

**DESCRIPTION OF A BATHYPELAGIC FISH, *LESTIDIUM*
BLANCI SP. NOV. (FAMILY PARALEPIDIDAE) FROM THE
ARABIAN SEA***

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DURING a routine research cruise of *R.V. Varuna* on 6-8-1965 to the Cochin-Cape Comorin section of the Arabian sea, three specimens of the genus *Lestidium* were taken along with several other bathypelagic fishes from a bottom trawl net operated at 370 metres. This haul was made at 17.00 hours at a place (Lat. 8° 45'N, Long. 75° 50'E) about 95 km off Quilon. These specimens markedly differ from all the known species of the Genus *Lestidium*, and are described here as *Lestidium blanci* sp. nov.¹

The family Paralepididae belongs to the order Iniomi² and to the Sub-order Aleiposauridae and is closely related to the families Scopelarchidae, Evermanellidae and Omosudidae. The Genus *Lestidium* is the largest in the family Paralepididae and is generally world wide in distribution (Harry, 1951). Harry (1953) distinguishes three groups, *Lestidiops* Hubbs, *Lestidium* Gilbert and *Lestrolepis* Harry, which could be considered as three Sub-genera in the Genus *Lestidium*. It is to the Sub-genus *Lestidiops* Hubbs (of which the species *L. sphyraenopsis* Hubbs) these specimens approach mostly because of the respective position of dorsal fin, pelvic fin and anus, but differ in other details particularly in the number of anal and dorsal rays. Ege (1953) classifies the species of Genus *Lestidium* in three groups which do not correspond exactly to any Sub-genera given above. The present species belongs to the first group *Lestidium* of Ege. The principal differences with the various species of the first group are given in Table 1. Table 2 gives the meristic counts and morphometric measurements of the three specimens. Table 3 shows that the three specimens agree with each other and they belong to a new species, the proportions being different from the other species of *Lestidium* already described.

***Lestidium blanci* sp. nov.**

(Fig. 1)

Holotype (C.M.F.R.I. No. 105) and Paratypes (C.M.F.R.I. No. 106) are deposited in the reference collection museum of the Central marine Fisheries Research Institute, Mandapam Camp, S. India.

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¹The author has great pleasure in naming this species after Dr. M. Blanc of the National Museum of Natural History, Paris, whose help in identifying the specimen and the preparation of this paper was invaluable.

²According to classification of L. Bertin and Arambourg (in P. P. Grasse, *Traite de Zoologie*, Tome III, Masson et Cie, Paris, 1958) the family Paralepididae belongs to the order Clupeiformes and Sub-order Myctophoidel.

DESCRIPTION

The body is very elongated, laterally compressed and provided with soft abdominal keel. The pectoral fins are slightly raised over the side of the body.



FIG. 1. *Lestidium blanci* sp. nov. from the Arabian sea. Lateral view of the holotype.

Pelvics are abdominal. The caudal is small and forked. Origin of the dorsal is far behind the middle of the body and is placed after the pelvic and anus. The adipose fin is situated just above the terminal part of the anal fin. The anal is sufficiently long and almost extends to the extremity of the body, but stands out dis-

TABLE I

Differences of *Lestidium blanci* sp. nov. with the allied species
(The proportions are expressed in percentage of standard length)

Character	<i>L. intermedium</i> (Poey)	<i>L. philippinum</i> (Fowler)	<i>L. nudum</i> Gilbert	<i>L. affine</i> (Ege)	<i>L. elongatum</i> (Ege)	<i>L. sphyraenopsis</i> (Hubbs)	<i>L. blanci</i> sp. nov.
Distance from snout to anus	54.3	57.4	57.3	57.5	55.6	59.6	65.5-66.1
Prepelvic distance	.. 50.3	52.6	54.2	52.0	48.5	53.1	60.1-60.7
Predorsal distance	.. 63.2	61.9	60.7	61.5	59.1	64.6	71.1-71.5
Preanal distance	.. 73.6	74.8	75.8	79.2	77.3	80.9	79.3-79.6
Number of vertebrae	.. 91-98	84-89	82-89	77-85	88-91	99-100	91
Number of thoracic vertebrae	28-30	29-31	32-36	31-35	43-45	?	42
Number of anal rays	.. 41-45	38-40	32-36	27-31	28-30	27-31	33-34
Number of dorsal rays	.. 10	10-11	9-11	9-11	12-14	12-13	7-8

tinctly from caudal. The anus is midway between the pelvic and dorsal fins. There are no luminous organs over the body. Body is scaleless. Lateral line with a modified row of scales in the form of plates and terminates slightly behind the middle of the anal fin. Each plate has two superior pores, two or three inferior pores and one posterior median pore (Fig. 2).

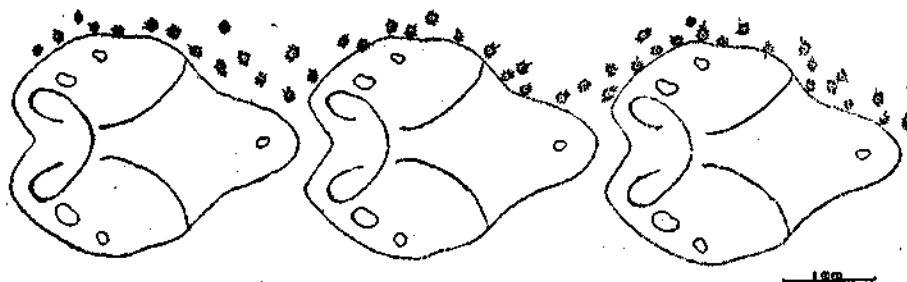


FIG. 2. Lateral line section on left side above tip of pectoral fin of *Lestidium blanci*, sp. nov. showing the structure of modified scales.

The eye is big, 7-8 diameters in the length of head and is equal to the base of the dorsal fin. Nostril is midway in snout length. The snout is elongated. The

TABLE 2

Meristic counts and morphometric measurements of Lestidium blanci sp. nov.

Character	Specimen No.		
	I	II	III
Number of dorsal rays..	8	7	8
Number of anal rays..	33	34	..
Number of pectoral rays	11	11	11
Number of pelvic rays	9	9	9
Number of lateral line plates	73	72	73
Number of vertebrae	91
Number of thoracic vertebrae	42
Total length	290 mm	292 mm	277 mm
Standard length	280 "	281 "	270 "
Maximum height of the body	24 "	25 "	23 "
Length of head	52 "	52 "	50 "
Distance from snout to nostril	26 "	26 "	25 "
Diameter of eye	7 "	7 "	6 "
Length of dorsal base..	7 "	7 "	7 "
Length of anal base..	47 "	46 "	43 "
Distance from snout to anus	185 "	184 "	178 "
Prepectoral distance	55 "	55 "	54 "
Prepelvic distance	170 "	169 "	164 "
Predorsal distance	200 "	200 "	193 "
Preanal distance	223 "	223 "	215 "
Distance from origin of pelvic to anus	15 "	15 "	14 "
Distance from anus to the origin of dorsal	15 "	16 "	15 "
Distance from dorsal to anal	23 "	23 "	22 "
Distance from origin of pelvic to the origin of dorsal	30 "	31 "	29 "
Distance from origin of pelvic to the origin of anal	53 "	54 "	51 "
Distance from anus to the origin of anal	38 "	39 "	37 "

upper jaw ends in a toothless notch into which is inserted the raised extremity of the lower jaw. The posterior end of maxillary is well ahead of the anterior border of the eye. Interorbital is flat with two longitudinal ridges on either side.

The dentition is complex. The lower jaw carries long and pointed teeth, with round base and are inserted in two rows on each side. Those of the innermost row are long and are inclined towards the interior. Premaxillary is with one pair of anterior canines followed by a row of small teeth which are slightly curved towards the back. Vomer is without teeth. The anterior palate carries long and pointed teeth placed in two rows on each side, whereas the posterior has one row on each side. Those of the inner row of the anterior side are inclined towards the interior. The first gill arch is armed with one row of small 'Gill teeth' on the lower side. Tongue is large with one row of minute teeth on each side.

There are 91 vertebrae of which 42 are thoracic in the holotype. The paratypes were not radiographed to study the vertebral counts.

In the holotype, another fish is noticed in its stomach. This appears to belong to the same species as this has also 91 vertebrae. The paratype measuring 270 mm.

TABLE 3
Body proportions of Lestidium blanci sp. nov.

Character	Specimen No.		
	I	II	III
Maximum height of the body..	8.5% of S.L.	8.8% of S.L.	8.5% of S.L.
Length of the head..	18.6% "	18.5% "	18.5% "
Distance from snout to nostril..	9.0% 50.0% of H.L.	9.2% 50.0% of H.L.	9.2% 50.0% of H.L.
Diameter of eye ..	2.5% of S.L. 13.5% of H.L.	2.5% of S.L. 13.5% of H.L.	2.6% of S.L. 14.0% of H.L.
Length of dorsal base ..	2.5% of S.L.	2.5% of S.L.	2.2% of S.L.
Length of anal base ..	16.8% "	16.4% "	15.9% "
Distance from snout to anus..	66.1% "	65.5% "	65.9% "
Prepectoral distance ..	19.6% "	19.6% "	20.0% "
Prepelvic distance ..	60.7% "	60.1% "	60.7% "
Predorsal distance ..	71.4% "	71.1% "	71.5% "
Preal anal distance ..	79.6% "	79.4% "	79.6% "
Distance from origin of pelvic to anus ..	5.3% "	5.3% "	5.2% "
Distance from anus to the origin of dorsal..	5.3% "	5.7% "	5.5% "
Distance from origin of dorsal to the origin of anal ..	8.2% "	8.2% "	8.1% "
Distance from origin of pelvic to the origin of dorsal ..	10.7% "	11.0% "	10.7% "
Distance from origin of pelvic to the origin of anal ..	18.9% "	19.2% "	18.9% "
Distance from anus to the origin of anal ..	13.6% "	13.9% "	13.7% "

S.L.=Standard Length ; H.L.=Head Length.

in standard length has also a fish (about 180 mm long) resembling to *Lestidium* sp. in its stomach.

Adult specimens of paralepids are little known as they are rarely caught. Harry (1951), summarising on the paralepids studied by him, opines that most of the so-called adult specimens of the scaled genera and many of the naked genera do not appear to be fully grown and it is probable that the true adults are swift that they have evaded the collectors efforts to catch them. All the present specimens, studied by the author appear to be fully grown and one of them (270 mm in standard length) is a mature female with a very long ovary practically extending the whole body cavity. The eggs are spherical, colourless and transparent.

The general colouration is violet brown with brownish black spot scattered all over the body. There is a distinct black mark on the occipital region. Peritoneum is with 8-9 black blotches.

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