als zu *Colossendeis robusta* Hoek gehörig, zu erkennen. Die *Colossendeis*-Larven unterscheiden sich nämlich durch den Besitz von Cheliferen mit zweigliedrigem Schaft, in einem Alter, wenn bereits die Palpen, die Eierträger und die Beine ihre endgültige Form und charakteristische Gliederung erhalten haben. Und wenn wir nun die Beschreibung des Tieres nach Eights mit der im Challenger-Report von Hoek vergleichen, aber vor allem, wenn wir die Zeichnung unsres Autors neben die von Möbius in den »Wissenschaftlichen Ergebnissen der Deutschen Tiefsee-Expedition« gegebene farbige Abbildung legen, dann wird es fast unmöglich, an der Identität zu zweifeln. Nur in einem einzigen Punkte zeigt sich *Decolopoda* grundverschieden von allen andern Pycnogoniden: das Tier hat 10 Füße, statt 8. Es scheint mir nun alles darauf zu weisen, daß der Autor, durch so viele Füße irre gemacht, sich verzählt hat, und leider niemand dagewesen ist, der ihm den Fehler verbessert hat. Ohne dieses überzählige Fußpaar wird das Tier eine typische *Colossendeis*-Larve, mit den 10 Füßen ist es ein irrationelles Monstrum.

Wenn aber meine Auffassung sich als richtig erweist, sind wir dann gezwungen, den Namen *Colossendeis* in dem System der Pycnogoniden durch *Decolopoda* zu ersetzen, — durch einen Namen also, der auf einem Irrtum beruht, und der diesen Fehler gerade in schönster Weise zum Ausdruck bringt?[1].

Nur wenn es geboten wäre, die Nomenklaturregeln sogar bis zur Unsinnigkeit durchzuführen, könnte man sich dazu entschließen!

7. On some Fishes from the Sea off the Azores.

By R. Collett, Christiania.

eingeg. 21. Februar 1905.

I have received for the purpose of examination, from my friend, Major Chaves, Director of the Museum at Ponta Delgada, a few specimens of fish taken in the sea surrounding the Azores. I have already on a previous occasion (1897)[1], given a brief description of a few of these, and will now add a few supplementary details regarding two of them, as also some remarks of two of the specimens lately received.

Fam. **Cyclopteridae.**

Eumicrotremus spinosus (Müll.) 1776.

1776. *Cyclopterus spinosus* Müll. Prodr. Zool. Dan. p. IX. Havniae. 1776.

A single specimen, not very well preserved.

Total length	60 mm.
Length of head	22 -
Height of body	26 -
Diameter of sucking disc	14 -

[1] δέκα, zehn; ὅλος, ganz; ποῦς, Fuß

[1] Archiv for Math. og Naturvid. Vol. 19. No. 7. p. 7 (Christiania. 1897.

The condition of the specimen does not permit of an exact counting of the fin-rays, but in all other respects it resembles arctic specimens. The bony spines upon the body and the base of the fins are well developed.

E. spinosus, unlike *Cyclopterus lumpus*, has its principal distribution in somewhat deep water, and has hitherto been found only in arctic waters. Its discovery in the sea surrounding the Azores, in a latitude (38° N. Lat.) similar to that of the south of Portugal, is interesting as a proof of the great conformity in the distribution of organic life in different latitudes at greater depths. In the Arctic Ocean, *E. spinosus* has only been found where the bottom temperature is about freezing, sometimes even in ice-cold water. It has not up to the present been found off the shores of the European continent.

Fam. Gadidae.

Gaidropsarus guttatus (Coll.) 1890.

1890. *Onus guttatus* Coll. Bull. Soc. Zool. France. Vol. XV. p. 105. (Paris, May 13, 1890).

One specimen, a fully grown female, in a good state of preservation, with a total length of 322 mm.

G. guttatus was described in 1890 from two young specimens with a total length of 183 and 213 mm, taken during the Prince of Monaco's cruise about the Azores in 1887. A full description of these specimens, accompanied by a drawing, was given in the General Account of the fishes obtained during the cruise of the »Hirondelle«, printed in Monaco, 1896[2].

Dr. Steindachner, moreover, in 1891, described a rather larger specimen (total length 260 mm), taken off the Canary Isles in November, 1890[3].

In one particular, the new specimen, which in all other important points resembles the type specimens, presents a marked difference from them, namely in colour. The whole of the lower surface of the body is of a uniform whitish colour, only the upper surface still having the brownish black ground with the characteristic irregular white spots, which in young individuals are distributed all over the body.

As the specimen was a fully developed female, in the middle of the spawning period, it is probable that the different colour is its pairing dress, which is only developed in fully grown individuals.

---

[2] Rés. Camp. Scientif. par Albert I. Fasc. X. Poiss. prov. des Campagnes de l'Hirondelle, p. 60. Pl. I, Fig. 3. (Monaco, 1896).

[3] Sitz.-Ber. Kais. Akad. Wiss. Math. Naturw. Cl. Bd. 100. Abt. 1. S. 360. (Wien, 1891).

Measurements.

Total length	322	mm.
Length to base of caudal	280	-
Length of head	69	-
Height of body above vent	57	-
From snout to vent	151	-
From vent so end of anal	130	-
Height of caudal peduncle	17,5	-
Diameter of eye	10,5	-
Interorbital area	12	-
Base of first dorsal	39	-
Length of snout	16	-

The length of the head is thus contained 4,66 times, and the height of the body over the vent 5,66 times, in the total length. The diameter of the eye is contained 6,59 times in the length of the head; it is a little less than the interorbital area, and considerably shorter than the snout.

As compared with the younger specimens, this full-grown female has a relatively larger head and a larger body (tip of snout to vent) in proportion to the total length, and a smaller diameter of eye. These changes take place more or less gradually with the growth of the individual, as will be seen from their proportions in the 4 specimens hitherto described.

		Eye in length of head	Head in total length
a.	Total length 183 mm (type specimen)	5,85	5,22
b.	- - 213 - - -	6,14	4,95
c.	- - 260 - (Steindachner)	about 7,0	about 4,70
d.	- - 322 - (full-grown) ♀	6,59	4,66

In this specimen, moreover, the interorbital area has become wider than the diameter of the eye, while in the younger specimens the two were of equal width.

The body proper (tip of snout to vent) is considerably longer than the distance from the vent to the termination of the anal (about 2 orbital diameters). In younger individuals the vent is about midway between the tip of the snout and the termination of the anal.

The first dorsal ray in this specimen measures only 14 mm (but appears to be a little defective, and has probably been a few millimetres longer).

The fins and the number of their rays exhibit no divergence. On the anterior portion of the lateral line (upto its descent towards the vent), there are 11 pores on one side, and 13 on the other.

The peculiar colouring seems, as already remarked, to be a gradually acquired pairing dress, as the yellowish white area upon the ventral surface of the body and on the fins, is irregular and laterally quite unsymmetrical. The original brownish black ground, thickly covered with yellowish white spots is, in fact, retained only upon the dorsal surface of the body (above the median line), upon the forehead, and at the base of the second dorsal and the caudal. The uniformly yellowish white colour, on the other hand, has spread all over the rest of the head, over the ventral surface of the body, both the ventrals, and most of the pectorals. On the sides of the body, the white colour runs up into the dark parts with an unsymmetrical line of demarcation; and all round the base of the first dorsal there is an irregular oblong patch of the same colour. The outer half of the second dorsal and of the caudal is yellowish white, the line of demarcation between it and the dark ground being here also laterally unsymmetrical. The pectorals are yellowish white, with a black patch at the base on the inner side.

As already mentioned, the two young type-specimens had no trace of these yellowish white areas. With regard to the somewhat larger specimen (total length 260 mm) from the Canaries, Steindachner states that the dark brown ground was rather lighter nearest the edge of the belly, but covered all over with the yellow blotches.

It is not improbable that the spreading of the yellowish white pairing-colour over the body in this specimen was not quite completed, a surmise which is supported by the fact of the irregular, almost haphazard line of demarcation between it and the original ground, which is on the two sides of the body. There is possibly some connection between this circumstance and the fact that the original dark brown ground is now capable of being removed with very slight friction.

The ovaries were distended with ripe spawn, and the belly, in consequence, was pendent. (The exact season when the specimen was obtained cannot be stated.) The ventricle contained a half-digested specimen of a Palæmonide, and in the intestines were found vertebræ of small fish.

Fam. **Sternoptychidae.**

Argyropelecus aculeatus Cuv. Val. 1849.

1849. *Argyropelecus aculeatus* Cuv. Val. Hist. Nat. Poiss. Vol. 22. p. 406. (Paris 1849.)
1849. *Sternoptyx acanthurus* Cuv. Val. Hist. Nat. Poiss. Vol. 22. p. 408. (Paris 1849.)

Three specimens, all half-grown [1].

---

[1] These specimens have been treated of in the Archiv f. Math. Naturv. Vol. 19. No. 7. p. 14 (Christiania, 1897), where they are spoken of as *A. olfersii* (Cuv.).

	a	b	c
Total length	49 mm	52 mm	54 mm.
Height of body . . .	31 -	32 -	33 -
Length of head	14 -	15 -	16 -

A. aculeatus is distinguished from *A. olfersii* (Cuv.) 1829, principally by the following characteristics:

1) Greater relative height of the body, this being about equal to the distance from the orbit to the root of the tail (in *A. olfersii* from the gill-cover to the root of the tail).

2) A number of short, spiny crests along the ventral line of the body (absent in *A. olfersii*).

3) A relatively larger eye, its heigt being contained about 8 times in the total length of the body, and 2,3 times in that of the head (in *A. olfersii* about 2,8 times).

The radial formula is: D. 9; A. 7 + 5 (as in *A. olfersii*), but the series is in places interrupted by spines, 2 of which are in front of the 8th anal ray, and 1 behind it.

The spinous armature along the ventral outline of the body consists of the following parts:

a. A toothed ridge on each side of the vent.

b. A short, fan-shaped ridge, consisting of from 2 to 7 teeth, of which the middle ones are the longest, between the seventh and eighth anal rays.

c. A single spine between the eighth and ninth anal rays.

d. A toothed ridge on each side of the ventral outline of the base of the tail (in the space between the anal and the caudal). The two ridges are somewhat divergent in front of the luminous spots at the base of the tail, but are almost touching between those spots.

e. The first rudimentary caudal rays both above and below are separated and form free spines.

Finally, the edge of the neural ridge is finely crenulated, and the height of the ridge is greater than that of the root of the tail.

The colour, and the number of the photophores are in the main as in *A. olfersii*; but the dark blue band extending (in both) along the dorsal line, is divided in *A. aculeatus* by a deep curve immediately beneath the space between the neural ridge and the first dorsal; and the blue-black colour, with extends obliquely out over the caudal, here reaches beyond the middle of the lower rays of that fin.

A. aculeatus was originally described (by Cuvier and Valenciennes in 1849) from a specimen with a total length of about 65 mm, taken in the sea off the Azores.

It is probable that *A. aculeatus* has subsequently often been overlooked and mistaken for *A. olfersii*. A large specimen, probably full-grown (total length 70 mm) is found off the Norwegian coast, brought by the Gulf Stream, and is preserved in the Christiania Museum [5]. Another specimen in that museum — total length 65 mm — was found in the sea midway between the Bermudas and the Azores.

Fam. Myctophidae.

Lampadena chavesi n. sp.

Diagn. Length of head contained 4,37 times in total length, height of body 6 times. Eye large, diameter contained 2,70 times in length of head. Origin of dorsal midway between tip of snout and base of caudal. Pectorals but little shorter than height of body, and reach to root of ventrals.

The two caudal luminous glands large, considerably larger than the diameter of the eye; the length of the ventral one almost equal to the height of the body. Two scales between the adipose fin and the dorsal luminous gland.

The photophores exceedingly small, separated by a black septum; M. postero-laterales 2; M. praecaudales 3, all separate (the last in the lateral line); M. pectorales 5 (the fourth spot at the same height as the third).

Colour blackish.

Radial formula: D. 13; A. 14; L. lat. 36; gill rakers on the first branchial arch, 20.

Habitat. The Azores.

One specimen, resembling in all main characteristics *L. speculigera*, Goode & Bean, 1895 [6], but differing principally in the relatively larger luminous glands, larger eyes, lesser height of body, and certain differences in the arrangement of the photophores.

Measurements.

Total length	87,1 mm.
Length to tip of central caudal rays . .	78 -
Length of head	19,9 -
Horizontal diameter of eye	7,3 -
Greatest height of body (at ventrals) . .	14,5 -
Length of pectoral	12 -
Length of ventral	11 -

[5] Arch. f. Math. og Naturv. Vol. 23. No. 7. p. 22 (Christiania, 1901).

[6] Oceanic Ichthyology, p. 85. Pl. XXVI. No. 99 (Washington 1895). It should be observed that the figure of *L. speculigera* given in that work, does not correspond in every detail to the description, nor can it be considered quite correct. The letter-press, moreover, is not without errata.

The length of the head is thus contained 4,37 times in the total length (3,91 times in the length to the tip of the central caudal rays); the diameter of the eye is contained 2,70 times in the length of the head; and the height of the body 6 times in the total length.

The fins. The pectorals are comparatively long, and reach with their tips to the root of the ventrals, covering the supra-ventral spot (antero-lateral, Goode & Bean).

The tip of the ventral reaches to the vent, its length being greater than half the length of the head.

The luminous glands are immense, and shine with a bright, silky lustre. The ventral one is the longest, and covers a surface corresponding in length to $9^1/_2$ of the scales of the lateral line. It begins immediately behind the anal, and ends a little in front of the first rudimentary rays of the caudal.

The dorsal gland is somewhat shorter, and covers only about 8 scales of the lateral line. It begins in the vertical from the first third of the ventral gland, and extends very slightly farther back, exactly to the beginning of the rudimentary rays of the caudal.

The length of the ventral gland is 13 mm, that of the dorsal one 10 mm, both of them being thus considerably longer than the diameter of the eye.

The photophores, which are very small and rather difficult to trace in their entirety, are als follows[7]:

M. operculares (Op.) 2, on the praeoperculum; the one situated about half-way between the orbit and the upper P. V., the other in the vicinity of the isthmus.

M. ante-orbitales (A.Orb.) 2, exceedingly small, fairly close together, and lying exactly on the anterior margin of the orbit.

M. branchiostegae (Brr.) 3, normal.

M. pectorales (P.) 5; the foremost lies near the isthmus, and is separated from the second by a space; the second, third and fourth form a slight curve, but the fifth lies higher than the rest, in front of the base of the uppermost ventral rays.

The fourth (last but one) spot is here situated no higher than the third.

M. sup-pectorales (P.V.) 2, the upper one immediately in front of the base of the pectoral, the lower one vertically over the space between the first and second pectoral spots.

M. supra-pectoralis (P.L.) 1, a little below the lateral line, and almost vertically over the base of the uppermost rays of the pectoral.

---

[7] I employ the nomenclature adopted by Dr. Brauer in his excellent monograph on the genus *Myctophum*, in Zool. Anz. Vol. 28. No. 10. p. 377. (Dec. 1904).

M. supra-ventralis (V.L.) 1, midway between the lateral line and the base of the ventral.

M. postero-lateralis (Po.L.) 1, a little below the lateral line, in the vertical from the space between the last and last but one of the A.A. (vertically below the adipose fin).

M. ventrales (V.) 6, forming a fairly regular arch; the foremost is low down, between the bases of the ventrals, the second is higher, the third highest, the fourth, fifth and sixth being again lower. (On the right side, the third spot is not developed.)

M. supra-anales (A.A.) 3, of which the lowest 2, together with the last ventral, form a straight line, which runs obliquely upwards and backwards; the uppermost is more isolated, and is situated a little below the lateral line.

M. anales anteriores (A.A.) 7, on the right side 8. The last photophore lies a little beyond the beginning of the ventral luminous gland, the last but one just at the anterior margin of that gland.

M. anales posteriores (A.P.) 2, at the edge of the centre of the luminous gland, and separated from both A.A. and P.C. by an interval equal to the length of 2 or 3 scales.

M. praecaudales (P.C.) 3, all single. The foremost is situated at the end of the ventral luminous gland, the second immediately over the fourth rudimentary spine of the caudal, and the third just at the end of the lateral line.

The scales in the lateral line are of the same size as the others. Their number is 36 (the same on both sides). There are moreover on each side 2 or 3 poreless scales at the base of the caudal.

8. Einige neue Planktonorganismen aus südschweizerischen und oberitalienischen Seebecken.

Von Dr. Otto Zacharias (Plön).

eingeg. 26. Februar 1905.

Bei Gelegenheit einer Studienreise, die ich im vorigen Frühjahr (1904) an die insubrischen Seen unternahm, entdeckte ich einige neue tierische Planktonwesen, welche ich hier in Kürze charakterisieren will. Die Abbildung derselben wird andernorts erfolgen[1].

So fand ich im Luganer See (Lago Ceresio) eine auffällige Varietät der bekannten Tintinnoine *Codonella lacustris* Entz vor, welche ein von der typischen Species erheblich abweichendes Gehäuse besitzt,

[1] Hydrobiologische und fischereiwirtschaftliche Beobachtungen aus einigen Seen der Schweiz und Italiens. Plön. Forschungsberichte, XII. Bd. 1905. IX. Kap. S. 169—302.