged, but all the exterior characters can be determined.

DESCRIPTION

Head and body compressed. Eyes normal, mouth large. All fins small. Dorsal opposite anal. Barbel moderate.

TAB. 22. — *Stomias boa*: Table of Measurements,
Between Verticals, in mm.

Total Length.	.	.	.	.	.	140
Standard length	.	.	.	.	.	131
Head	.	.	.	.	.	ca. 11
Snout to pectorals	.	.	.	.	.	12
Snout to ventrals	.	.	.	.	.	94
Snout to dorsal	.	.	.	.	.	115
Snout to anal	.	.	.	.	.	114
Base of dorsal	.	.	.	.	.	10.5

TAB. 22. — (continued)

Base of anal	13.7
Eye	2.7
Snout	2.7
Barbel	8
Interorbital	3.5
Greatest breadth of body	6
Greatest depth of body	13
Least depth of caudal peduncle	2.5

TAB. 23. — *Stomias boa*: Table of Counts*Rays*

Dorsal	18
Anal	21
Ventrals	5
Pectorals	7
Branchiostegals	16
Vertebrae	79
Gill-rakers on 1st arch	9

Small photophores on scales

First row (uppermost)	1 small in centre
Second	1 small in centre
Third	1 fairly large in centre
Fourth	2-4 small in centre
Fifth	2, sometimes 3 near inferior angle
Sixth	4-5, in vertical row, near inferior angle
Seventh	numerous very minute along vertical borders
Eighth	abt. 8 fairly large along upper and vertical borders

Large photophores of ventral series

I - P.	11
P - V.	49
V - A.	13
A - C.	13 + (5?)

Large photophores of lateral series

P - V.	49
V - A.	13

Teeth

P ₁ maxillary	5 left, 6 right
Mandibular	11
Vomerine	2/2
Palatine	2+1

Head about 12 in standard length; greatest depth about 10; predorsal length 1.14; pre-anal-fin length 1.15; least depth of caudal peduncle about 57. Eye 4.2 in head; interorbital 3.5; largest tooth of premaxillary (2nd) 4.8; snout 1.1; barbel 1.4.

Teeth of premaxillaries and mandible large, curved and pointed. Sequence of decrease in size in left premaxillary: 2nd, 4th, 5th, 1st, 2nd; in right:

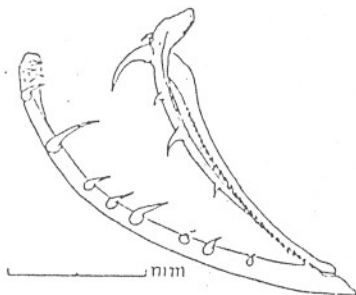


FIG. 6.—*Stomias boa*, Reg. No. 5096; dentition of the jaw-bones of the left side.

2nd, 5th, 4th, 6th, 1st = 3rd; in mandible: 5th, 4th, 8th, 10th, 7th, 1st = 3rd = 6th = 9th, 2nd, 11th. The two teeth on each side of the vomer and the three on each palatine are of the shape and more or less the size of the 4th left premaxillary one.

The gill-rakers consist of groups of three curved, pointed tooth-like spines on a common base, which increase in length from front to back. There are 8 on the ceratobranchial and one on the hypobranchial of the first gill-arch. None on the upper branch or the angle between the epibranchial

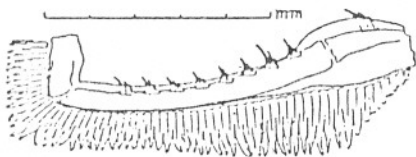


FIG. 7.—*Stomias boa*, Reg. No. 5096; outer surface of right first gill-arch.

and ceratobranchial. The last one well removed from angle. Large space between the foremost ceratobranchial gill-raker and the hypobranchial one.

On the head there are three luminous glands, one below eye, one at hind border of preopercle, and one on membrane behind last branchiostegal ray. The size and disposition of the photophores of the body is indicated in the above list of counts.

Colour uniform blackish.

COMPARISON WITH THE "DANA" MATERIAL OF THE TWO ATLANTIC
SUBSPECIES OF *STOMIAS BOA*, AS DESCRIBED BY EGE (1934)

Whereas the proportions and by far the greater part of the meristic values lie well within the range of variation of Ege's copious material, there are great differences in the following characters:

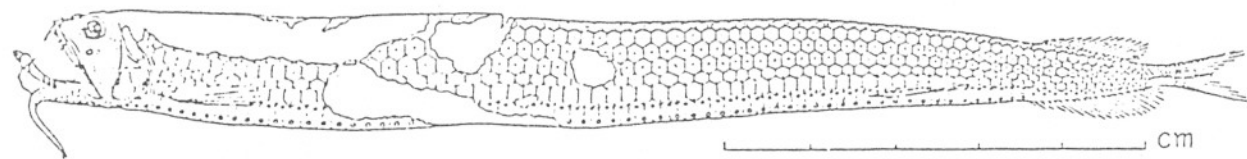
	Ege's material	Madeira specimen
Mandibular teeth	7 - 8	11
Vomerine teeth	1 each side	2 each side
Pectoral rays	6	7
Small photophores in row of scales nearest dorsal median line	2 - 3	1 (rarely 2)
Small photophores in 6th row	4 - 5	3 (rarely 4)
Large luminous glands on head	One on cheek	One on cheek, one behind border of preopercle, one on outer enlarged membrane attached to hind-edge of last branchiostegal ray

TAB. 24.

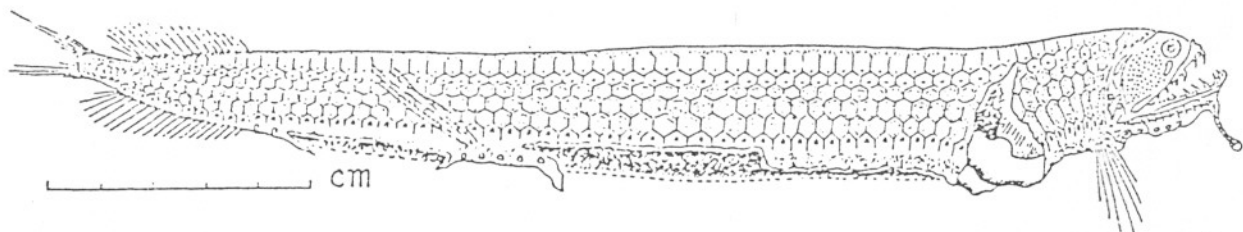
I must thank Dr. Ege for kindly re-examining some of his material, with the object of checking up on the above points, and also for giving me his valuable opinion. The discrepancies of the last three points could thus be eliminated, for he found in all specimens the two luminous glands of the head situated rearward to the one below the eye, and, regarding the smaller photophores, he says (*in. lit.*): "My description and drawing (Dana Report No. 5, 1934) of the smaller photophores on the body are exclusively based on a few specimens in which all the scales remained and the skin with the photophores was well protected. I have now examined specimens wanting the scales and found for some of them in the row nearest the dorsal median line also areas containing only a single photophore. A similar relation applies to the 6th row."

With regard to the great difference in the number of teeth, he thinks that possibly some displacing teeth, not fully developed yet, may have entered in the number. The greater number of pectoral rays constitutes, of course, an important difference, as in no specimen of all the subspecies of *Stomias boa* more than 6 rays have been found.

In spite of the disagreements he is of opinion that the specimen in question is to be referred to *Stomias boa* and concludes: "The central charac-



A



B

FIG. 8. — A *Stomias boa*, Reg. No. 5096. B *Stomias brevibarbatus*, Reg. No. 6886.

ters, the smaller photophores and the number in the section V-A of the ventral row of photophores seem to make out this view".

To which of the two Atlantic subspecies this specimen should be referred is not possible to say, but in the eastern part of the North Atlantic *Stomias boa ferox* Reinhardt was not found in latitudes quite as far north as Madeira, whereas *Stomias boa boa* Risso reaches down to 20' lat. Also by far the greater part of proportions lie closer to the average values of the latter subspecies than to those of the former.

Stomias brevibarbus Ege

Figs. 8B, 9, 10 & 11. Tabs. 25-27.

Stomias brevibarbus Ege, 1918, Rept. Danish Oce. Exped. 1908-10, no. 4, II, A 4, p. 22, fig. 11 [not seen]; 1934, Dana-Report no. 5, figs. 7 & 8. Parr, 1931, Bull. Bing. Oce. Coll., vol. 2, art. 4, p. 9. Fowler, 1936, Bull. Am. Mus. Nat. Hist., vol. 70, part 2, p. 1352. Maul, 1948, Bol. Mus. Mun. Funchal, no. 3, art. 5, p. 14, fig. 4.

Large specimen, 215mm. S.L. Reg.No. 6886. From stomach of *Aphanopus carbo* Lowe. 2.XI.1955. The abdominal cavity is slit open before and behind the ventrals, and most of the photophores of the ventral series, and the entrails are destroyed. A short distance behind the head there is a deep cut reaching up to the second horizontal row of scales, but the adjoining scales of the edges are undamaged. Most of the I-V series of photophores are missing. Apart from these damages the specimen is in good condition, with all other characters, such as lateral photophores and all the scales above these, intact. Also the head and fins are quite undamaged. The specimen is preserved in formalin.

DESCRIPTION

The specimen was examined immediately on arrival, after being straightened and set in sea water, and was only removed to formalin after all the necessary measuring and counting had been done. It was found, however, that the standard length was maintained after several days of hardening in formalin.

TAB. 25. — *Stomias brevibarbus*: Table of Measurements in mm.,
Between Verticals.

Standard length	.	.	.	.	.	215
Head	.	.	.	.	.	22
Preventral length	.	.	.	.	.	139
Predorsal length	.	.	.	.	.	185
Pre-anal-fin length	.	.	.	.	.	184
Base of dorsal	.	.	.	.	.	21
Base of anal	.	.	.	.	.	24

TAB. 26. — *Stomias brevibarbus*: Table of Counts.

Rays

Dorsal	.	.	.	.	.	.	.	.	18
Anal	.	.	.	.	.	.	.	.	20
Pectorals	.	.	.	.	.	.	.	.	7
Ventrals	.	.	.	.	.	.	.	.	5
Right branchiostegals	.	.	.	.	.	.	.	.	15
Left branchiostegals	.	.	.	.	.	.	.	.	14
Gill-rakers	.	.	.	.	.	.	.	.	4+6

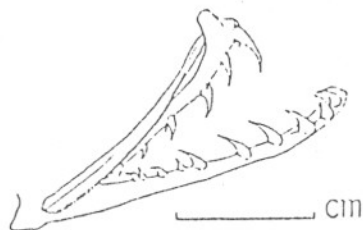
Large photophores (lateral series)

Head - V	.	.	.	.	.	.	.	.	54
V - end	.	.	.	.	.	.	.	.	13

Teeth

Right premaxillary	.	.	.	.	.	.	.	.	7 (1)
Left premaxillary	.	.	.	.	.	.	.	.	7 (1)
Maxillary	.	.	.	.	.	.	.	.	abt. 25
Right mandible	.	.	.	.	.	.	.	.	6 large, 4 small
Left mandible	.	.	.	.	.	.	.	.	6 large, 5 small
Vomer	.	.	.	.	.	.	.	.	1 each side
Palatines	.	.	.	.	.	.	.	.	1 anteriorly
Far back on roof of mouth	.	.	.	.	.	.	.	.	3 left, 4 right

Head 9.77 in standard length; preventral length 1.55; predorsal length 1.17; base of dorsal 10.26; base of anal 8.96. Barbel about 2 in head; interor-

FIG. 9. — *Stomias brevibarbus*, Reg. No. 6876; dentition of jaw-bones of right side.

bital about 5.4; eye about 5.2; greatest breadth of body about 2.2; greatest breadth of head about 1.5; depth at ventrals about 1.

Teeth of upper jaw large, fang-like on premaxillary. There are 7 on both sides, the second being the largest and being contained abt. 6 1/2 times in the length of the head. The decrease in length runs in the following sequence: 2nd, 4th, 5rd, 1st, 5th, 6th, 7th, the smaller being contained abt. 4 times in the longest. There is a thin small supplementary tooth directly behind

the 5th tooth on the right side, and behind the 6th on the left. On the maxillary there is a row of small, pointed, very close-set teeth, occupying the posterior $\frac{2}{3}$ of the maxillary. The right mandible bears 10 teeth and the left 11, the anterior 6 being strong and fang-like, and the remaining ones distinctly smaller. The sequence of lengths in the anterior group is as follows: 4th, 5th, 3rd, 6th, 1st, 2nd, the longest being contained $\frac{1}{2}$ times in the longest tooth of the premaxillaries. One small tooth on each side of the vomer and one long tooth anteriorly on each palatine. Much farther back, on the roof of the mouth, there are 4 strong teeth on the right and 3 on the left. It is not possible to tell whether these are attached to the palatines or the entopterygoid, without dissection.

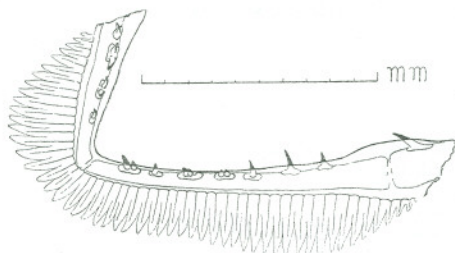


FIG. 10. — *Stomias brevibarbus*, Reg. No. 6886; inner surface of left first gill-arch.

Gill-rakers on lower branch consist of 4 single spines anteriorly, followed by 1 double, 1 treble, 1 single and 1 double spine. On the upper branch there are 4 in all; 2 single ones outside and 2 double ones inside. The rakers nearest the angle are well removed from it. The foremost raker of the lower branch is situated on the hypobranchial and is well removed from the foremost ceratobranchial raker.

Scales hexagonal, 5 longitudinal rows above the one bearing the lateral series of large photophores.

Three luminous glands on head, one conspicuous, bean-shaped, directly under eye, length about equal to diameter of eye. Two smaller, round ones under opercle.

Luminous organs on body: One in lower part of each scale of upper row; one, rarely two, fairly large ones in part slightly below centre of each scale of second row; about 10 minute in third row, about 8 in upper part, disposed in an arch, and 2-3 in lower part; about 16 in fourth row, fairly equally distributed, but several of the upper forming an arch; the fifth row has about 18 luminous bodies, distributed in the manner of those of the fourth row.

The lateral row of large photophores consists of 34 bodies between the head and the anterior end of the base of the ventral fin and of 13 from the latter point to end. The ventral row is very incomplete, but the number of photophores in the series between pectorals and ventrals could hardly differ, if at all, by more than one from the analogous overlying series of the lateral row.

On the head there is a great number of small photophores, equally distributed, all over the cheeks.

The barbel is short and ends in a bulb. The very end of this bulb seems somewhat damaged, and filaments, if they existed, must have been lost.

The colour is uniform black on body and head, as well as on the inside of the mouth and branchial cavity and the peritoneum.

COMPARISON WITH EGE'S MATERIAL

Ege (1954, *op. cit.*) described material of *Stomias brevibarbus* consisting of 45 specimens measuring from less than 50mm. to 150mm. in standard length, and any characters standing noticeably outside the extremes of varia-



FIG. 11. — *Stomias brevibarbus*, Reg. No. 2749*; dentition of jaw-bones of right side, showing the great difference compared to the specimen described here.

tions he found, on the species our specimen was referred to, call for search of an explanation. The three characters where such differences are found are the following:—

TAB. 27.

	Madeira specimen	Ege's material
Preventral length	64.7% of standard length	59.5 - 62.9% of standard length
Branchiostegal rays	14 left, 15 right	17 - 18
Dentition	On premaxillaries: 7 large, wide-set teeth on each. (Total 7)	6-7 large, wide-set and 5-6 small close-set (Total 11-12)
	On mandible: 6 large and 4 small right, 6 large and 5 small left. (Total 10/11)	10-14 large, 3-5 small. (Total 14-18)
	Far back on roof of mouth: 5 left, 4 right. (Total 3/4)	1 each side. (Total 1)

* Described and figured in Bol.Mus.Mun. Funchal, III, 5, p. 14, fig. 4

Characters such as the number of longitudinal rows of scales and the pattern of the numerous smaller luminous bodies are not likely to vary in adult species of the genus *Stomias*, as Ege's material, consisting of a large number of specimens pertaining to the 5 species demonstrates, and the precise agreement of these characters with those of *Stomias brevibarbalus*, coupled with the agreement of almost all proportions, counts and other characters, make it imperative to range the specimen described above with that species. However, in view of the fact that this specimen is considerably larger than the largest examined by Ege, we may hint at the possibility that, in the case of the position of the ventrals and the number of teeth, a change takes place in stages above the size of 150mm. The difference in the number of branchiostegal rays could of course easily be due to individual variability.

Astronesthes neopogon Regan & Trewavas

Figs. 12, 13 & 14. Tabs. 28 & 29.

Astronesthes neopogon, Regan & Trewavas, 1928, Danish "Dana" Exped. 1920-22, Oceanogr. Rep. No. 5, p. 20, plate 2, fig. 1.

Three specimens, Reg. Nos. 5842, 5952, 6681. Respective S.L. (mm.) 165, ca. 165, ca. 160. Respective dates 7.VII.1955, 27.VII.1955, 12.X.1955. The first specimen is in fair condition, whereas the others are rather damaged.

DESCRIPTION

Only specimen No. 5842 is considered here, as the other two are not in suitable condition for a reliable description:—

Head and body compressed. Eye normal, mouth large, horizontal. Fins of moderate size. Origin of ventrals in middle of standard length, that of anal a short distance behind end of base of dorsal. Short thick fleshy barbel, ending in a fine point.

TAB. 28. — *Astronesthes neopogon*: *Table of Measurements, Between Verticals, in mm.*

Total length	ca. 190
Standard length	165
Head	52
Snout to pectorals	52
Snout to ventrals	82.5
Snout to dorsal	85
Snout to anal	124
Base of dorsal	51.5
Base of anal	22.5
Eye	6.5
Snout	7.5
Barbel	19
Interorbital	9.5
Second tooth of premaxillary	10.3
Second tooth of mandible	11.7

TAB. 28. — (continued)

Greatest depth of body	.	.	.	.	53
Greatest breadth of body	.	.	.	.	15
Least depth of caudal peduncle	.	.	.	.	10.5

TAB. 29. — *Astronesthes neopogon*: Table of Counts.

Rays

Dorsal	.	.	.	.	.	.	.	.	.	15
Anal	.	.	.	.	.	.	.	.	.	15
Ventrals	.	.	.	.	.	.	.	.	.	7
Pectorals	.	.	.	.	.	.	.	.	.	9

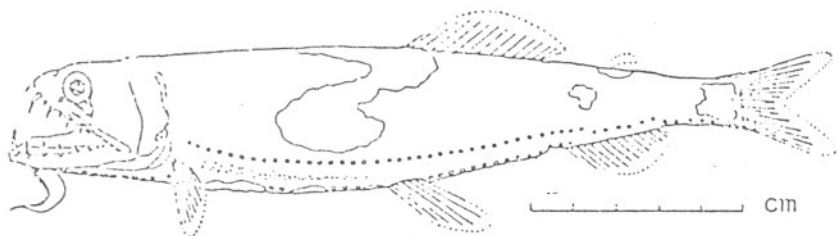
Photophores in ventral series

I - P	.	.	.	.	.	.	.	.	.	10
P - V	.	.	.	.	.	.	.	.	.	?
V - A	.	.	.	.	.	.	.	.	.	18
A - C	.	.	.	.	.	.	.	.	.	11

Photophores in lateral series

P - V	.	.	.	.	.	.	.	.	.	18
V - A	.	.	.	.	.	.	.	.	.	19
Gill-rakers (1st gill-arch)	.	.	.	.	.	.	.	.	.	3+1+16

Head 5.16 in standard length; greatest depth 5.00; predorsal length 1.88; pre-anal-fin length 1.55; least depth of caudal peduncle 15.71. Eye 4.92 in head; interorbital 3.57; second tooth of premaxillary 3.11; snout 4.27; barbel 1.68.

FIG. 12. — *Astronesthes neopogon*, Reg. No. 5842.

Teeth on upper jaw consisting of 7 large, widely spaced, curved and arrow-shaped ones, and about 45 moderate, close-set, pointed ones. On the left side the large ones are all on the premaxillary, whereas on the right side the hindmost one grows on the maxillary. The small teeth occupy the posterior half of the maxillaries. The size sequence of the large teeth is 2nd, 1st, 4th, 6th, 7th, 3rd, 5th. In the lower jaw there are 11 teeth of the shape of the premaxillary ones, the second being greatly enlarged, and their size sequence being 2nd, 3rd, 4th, 6th, 8th, 1st, 9th, 10th, 5th, 7th, 11th. One fairly strong

pointed tooth on each side of the head of the vomer and a row of 7, equal in size, along each palatine.

The gill-rakers consist of groups of 1-4 pointed spines, each group springing from one common base. On the upper branch all consist of 4 spines, and the only single one is that of the angle formed by the upper and the lower branch. All gill-rakers are at a more or less equal distance

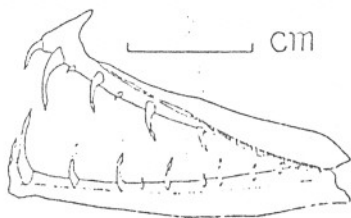


FIG. 13. — *Astronesthes neopogon*, Reg. No. 5S42; dentition of jaw-bones of left side.

from one another, except the foremost hypobranchial one, which is somewhat farther removed.

Two photophores of the lateral series are above the anal fin. In the A-C series the 6th is the highest. Numerous very small luminous spots all over. From pectorals to ventrals, between the lateral and ventral series, a band of irregularly distributed, rather large luminous spots.

On head one fairly large organ below hind border of eye, one small one in front of lower border, and one small one on subopercle.

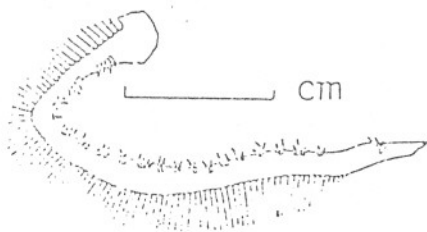


FIG. 14. — *Astronesthes neopogon*, Reg. No. 5S42; outer surface of right first gill-arch.

Barbel thick and fleshy, compressed, ending in a fine point.

Colour uniform dark slate-grey. Barbel pinkish white with a black line anteriorly.

The only other specimen so far recorded seems to be the type, which was taken at more or less the same latitude as Madeira but 16° farther West. There is good agreement between the specimen here described and the type. The only noticeable difference is that between the number of dorsal rays, which is 17 for the type, whereas here we find only 15 rays.

The other two specimens, Nos. 5932 and 6681, though in a very bad state of preservation, can easily be referred to this species by means of comparison of those characters still intact and the general proportions.

Astronesthes gemmifer Goode & Bean

Figs. 15, 16 & 17. Tabs. 30 & 31.

Astronesthes gemmifer, Goode & Bean, 1895, *Oce. Ichth.*, p. 105, pl. 55, fig. 124. Parr, 1927, *Bull. Bing. Oce. Coll.*, vol. 5, art. 2, p. 50, fig. 21B. Regan & Trewavas, 1929, *Danish "Dana" Exped.*, 1920-22, *Oce. Rept.* No. 5, p. 19, pl. 1, fig. 5. Fowler, 1936, *Bull. Am. Mus. Nat. Hist.*, vol. 70, part 2, p. 1191 & 1195. Rae, 1950, *Ann. Biol. Copenh.* [not seen].

One specimen, 159mm. S.L. Reg. No. 7205. From stomach of *Aphanopus carbo* Lowe. Unfortunately the anterior half of the mandibles was lost, but for this, the specimen is in excellent condition.

DESCRIPTION

Head and body compressed. Eye normal, mouth large. Dorsal and anal fairly large, origin of dorsal and of ventrals slightly before middle of standard length. Anus short distance in advance of anal. Moderately long thin barbel, without filaments.

TAB. 30.—*Astronesthes gemmifer*: Table of Measurements, Between Verticals, in mm.

Total length	178
Standard length	159
Head	34
Snout to pectorals	34
Snout to ventrals	75
Snout to dorsal	76
Snout to anal	115
Base of dorsal	31
Base of anal	25
Eye	8
Snout	10
Barbel	37
Interorbital	9
Second tooth of premaxillary	4
Greatest breadth of body	15
Greatest depth of body	24
Least depth of caudal peduncle	10

TAB. 31.—*Astronesthes gemmifer*: Table of Counts.

Rays

Dorsal	18
Anal	18
Ventrals	7
Pectorals	9
Branchiostegals	20

TAB. 31. — (continued)

Photophores n ventral series

I - P	.	.	.	.	.	.	.	.	.	12
P - V	.	.	.	.	.	.	.	.	.	18
V - A	.	.	.	.	.	.	.	.	.	26
A - C	.	.	.	.	.	.	.	.	.	10

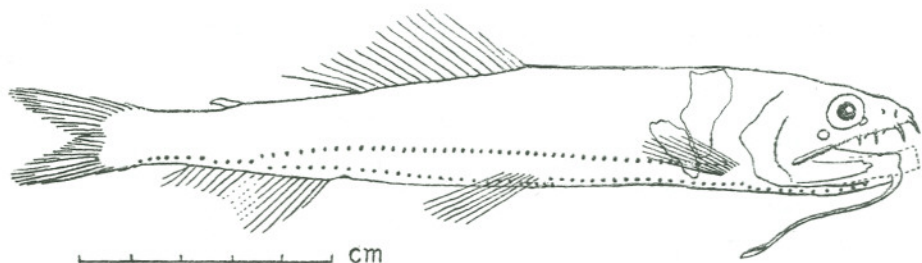
Photophores in lateral series

P - V	.	.	.	.	.	.	.	.	.	18
V - A	.	.	.	.	.	.	.	.	.	27

Teeth

Premaxillary	.	.	.	.	.	.	.	.	.	6
Maxillary	.	.	.	.	.	.	.	.	.	45
Gill-rakers	.	.	.	.	.	.	.	.	.	10+1+2

Head 4.65 in standard length; greatest depth 6.63; predorsal length 2.09; pre-anal-fin length 1.38; least depth of caudal peduncle 15.90. Eye 4.25 in head; interorbital 3.78; second tooth of premaxillary 8.50; snout 3.40; barbel 0.92.

FIG. 15. — *Astronesthes gemmifer*, Reg. No. 7205.

Teeth of premaxillaries large, ending in an arrow-head-shaped point. The sequence of decrease in size is: 2nd, 1st, 4th, 6th, 3rd, 5th. The 3rd and 5th are conspicuously smaller than the 6th. The teeth of the maxillaries are minute, close-set, in one single row. The roof of the mouth is somewhat damaged and the tooth-bearing part of the mandible is missing.

The spines of the gill-rakers resemble the premaxillary teeth in shape. On the lower branch of the gill-arches each gill-raker consists of two spines on a common flat base, the hind one being smaller; on the upper branch of three spines, the innermost the smallest; in the angle of one spine. Two of the gill-rakers of the lower branch are on the hypobranchial. The distances between all are equal.

The V-A section of lateral photophores extends beyond the anal origin by 6 photophores. In the ventral series the V-A section begins below, slightly before the last photophore of the P-V section and extends beyond the anal origin by 5 organs.

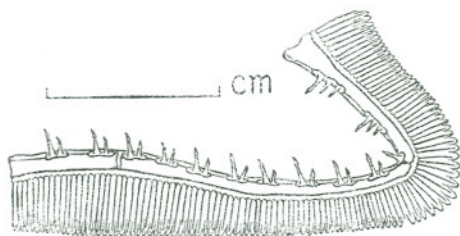


FIG. 16. — *Astronesthes gemmifer*, Reg. No. 7205; outer surface of left first gill-arch.

On the head there are two luminous bodies, one fairly large and round one below and behind the eye, removed from it at a distance equal to its own diameter, and one at the lower front border of the eye.

The barbel ends in a slightly thickened, elongate, distally pointed bulb, without filaments.

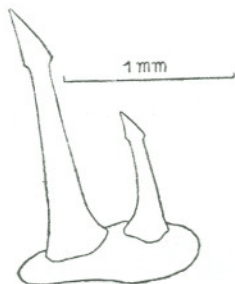


FIG. 17. — *Astronesthes gemmifer*, Reg. No. 7205; third gill-raker, from angle forward.

Colour on fresh specimen uniform black everywhere. Lateral series of photophores purple, all others yellow, except the numerous very small ones on side, which are of an even deeper black than that of the body. Barbel white, with the posterior half of the bulb deep black.

This specimen represents the first record of this rare species for Madeira proper. The specimen recorded by Roule & Angel (1933) was caught about 160 miles West of Madeira.

FAMILY PARALEPIDIDAE

Uncisudis new genus

Diagnosis: Body compressed, elongate. Head and snout very long, with the tip of the latter extending distinctly beyond the tip of the mandibular bones. Small non-ossified prolongation on tip of lower jaw. Eye moderate, with pupil much larger than lens. Nostrils close together and well behind posterior tip of maxillary. Tip of lower jaw distinctly elevated. Upper jaw terminating well in advance of vertical through front eye-edge. Foramen large, irregularly shaped and open posteriorly. Angle of gape slightly before tip of maxillary. Supra-maxillary moderately long, very thin and close to maxillary. Teeth on lower jaw long and well developed, with arrow-head shaped and somewhat smaller, but sturdy, strongly inwardly hooked teeth. Teeth on palatines in two rows, similar in shape to those of lower jaw, posteriorly ending in one row of small teeth. Tongue rather far back in mouth, with only a few teeth. Gill-rakers spinous, slightly barbed, long, several in a row on each base. Pharyngobranchial teeth in one elongate patch on each side.

Body and head naked. Lateral-line tube large. Lateral-line segments strongly ossified, nearly twice as long as high, narrow in the anterior half and broad in the posterior half, with pointed end. Pierced on inner surface by 1 or 2 small holes. Unfortunately the clearing process has possibly obliterated some small pores of the lateral-line tube, for even the fairly large median ones above the anterior one third of each segment and the outer ones above the upper and lower corners of the segments can only be detected with great difficulty.

DISCUSSION

This new genus is closest to *Macroparalepis* and *Lestidium*. It is distinguished from both by the position of the nostrils, being before the posterior tip of the maxillary in the former or at most over it in the latter; by the gape of the mouth, being only slightly before the tip of the maxillary in both; and by the presence of inwardly hooked teeth in lower jaw and palatines. There is a distinct difference in the shape of the lateral-line segments, which are described as being of double concave form for both genera (Harry, 1955) and distinctly deeper than long for *Macroparalepis* and approximately as long as high for *Lestidium* (Harry, 1951). Also Ege (in lit.) points out the importance of this character: "narrow in the anterior half and broad at the posterior half with a pointed end", and he continues to say: "...quite different from all the types found within the two genera *Lestidium* and *Macroparalepis*".

There is still *Stemonosudis* to be considered, with which it shares the position of the nostrils and that of the angle of the gape in relation to the tip of the maxillary. But it deviates greatly from it in the shape of the tip of the lower jaw, the teeth of the upper jaw and the size and shape of the teeth in general, and, finally, in the presence of well developed gill-rakers

and pharyngobranchial teeth, as well as the shape of the lateral-line segments.

Another specimen of Paralepidid has come to hand, which shows very similar lateral-line segments to those of this new genus, and to which it probably belongs. It differs from the species described below by having much fewer teeth in the palatines and by each bone plate of the gill-arches only bearing 1 or 2 gill-rakers. Otherwise, the general shape and size of teeth is very similar, including those of the pharyngobranchials.

Unfortunately the specimen is too badly damaged, with too many of the important characters missing, to be suitable for description, but the coming to hand of better material in the more or less near future is not unlikely.

REMARKS

The diagnosis has been drawn up along the lines of Harry's descriptions, for easy comparison in the excellent survey of the genera of the Parapedidae by this author.

The name is formed from *uncus*, L.—hook, in allusion to the sturdy, hook-shaped teeth of the lower jaw and the palatines, + *sudis*, L.—stake, pile, pike.

Uncisudis longirostra sp.n.

Figs. 18 A-H. Tabs. 52-55.

One female specimen (type), 187mm. S.L. From stomach of *Aphanopus carbo* Lowe. Reg.No. 5722. 5.VI.1955.

One specimen (paratype), 49.8mm. head-length. From stomach of *Aphanopus carbo* Lowe. Reg.No. 8649. 22.VI.1956.

Both specimens were cleared and stained after careful notes having been taken on the pigmentation and other characters that might be lost.

DESCRIPTION OF TYPE

The skin of the type is somewhat macerated and as a consequence most of the pigmentation has disappeared and the lenses of the eyes are lost. Also the whole length of the lowermost part of the abdomen is missing, and with it the ventrals have gone. On the left-side most of the lateral-line segments are missing, but they are complete on the right side. Otherwise the specimen is in fair condition.

TAB. 52.—*Uncisudis longirostra* (type): Table of Measurements in mm., and Percentages in Standard Length.

Standard length	187	%
Head	43.75	26.1
Snout	29.25	15.6
Eye	5.25	2.8
Interorbital	3.6	1.9
Premaxillary	22.0	11.8

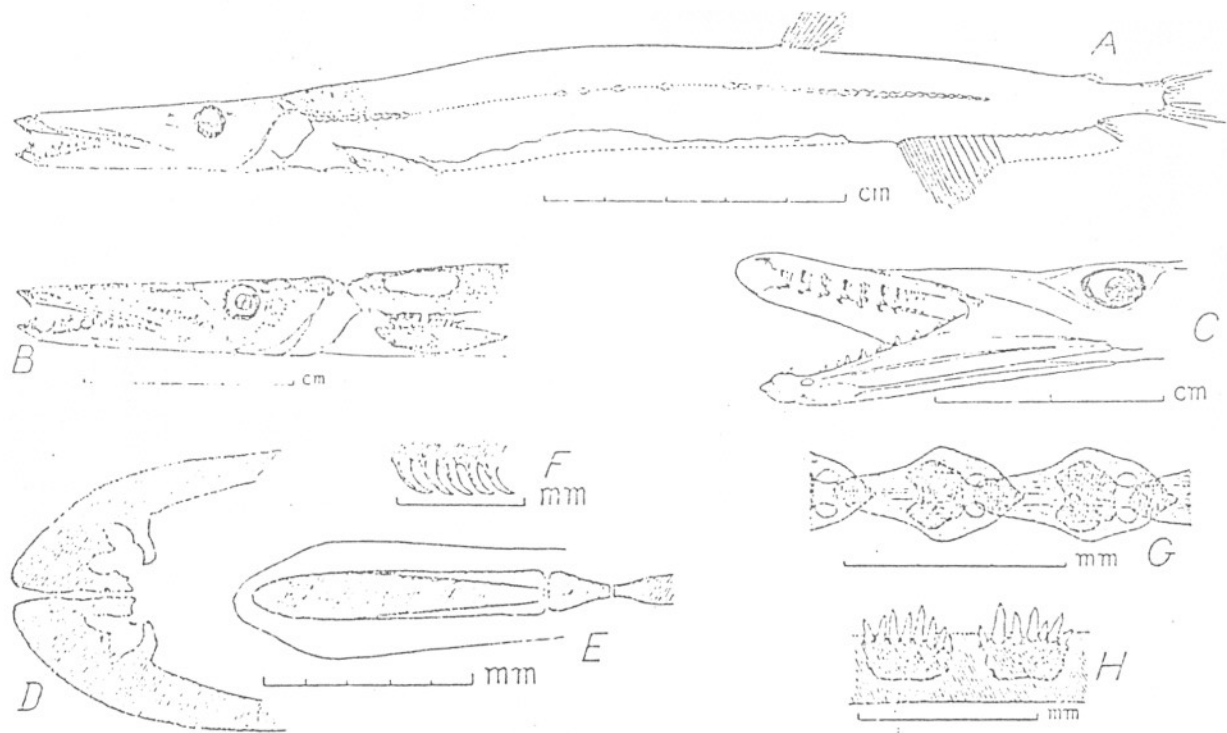


FIG. 18.— *Uncisudis longirostra* gen. n., sp. n. A Type. B-H Paratype: B Sideview of existing portion. C Seen slightly from below to show palatine dentition. D Premaxillaries showing open foramina. E Tongue. F Maxillary dentition. G Lateral-line segments at end of pectorals. H Two gill-rakers of ceratobranchial of first gill-arch.

TAB. 32 — (continued)

Longest tooth in mandibles	2.25	1.2
Snout to tip of glossohyal	10.5	5.6
Snout to dorsal	123.0	64.5
Snout to anal	143.0	75.3
Snout to end of late al segments	159.0	85.0
Depth (across centre of eye)	11.5	6.2
Depth (at origin of anal)	14.0	7.5
Least depth of caudal peduncle	5.0	2.7
Base of dorsal	6.75	3.6
Base of anal	33	17.7

TAB. 33.—*Uncisudis longirostra (type): Table of Counts.*

Dorsal (last close-set couple of rays as two)	12
Anal	31
Pectorals	12
Teeth on premaxillary (left)	104
Teeth on premaxillary (right)	99
Lateral-line segments on right side	63
Gill-rakers on first gill-arch:	
epibranchial	10
ceratobranchial	19
hypobranchial	abt. 8
Vertebrae (including hypural)	80

Body moderately elongate and compressed. Depth at origin of anal 13.4 times in standard length; least depth of caudal peduncle 37.4 times.

Head long and pointed, its length 3.8 times in standard length. Snout very long, its length 1.7 in head; eye 9.3; premaxillary 2.2; distance between snout-tip and glossohyal 4.6; depth across centre of eye 4.2; base of dorsal 7.2; base of anal 1.5. Interorbital straight. Foramina of premaxillary processes very large and irregular in shape, open posteriorly. Osseous part of lower jaw distinctly shorter than upper jaw. Pupil very large. Dentition very strong in lower jaw and palatines, where it consists of mostly fixed, inwardly curved teeth, alternating with a more or less equal number of longer straight slightly barbed ones in an outer row, all of which are depressible. The longest tooth in the mandible is contained 2.3 times in the diameter of the eye. On the palatines the curved teeth alternate with the depressible ones only anteriorly. Posteriorly the outer row continues singly with abt. 10 much smaller teeth which are curved backwards. On the premaxillary there are 4 fangs near tip and a row of minute close-set teeth, all of which are curved backwards. No teeth on vomer. About 22 fairly strong, pointed, backwardly curved pharyngobranchial teeth, arranged in 3 rows, in one elongated patch. Three small teeth on left upper ridge of glossohyal; one on right. Gill-rakers on ceratobranchial with 4 to 8 teeth, mostly 6 or 7.

Segments of lateral line posteriorly broad but pointed, anteriorly narrow, but with round end. Usually with one, sometimes with two small holes near middle on the inner side. One median pore in tube, situated just behind pos-

terior point of each segment, and one on each side at about middle of segments can still be detected, but it is possible that there are one or two more small ones.

Colouration

On snout-tip, nape and part immediately behind head the pigmentation is still more or less preserved. On the nape and upper part of the back the pigment spots are minute and densely crowded, superiorly, near lateral line and on tube itself, there are a few large stellate chromatophores. Below lateral line, not quite half way down to lower outline, minute, more widely scattered pigment spots. Snout-tip and where the no longer recognizable nostrils must be, fairly strong pigmentation.

DESCRIPTION OF PARATYPE

Unfortunately only the head and anterior part of the trunk exist. This existing portion, however, is in an excellent state of preservation and therefore useful, apart from confirming all the observations made of corresponding characters on the type, for observations on pigmentation and particularly the situation of the double nostrils.

TAB. 54. — *Uncisudis longirostra* (paratype) : Table of Measurements in mm, and Percentages of Head ; Including those of the Type, for Comparison.

	mm	% (paratype)	% (type)
Head	49.8		
Snout	29.7	59.6	60.0
Interorbital	4.0	8.0	7.4
Premaxillary	22.0	44.2	45.2
Eye	5.4	10.8	10.8
Glossohyal	7.0	14.1	—
Snout to glossohyal	15.0	26.1	21.5
Snout to centre of double nostrils	25.0	50.2	—
Longest tooth in mandible	2.5	4.6	4.6
Depth at origin of pectorals	abt. 12.0	24.0	—

TAB. 55. — *Uncisudis longirostra* (paratype) : Table of Counts.

Pectorals	12
Teeth on premaxillaries (right)	107
Teeth on premaxillaries (left)	107
Gill-rakers on first gill-arch :—	
epibranchial	10
ceratobranchial	22
hypobranchial	abt. 10

Head proportions, dentition, gill-rakers and lateral-line segments like in type. The double nostrils well behind the end of the premaxillaries, being only a short distance before middle of distance between verticals through front eye-edge and posterior point of premaxillaries. The pupil is obliquely oval and much wider than lens.

Colouration

Strong pigmentation on tips of snout and lower jaw, upper part of lower jaw, maxillaries, top of head, region between eyes and maxillaries, before and behind eye, and anterior part of cheeks. Nape and part of body above lateral line dark with densely crowded chromatophores. Very small, but densely crowded chromatophores below lateral line, with some few larger, stellate ones on and just above it. Belly white.

The specific name is formed from *longus*, L. — long, + *rostrum*, L. — a beak, bill, snout, muzzle, mouth.

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