

*Cah. O.R.S.T.O.M., sér. Océanogr., vol. VI, n° 2, 1968.*

**A NEW RECORD OF THE ANCHOVY  
*STOLEPHORUS HETEROLOBUS* (RÜPPELL)  
FROM THE COAST OF MADAGASCAR**

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INTRODUCTION

While examining clupeoid material in the collection of the «Centre ORSTOM d'Océanographie» at Nosy-Bé, Madagascar, nine specimens of *Stolephorus heterolobus* (Rüppell) were discovered in a mixed collection of *Stolephorus* spp. This species has not been recorded previously south of the Zanzibar Channel, where it is of considerable importance in pelagic food chains. Five specimens of *S. heterolobus* were presented by «Centre ORSTOM» to the EAMFRO collection, and these are fully described below.

I would like to express my thanks to the Director M. ANGOT, and M. CHABANES of the «Centre ORSTOM de Nosy-Bé» for making this material available.

***Stolephorus heterolobus* (Rüppell)**

REFERENCES AND SYNONYMY.

*Engraulis heteroloba* Rüppell, 1837 : 79, pl. 21, fig. 4 (Type locality : Massawa).

*Anchoviella heteroloba* : Fowler, 1940 : 698 (Synonymy ; Indo-Pacific specimens).

*Stolephorus heterolobus*, Whitehead, 1965 : 266, fig. 4 a (isthmus) (Synonymy ; Suez Canal, Red Sea, Gulf of Aden, Gulf of Oman, Persian Gulf) ; Losse, 1966 a (East African coast : Dar-es-Salaam, Zanzibar, Mombasa, Malindi) ; Losse 1966 b (Zanzibar Channel).

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## DESCRIPTION.

Based on five specimens, 58,7-68,0 mm, standard length from Nosy-Bé, Madagascar (EAMFRO 1965, 9, 1-5).

Dorsal ii 11 (12), pectoral i 13-14, pelvic i 7, anal ii 15 (16). Abdominal scutes 5, needle-like, prepelvic only. Gillrakers on first gill arch 22-24+25-28, total 49-52. Branchiostegal rays 11-12 exposed. Scales caducous, about 41-42 (pockets) in lateral series.

In percentages of standard length : depth 15,3-16,4, head 25,2-27,4, snout length 5,8-6,5, eye diameter 6,3-7,1, post-orbital distance 13,0-14,1, maxilla length 17,7-19,0, lower jaw length 16,8-17,9, extension of maxilla beyond 2nd. supramaxilla 1,7-2,2, pectoral fin length 13,7-14,6, pelvic fin length 8,8-9,2, pre-dorsal distance 53,6-55,2, pre-pelvic distance 45,0-46,1, pre-anal distance (63,1) 65,0-66,4, anal fin length 15,4-17,5, muscular portion of isthmus 10,2-10,7.

Body compressed, dorsal and ventral profiles hardly convex ; snout pointed at tip, slightly shorter than, or about equal to eye diameter ; inter-orbital convex with a prominent central ridge; maxillae moderately long, posterior tips pointed and projecting slightly beyond angle of jaws; muscular portion of isthmus short, the anterior tip not projecting forward to posterior borders of branchiostegal membranes; urohyal exposed, with a flat, bony, ventral, shield-shaped plate lying just anterior to tip of muscular portion of isthmus (Whitehead, 1965, p. 267, fig. 4 a); pseudobranch exposed, slightly longer than eye diameter; gill rakers moderately flattened, lanceolate, longer than gill filaments.

Anal origin beneath last dorsal ray or slightly behind dorsal base; dorsal fin nearer caudal base than eye, the origin nearer caudal base than snout; pelvic origin anterior of dorsal, much nearer snout than caudal base.

## COLOUR.

*In alcohol*, body uniformly light brown with a silver lateral band wider than eye diameter, broadest under dorsal base, bordered dorsally by a narrow blue-black line. Rays of dorsal with dark brown chromatophores, anal rays with a few brown chromatophores. Parietal and nape dark brown; posterior borders of dorsal scale pockets and caudal brownish. Top of head with scattered brown chromatophores.

## SIZE.

68,0 mm. S. L. (Nosy-Bé) ; to 88,0 mm S.L. in East African waters (Zanzibar).

## DISTRIBUTION.

Nosy-bé, Madagascar. Eastern coast of Africa : Suez Canal, Red Sea, Gulf of Aden, East African coast (Dar-es-Salaam, Zanzibar, Mombasa, Malindi; Losse 1966 a); elsewhere, Gulf of Oman, Persian Gulf, Madras, East Indies and Australia.

## TAXONOMIC NOTE.

The five examples from Madagascar agree closely with a large number of East African specimens that I have examined. In this material it may be noted that in adults (above 60 mm S.L.) the urohyal plate is well developed and easily visible with the naked eye, it is poorly developed at 40 mm and not evident in post-larvae of 37 mm or less. Presumably Malagasy material will show a similar degree of development of this character when a good series is available.

A closely allied species, *Stolephorus buccaneeri* Strasburg is now known from East African waters and South Africa (Losse, 1966 a). This species, like *S. heterolobus*, is characterized by a short muscular isthmus and the urohyal is exposed, not reaching the posterior borders of the branchiostegal membranes. It differs from *S. heterolobus* by possessing two fleshy ventral lobes (c. f. bony ventral plate) lying just anterior to the tip of the muscular isthmus, and a short truncated maxilla which hardly projects beyond the second supramaxilla; the anal origin lies just beyond the dorsal base. Specimens of both these species from the Mozambique Channel are required for further taxonomic studies.

#### REFERENCES

- FOWLER (H. W.), 1941. — Contributions to the Biology of the Philippine Archipelago and Adjacent Regions. *Bull. U.S. nat. Mus.*, No. 100, 1-879.
- LOSSE (G. F.), 1966 a. — Check list of Elopoid and Clupeoid fishes in East African coastal waters. *E.A. Nat. Hist. Soc.* (in press).
- , 1966 b. — Fishes taken by Purse-seine and Dipnet in the Zanzibar Channel. *E. Afr. agr. for. Journal (MS)*.
- RÜPPELL (W. P. E. S.), 1837. — *Neue Wirbelthiere zu der Fauna von Abyssinien gehörig*. Frankfurt-a-M., 58-80, pl. 15-21.
- WHITEHEAD (P. J. P.), 1965. — Review of the Elopoid and Clupeoid fishes of the Red Sea and Adjacent Regions. *Bull. Brit. Mus. nat. Hist. (Zool.)*, 12 (7), 227-281.