

- HORA, S. L. 1929. An Aid to the Study of Hamilton Buchanan's 'Gangetic Fishes.' *Mem. Indian Mus.*, 9 : 169-192 (p. 185, pl. xviii, fig. 1).
- JAMES, P. S. B. R. 1959. *Eupleurogrammus intermedius* (Gray) (Trichiuridae: Pisces), A New Record from Indian waters. *Journ. Mar. biol. Ass. India*, 1 : 139-142.
- TUCKER, D. W. 1956. Studies on the Trichiurid Fishes-3. A preliminary Revision of the Family Trichiuridae. *Bull. Brit. Mus. (nat. Hist.)*, Zool., 4 : 73-130.

A SHORT ACCOUNT OF THE WAHOO, *ACANTHOCYBIUM SOLANDRI* (CUVIER & VALENCIENNES)

RECENTLY it has been possible to collect a few specimens of *Acanthocybium solandri* from Vizhingam (Lat. 08° 22' N., Long. 76° 59' E.), South-West Coast of India ; and a description of the species is given below, as no account of it is available from Indian waters, except for a mention of its occurrence around Minicoy Island by Jones and Kumaran (1959) and in the Wadge Bank area off Cape Comorin by John (1959).

A. solandri is widely distributed, and is recorded from the circum-tropical parts of the Pacific, Atlantic and Indian Oceans. The first record of this species from the Indian Ocean (Arabian Sea) is that of Boulenger (1897) who gives a detailed description of a specimen collected and sent to the British Museum by Surgeon-Lieut.—Col. Jayakar from Muscat. Other records of this fish from the Indian Ocean are from the Delagoa Bay and Durban coasts in South Africa (Smith, 1949) ; Ceylon coast (Deraniyagala, 1952 ; Munro, 1955) ; and from Minicoy Island (Jones and Kumaran, 1959) ; the Wadge Bank area in India* (John, 1959) ; and subsequently from Andamans and Tuticorin (Jones, Silas and Dawson, 1960).

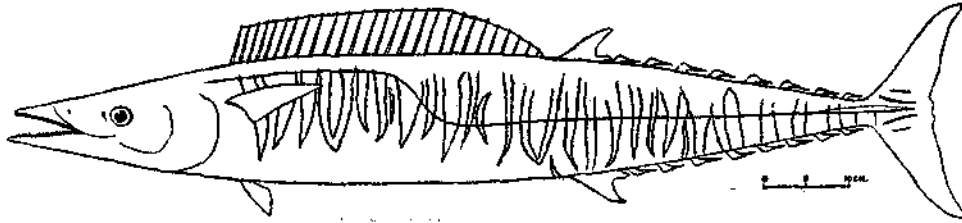
DESCRIPTION

Acanthocybium solandri (C. & V.)

- Cybbum solandri* Cuvier & Valenciennes 1841, *Hist. Nat. Poissons*, 8, 192.
- Acanthocybium solandri*. Boulenger, 1879, *Proc. Zool. Soc. London*, 272 ; Hardenberg, 1934, *Treubia*, 14(3) 292 ; Smith, 1949, *Sea fishes of South Africa*, 301, PL. LXIV, fig. 843 ; Fraser-Brunner, 1950, *Ann. Mag. Nat. Hist.*, (12) 3 : 162, fig. 35 ; de Beaufort, 1951, *Fishes of the Indo-Australian Archipelago*, 9 : 228 ; Deraniyagala, 1952, *Coloured Atl. Some. Vert. Ceylon, I, Fishes*, 100-101, figs. 47, 48 ; Munro, 1955, *Marine and Fresh water Fishes of Ceylon*, 220, pl. XLIII, fig. 649 ; Jones and Kumaran, 1959, *Indian J. Fish.* 6(1) : 49 ; John, 1959, *Bull. Centr. Res. Inst., Univ. Kerala*, 7(1) : 133 ; Jones, Silas & Dawson, 1960. *J. Mar. biol. Assoc. India*, 2 (1). 134 .
- D1. XXIII-XXVII ; D2. III, 9—10+8—10 ; A. III, 9—10+7—9 ; P. ii.21 ; V. I, 5 ; Vert. 62-64.

Body, elongated and cigar-shaped, covered with small, narrow, rhomboidal scales ; those at the base of vertical fins elongated and lanceolate. Head, very long

* Dr. S. Jones, Chief Research Officer, in a personal communication informs me that he has seen a specimen of *A. solandri* on 16-3-1956 at Colachel (South of Vizhingam).



Acanthocybium solandri (Cuvier & Valenciennes)

and slender. Depth of body 6.2-6.8, length of head 4.0-4.3, caudal 8.4-9.5 in standard length. Diameter of eye 9.2-9.8 in length of head, and 2.5 in interorbital space. Snout long and beak-like, 1.9-2.1 in length of head. Cleft of mouth wide, extending to below anterior edge of eye; posterior part of maxillary covered by the preorbital. Jaws strong, set with a series of trenchant, closely set, slightly serrated teeth which increase in size posteriorly; about 40-45 such teeth in lower jaw and 45-50 in upper jaw. Chin pointed, slightly projecting. Villiform teeth in a club-shaped patch on vomer and in an elongated band on palatines. Branchial lamellae reticulate. Gill-rakers absent. Preopercular edge slightly serrated. Anterior dorsal, well developed, high, a little longer than second dorsal, originating above base of pectoral; spines sub-equal, highest behind middle of fin, $\frac{1}{4}$ length of head. Second dorsal, small, originating a little in advance of anal which is similar to former. Pectoral, originating a little anterior to origin of anterior dorsal, 1.9-2.2 in head, reaching to below 10-11th dorsal spine. Ventrals small, thoracic, about half length of pectoral. Caudal, short, lunate and 1.9-2.2 in head. Lateral line, with many perpendicular branches, high at anterior part of body, descending abruptly in a strong curve below the second third of anterior dorsal, terminating on tail in a strong keel which is about $\frac{1}{3}$ length of head. Number of vertebrae 62-64.

In fresh condition colour of the body is steel-blue above and paler ventrally. Sides with 25-30 vertical faint bars. Anterior dorsal similar to body in colour, but paler. Second dorsal, pectoral and caudal fins blackish; ventrals and anal dusky.

GENERAL REMARKS

The various body measurements and fin counts of *A. solandri*, taken from fresh material, are given in the Tables 1 and 2. The above description is based on these measurements. The figure is drawn, proportionately, based on the measurements taken from fish No. 4.

No significant differences are noticed in the various body proportions and the fin counts of *A. solandri* described from the Indian waters and from other places, except from Indonesia (Hardenberg, 1934). In his description of the species from Indonesian waters, Hardenberg (*l.c.*) gives the second dorsal fin count as 7. This is probably an error which is later followed by de Beaufort (*l.c.*), and Munro (*l.c.*). It may also be mentioned here that the specimen described by him has comparatively shorter head, which is contrary to all existing description of the species both from the Indo-Pacific and the Atlantic. The number of fin rays in the second dorsal is also 11-13 (its range in the present material is 12-13) and not 7.

A. solandri, known as *Oria Neemeen* or simply *Oria meen* in the local dialect, appears to be not very common at Vizhingam. This fish is occasionally caught

TABLE I
Body Measurements of *Acanthocybium solandri* in mm.

S. No.	Date	Weight Kg.	Sex & Stage of maturity	Furcal length	Standard length *	Greatest body depth	Head length	Maxillary length	Snout length	Eye diameter	Snout to pectoral	Snout to ventral	Snout to 1st dorsal	Snout to 2nd. dorsal	Snout to anal	Pectoral length	Pelvic length	Height of 1st. dorsal *	Height of 2nd. dorsal	Height of anal	Vertebrae
1	20-11-1959	10.51	♀ II	1,200	1,122	170	260	132	130	28	275	295	280	690	745	135	70	55	52	61	—
2	24-11-1959	10.06	♂ II	1,130	1,045	160	242	121	124	25	252	257	262	657	694	128	66	57	55	55	64
3	17-12-1959	8.23	♀ II	1,055	984	168	245	120	125	25	258	267	274	634	667	128	58	54	52	51	63
4	5-1-1960	7.31	♂ II	1,054	985	148	231	115	112	25	246	263	253	631	650	112	52	46	43	56	—
5	22-1-1960	11.43	♀ II	1,205	1,128	182	265	135	137	28	281	305	286	701	756	128	60	55	59	65	62
6	8-2-1960	8.23	♂ II	1,139	1,064	157	259	131	131	27	272	283	276	680	722	120	66	57	56	54	—
7	17-3-1960	7.77	♀ II	1,090	1,020	153	247	124	121	26	256	265	272	—	—	—	—	—	—	—	62

* From the tip of snout to the origin of caudal fin.

** Height of 1st dorsal taken at 1st. dorsal spine.

in November-March by open-sea fishermen using No. 1 hooks, baited with sprats, goat-fishes and squids. During the above period this species is reported to have been caught also at other centres south of Vizhingam; and often brought to the Connemera Market, Trivandrum.

TABLE II
Fin Counts of *A. solandri*

Serial No. of fish	1st dorsal fin	2nd dorsal fin	Dorsal finlets	Anal fin	Anal finlets	Pectoral fin	Ventral fin
1	XXVI	III, 9	10	III, 9	8	ii, 21	I, 5
2	XXVI	III, 10	8	III, 10	8	ii, 21	I, 5
3	XXV	III, 10	9	III, 10	9	ii, 21	I, 5
4	XXVII	III, 10	8	III, 10	8	ii, 21	I, 5
5	XXV	III, 9	9	III, 10	8	ii, 21	I, 5
6	XXV	III, 10	8	III, 10	7	ii, 21	I, 5
7	XXIII	III, 10	9	III, 10	8	ii, 21	I, 5

The Wahoo is a large oceanic and pelagic fish; voracious in habits, feeding mainly on other pelagic and shoaling fishes. Examination of the stomach contents of the specimens collected at Vizhingam showed that they were mainly feeding on shoaling fishes like frigate mackerel (*Auxis thazard*), Indian mackerel (*Rastrelliger kanagurta*) and other scombroid fishes. All the specimens examined from Vizhingam are immature.

Two types of parasites have been collected from *A. solandri* examined from Vizhingam. One of them is a large species of digenetic trematode found in the stomachs of all the fish examined; and it appears to be similar to the species of *Distomum*, recorded by Kishinouye (1923) from the stomachs of this fish from Japan. Another is an interesting lernaeid copepod parasite, which has not yet been identified, collected from the body wall of the fish No. 5 in the present material. These external copepod parasites are tough in texture, very much elongated and thread-like (10.5-12.0 cm. in length), and with an anterior lobed organ which gets embedded in the body wall of the fish to get firm hold, while the rest of the parasite is suspended freely outside. Their general colour when fresh is bluish-green.

I am greatly indebted to Dr. S. Jones, Chief Research Officer, Central Marine Fisheries Research Station, Mandapam Camp for the encouragement and help in the preparation of this note. My sincere thanks are also due to the Superintendent, Trivandrum Zoo, for kindly extending library facilities to me.

Central Marine Fisheries Research Centre,
Vizhingam P.O., Kerala

K. V. NARAYANA RAO

REFERENCES

- KISHINOUE, K. 1923. Contributions to the comparative study of the so-called Scombroid fishes. *J. Coll. Agric. Univ. Tokyo*, 8: 410-413.