

**THE DISTRIBUTIONAL RECORD OF *MURAENICHTHYS*
SCHULTZEI BLEEKER FROM GUJARAT COAST**

During the collection of fishes from the tidal zones at Rupan, Okha, and Kiew point (Gujarat coast) during 1962-63, a few specimens of *Muraenichthys schultzei* Bleeker were obtained from the mud and beneath the stones. The specimens were collected by draining the water from the tide pools and then scooping the mud. As they are burrowers and capable of moving fast in the mud and among rocks difficulty was encountered in collecting them. Often formalin was poured into the crevices and holes to evict them.

Muraenichthys schultzei Bleeker, the worm eel, was first recorded by Bleeker (1857) from Java. Day (1889) recorded it from Andamians, Bamber (1915) from Sudanese Red sea, Fowler (1950) from Red sea and Schultz (1953) from Marshall and Marianas Islands.

As *Muraenichthys schultzei* Bleeker has not so far been recorded from Indian waters, the occurrence of this species along the Gujarat coast is of interest. The present record not only shows the continuous distribution of the species from Pacific to Red sea but also confirms the wide range of specific variation as indicated by Schultz (1953).

Description : Body cylindrical, tapering. Scales lacking. Ventral fins and pectoral fins absent. Nostrils on the ventral side of the upper lip.

Greatest depth of body 17 to 27 ; head length 5 to 7.3 ; pre-anal length 2.1 to 2.5 ; post-anal length 1.6 to 1.8 ; pre-dorsal length 2.1 to 2.5 ; post-dorsal length (from dorsal origin) 1.6 to 1.8 of standard length. Snout 6.5 to 9 in head length. Eye diameter 14 to 19 in head or 2 to 2.5 in snout length. The distance between the tip of the snout to the dorsal origin is more than 1.3 of that of origin of dorsal to the caudal end. The body proportions in percentage are given in Table I.

Anterior nostrils are tubular and point downwards. Posterior ones are with a valvular flap on the upper lip, anterior to eye, cleft of the mouth extends more than that of the snout length behind the eye. Eyes are small without free margin. Gill openings are restricted to a slit on the lower middle side of the body with a flap. Origin of the dorsal fin above the anus. Anal fin originates close to the anus. Dorsal and anal fins are short and confluent with the caudal fin, which is short and round. Lateral line originates behind the occipital region-as far back as the snout and eye length from the posterior margin of the eye and terminates

TABLE I
Body Proportion in Percentage

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Total length (mm.)	84.2	71	64	144	80	44	48	43	50	49	113	98	95	99	97
<i>In standard length :</i>															
Depth	3.82	4.16	5.87	5.02	4.07	3.2	3.83	4.37	4.08	4.34	4.0	4.0	4.5	3.7	4.0
Head length	14.3	13.8	18.00	14.4	14.5	20.0	20.0	16.0	16.5	16.0	13.0	14.0	14.2	15.4	15.9
Pre-anal length	41.5	40.0	43.1	40.0	41.5	45.4	45.4	40.0	43.1	40.0	40.0	45.4	45.4	45.4	45.4
Post-anal length	58.83	58.83	58.83	58.83	55.55	55.55	55.55	58.83	58.83	55.55	58.83	55.55	55.55	55.55	58.83
Pre-dorsal length	41.67	40.0	43.48	40.00	41.67	45.45	45.45	40.00	43.48	40.00	40.00	45.45	45.45	47.62	45.45
Post-dorsal length	58.83	58.83	58.83	58.83	55.55	55.55	55.55	58.83	58.83	55.55	58.83	55.55	55.55	55.55	58.83
<i>In head length :</i>															
Caudal peduncle depth	7.69	7.69	8.33	5.56	7.14	5.88	4.99	5.88	5.26	4.99	8.33	6.67	7.69	8.25	6.67
Head depth	25.0	33.33	31.25	33.33	28.57	28.57	33.33	33.33	30.33	30.32	35.72	35.72	25.00	25.00	28.57
Snout length	15.38	15.38	14.29	15.38	15.38	14.29	14.29	15.38	11.29	14.29	13.70	11.11	12.99	11.77	14.08
Eye diameter	6.67	7.14	7.14	5.88	7.14	6.67	6.25	5.88	5.88	6.25	6.90	5.88	5.21	5.41	5.88
Upper jaw length	29.41	40.00	40.00	34.48	40.00	33.33	30.30	33.33	33.33	30.30	38.42	33.33	33.33	37.04	33.33
Inter orbital space	11.11	15.38	16.67	12.5	12.5	14.28	11.11	14.28	10.00	11.11	10.53	11.11	9.09	9.09	11.11
<i>In snout length :</i>															
Eye diameter	50.0	50.00	50.0	47.62	50.00	50.00	41.67	40.00	43.48	41.67	43.48	47.62	40.00	47.62	45.45
<i>In eye diameter :</i>															
Least inter orbital	200.00	200.00	200.00	200.00	200.00	200.00	167.67	167.67	200.00	166.67	166.67	166.67	166.67	200.00	166.67

above the anus. Few pores are seen on the anterior part of the lateral line and posteriorly the pores are closed. Tongue appears adnate. Upper jaw is blunt; lower jaw is shorter and strong. Teeth are short, acicular and are arranged in irregular bands. Inter-maxillary teeth are enlarged in a circle with three teeth on the middle. Maxillary teeth are in three rows, and irregularly arranged with the broad middle region and narrow posterior and anterior regions; vomerine teeth small, pointed, in two more or less parallel rows. Two rows of pointed, equal teeth on lower jaw. Posteriorly there is only a single row. Dorsal surface of the head, trunk above the lateral line and tail are profusely mottled with black pigment. Fins are fleshy. Lower jaw, breast and trunk below the lateral line are fleshy and devoid of pigmentation. When alive small specimens are reddish and transparent (heart and a few blood vessels clearly visible) and the larger ones are reddish yellow.

The present collection includes specimens of size ranging between 43.5 and 144 mm. Previously recorded maximum size is 130 mm.

A mature male of length 144 mm. was collected from the tide pool of Rupan coast from beneath a rock on 17-2-63. These specimens were found to live outside the water for a long time.

Habitat: Inhabiting fine sand and mud of the tide pools. Bigger specimens were found beneath the stones and crevices. From the coast of Rupan, Okha, and Kiew point (mouth of gulf of Cutch).

Day (1889) in his description of a single specimen from the Andaman islands says that the dorsal fin originates ahead of the origin of anal fin. The specimens of *Muraenichthys schultzei* Bleeker from the Gujarat coast differ from the Andaman specimens in having the dorsal origin opposite to the anal fin, but agree with the description given by Gunther (1870), 'origin of the dorsal fin nearly opposite to the ventral; snout obtuse. Cleft of the mouth extending considerably beyond the eye'. Schultz (1953) ascertained the wide range of variation of the species and his description tallies with that of *M. schultzei* of Gujarat coast.

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