

ON A NEW GENUS AND SPECIES OF PARALEPIDID
FROM MADEIRA

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With 1 figure

Longisudis new genus

During the years 1957 and 1958 three fragmentary, badly damaged paralepidids were obtained, all taken from the stomachs of *Aphanopus carbo*. In spite of their poor state of preservation they showed clearly that they could not belong to any of the species of this family so far described. It was not till just recently, seven years later, that a fourth specimen, also from the stomach of *Aphanopus carbo*, appeared. This time all of one piece and reasonably well preserved, so that a complete description of this new species was possible.

Diagnosis: Body and head very elongate and compressed. Eye moderate, pupil much larger than lense. Nostrils well in advance of end of maxillaries. Tip of lower jaw strongly elevated. Upper jaw terminating slightly before vertical through front eye-edge. Angle of gape almost at tip of maxillary. Prefrontals with a large bulbous protuberance laterally, just in front of eyes. Supramaxillary short, closely bound to maxillary. Teeth on lower jaw all fixed, strong, wide-set, arrowhead-shaped, in one row. Teeth on upper jaw all minute, not very close-set, slightly retrorse. Vomer toothless. Teeth on palatines very strong, wide-set, slightly arrowhead-shaped, in one row, none depressible; posteriorly a few shorter teeth in a single row. Tongue large, tip far from end of lower jaw. Gill-rakers not developed. Pharyngobranchial teeth strong, in one patch on each side.

1) Museu Municipal do Funchal, Madeira.

Body and head without scales. Lateral-line tube very large, the very conspicuous segments nearly reaching the end of the base of the anal fin. Scale-like structures pierced above and below by two pores and one at anterior end on each segment. Segments about as long as they are high in anterior part of lateral line, otherwise distinctly longer than high, their highest part being more or less in the middle of their length. Pectorals II rays. Dorsal rays II. Anal rays 25.

Generic TYPE and only known form, *Longisudis nigra* n. sp.

The name *Longisudis* is formed from *longus*, L.—long + *sudis*, L.—stake, pile, pike.

Remarks. This new scaleless and gill-rakerless genus seems nearest to *Lestidium* and *Macroparalepis*. In common with them it has the elevated tip of the lower jaw, the forward position of the nostrils in relation to the posterior tip of the maxillary and the single patch of pharyngobranchial teeth. In many respects, however, it differs strongly from both. Thus the angle of the gape of the mouth is almost at the posterior tip of the maxillary, all the teeth of the lower and upper jaws and the palatines are fixed and in single rows, and gill-rakers are completely absent. Added to this is the very backward position of the dorsal fin, a character in which it differs from all paralepidids so far known.

The two other genera of scaleless paralepidids, *Stemonosudis* and *Uncisudis*, differ so greatly in so many characters from *Longisudis* that any relationship is hardly worth discussing.

Longisudis nigra n. sp.

One specimen (holotype). MMF Reg. No. 21171, S. L. 461 mm. 27.III.1965.

Three specimens (paratypes). MMF Reg. Nos. 13080 (October 1957), 14701 (25.IX.1958), 14969 (15.X.1958).

Description of Holotype

Fig. 1: A and B.

Practically all of the left side is well preserved. On the abdomen there is a cut some distance behind the head and at the region where the anus must have been situated a portion is bitten away. The viscera must have been torn out through the one or the other of the two resulting

apertures. In the middle of the region between the ventral fins and the anal fin some portions of the flesh have been torn away. The row of lateral-line structures is only interrupted in two places. Both sides of the head and all the fins are in very good state of preservation. In the region between the head and the dorsal fin of the right side of the body the skin and lateral-line structures are rubbed away.

Inside the body the vertebral column is broken in 4 places. The first place about half a head-length behind the head, the second about in middle between head and dorsal, the third a short distance before the ventrals, and the last under the middle of the base of the dorsal. In these breaks the ends have become superimposed which has thus caused a considerable shortening of the whole specimen as it is preserved now. The lengths of the superimposed parts are 4 mm. in the first break, 7 mm. in the second, 4 mm. in the third and 9 mm. in the fourth. When measuring the preserved specimen all longitudinal distances have been rectified accordingly.

The measurements of the holotype given in mm. and percentages of measurements in standard length are as follows:

| Standard length | 461 | % |
|--|------|------|
| Head | 76 | 16.5 |
| Snout | 41.5 | 9 |
| Orbit | 10 | 2.2 |
| Interorbital | 10 | 2.2 |
| Premaxillary | 41 | 8.9 |
| Longest tooth in mandible | 2 | 0.43 |
| Tip of mandible to tip of tongue | 14 | 3 |
| Snout to dorsal | 325 | 70.5 |
| Snout to ventrals | 309 | 67 |
| Snout to anal | 396 | 85.9 |
| Depth (at hind-edge of eye) | 23 | 5 |
| Depth (at origin of anal) | 18 | 3.9 |
| Least depth of caudal peduncle | 8 | 1.7 |
| Base of dorsal | 18 | 3.9 |
| Base of anal | 51 | 11.1 |
| Length of pectorals | 34 | 7.4 |

Counts: Dorsal 11; anal 25; pectorals 11/11; ventrals 9/9; lateral-line structures 96; vertebrae 95 (hypural included).

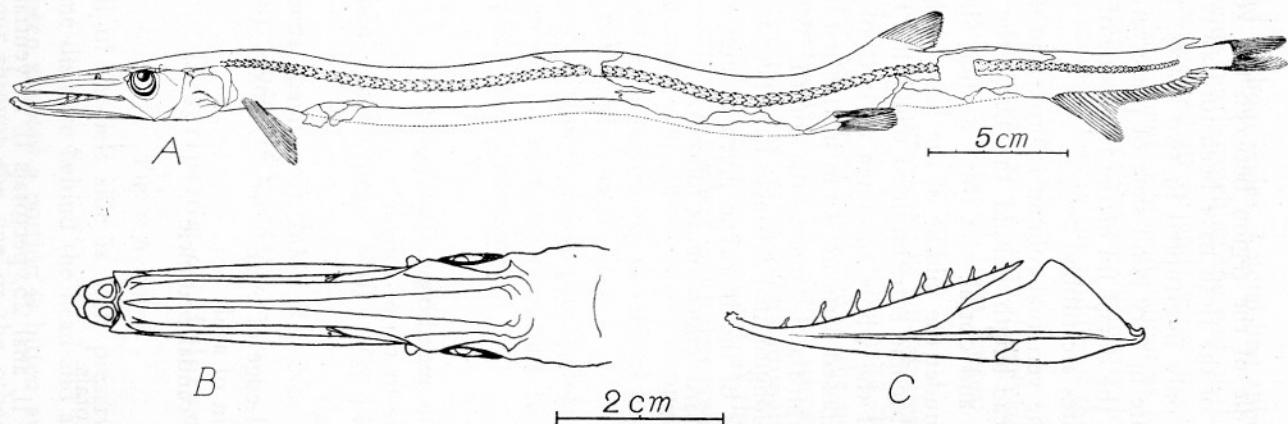


Fig. 1. — *Longisudis nigra*: A and B holotype MMF 21171, sideview of whole fish and head seen from above; C paratype MMF 14701, left lower jaw.

Body and head very elongate, the latter 6 times in standard length. Snout very long, its length 1.8 in head; orbit 7.6; interorbital 7.6; premaxillary 1.85; longest tooth in mandible 38; distance from tip of mandible to tip of tongue 5.4; depth at hind-edge of eye 3.3; least depth of caudal peduncle 9.5; base of dorsal 4.2; base of anal 1.5; length of pectorals 2.2. Interorbital straight. Pupils very much larger than lense. Prefrontals each with a very conspicuous bulbous protuberance laterally, just in front of eyes. Tip of lower jaw reaching beyond tip of upper jaw. Foramina of premaxillary processes large and round.

Teeth, except those of premaxillaries, large, sturdy and not very close-set. None are depressible. Both mandibles bear one minute tooth near tip and another farther back, well removed from the first. Behind the latter, distributed over a portion about equal in length to that between the first and the second, there is a row of 4 sturdy, arrowhead-shaped teeth, occupying the posterior half of the left mandible, and a row of 5 on the right one. Premaxillaries with minute, broad-based, not very close-set teeth along entire edge: about 35 on left and about 43 on right, the two front ones, which correspond to the usually conspicuously enlarged canines of most paralepidids, being more pointed and very slightly longer than the rest. No teeth on vomer. Along palatines a single row of teeth: about 4 on anterior half, comparable in size and shape to the large mandibular ones; about 5 much smaller ones along posterior half. One of the left large teeth has one much smaller one growing just in front of it. Along the edge of the tongue there are 3 small wideset teeth on each side. About 6 pointed teeth on upper pharyngeals.

Segments of lateral line distinctly longer than high, except in anterior section, where their length is about equal to their height. Each segment has 5 fairly large pores, one near anterior end and two on upper and lower border.

The colour on body and head, as well as on the more basal parts of all the fins, is uniform deep black. Towards the ends of the fins the membranes and rays become gradually less heavily pigmented. The iris and inside of mouth, gill-membranes or any other cavities of the head, as well as the abdominal cavity, are likewise deep black.

Description of Paratypes

Fig. 1: C.

Considering the apparently great rarity of this new species, the three

other specimens have been designated paratypes in spite of their very incomplete and poor state of preservation. It is mainly the dentition of the lower jaws, the palatines and the upper phryngeals that are well preserved and deserve describing. In the case of the teeth of the lower jaw, the arrangement in the three paratypes shows that the lack of large teeth in the anterior half in the holotype is not a normal state.

Specimen MMF 13080. Length of head about 75 mm. October 1957. Only head and anterior portion of body. Badly rubbed on both sides. Right premaxillary lost. Teeth on lower jaw 9/9; except for the first symphyseal one, all sturdy and distributed in one row and at equal intervals over the whole length of the jaw bones. Premaxillary teeth about 40, one canine near tip distinctly longer. Palatine teeth 11/10, in one row, first 4 or 5 widest and much larger than the rest. Three small teeth on each side along edge of glossohyal. Four upper pharyngeal teeth each side. Pectoral rays 11.

Specimen MMF 14701. Broken in 3 separate parts. Head badly damaged but with the dentition of the lower jaw, the left palatine and the phryngeals well preserved. Length of head about 75 mm. 25.IX.1958. There are 9 sturdy teeth in an even row on each side of the lower jaw (Fig. 1: C), the small symphyseal ones being lost. The row of teeth on the palatine is composed of 11, the first 4 being widest and large. On the phryngeals there are about 5 on each side. All the fins, as well as the skin on the broken parts are lost, but some of the lateral-line sections are preserved and are like those of the holotype.

Specimen MMF 14969. Head and short anterior portion of body only. Length of head about 75 mm. 15.X.1958. Right side badly damaged. On the left side most of the characteristically black skin still well preserved, as well as the eye with its very large pupil. The dentition is also well preserved and does not differ in its essential points from that of the other two paratypes, showing the same regular distribution of the teeth of the mandible. The right pectoral fin is lost and part of the rays of the left one are missing.

The specific name is formed from *niger*, L.—black.

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