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STUDIES IN CARANGID FISHES

No. 5

The genus **CHORINEMUS** Cuvier, 1831
in the western Indian Ocean

by

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The genus *CHORINEMUS* Cuvier, 1831 in the
western Indian Ocean.
(With Plates 40-43)

by

J. L. B. SMITH

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ABSTRACT

The three species of *Chorinemus* are described and illustrated from the western Indian Ocean. *Scomber madagascariensis* Shaw, 1803 and *Scomberoides commersonianus* C. & V., 1831 are junior synonyms of *C. lysan* (Forsskål, 1775). *C. mauritanus* C. & V., 1831, *C. sanctipetri* C. & V., 1833, *C. moadetta* C. & V., 1833 and *C. toloo* Klunzinger, 1871 are junior synonyms of *C. tolooparah* (Rüppell, 1828). *Chorinemus tol* C. & V., 1831 and *C. moadetta* (non C. & V.) Rüppell and Klunzinger are junior synonyms of *C. tala* C. & V., 1831. Photographs of the types of *C. tala*, *C. tolooparah*, *C. sanctipetri* and *Scomber lysan* are reproduced.

FAMILY CARANGIDAE

Chorinemus Cuvier in Cuvier and Valenciennes, 1831. Cuvier in Cuvier and Valenciennes 1831: 367 (270).

The type *Scomberoides commersonianus* Lacépède, 1802 = *C. lysan* (Forsskål, 1775). Strongly compressed elongate oval body covered with small embedded scales. Front part of lateral line little curved over the pectoral, straight posteriorly, not armed. Mouth large with villiform teeth in bands in each jaw, on palate and tongue, diminish with age, replaced by larger teeth externally in jaws.

First dorsal with an antrorse spine in front, hidden with age, followed by 6-7 spines, fairly high and connected in juveniles, shorter and separate later. Second dorsal with a spine and 19-21 rays, slightly higher in front, hinder 8-10 rays finlet-like but connected. Anal of two spines in front, the second fin of a spine and 17-19 rays, exactly like the second dorsal. Pectorals and pelvics short, from the middle of the hind part of the pectoral base a cutaneous fold is connected to the body forming a distinct pocket behind the base of the fin.

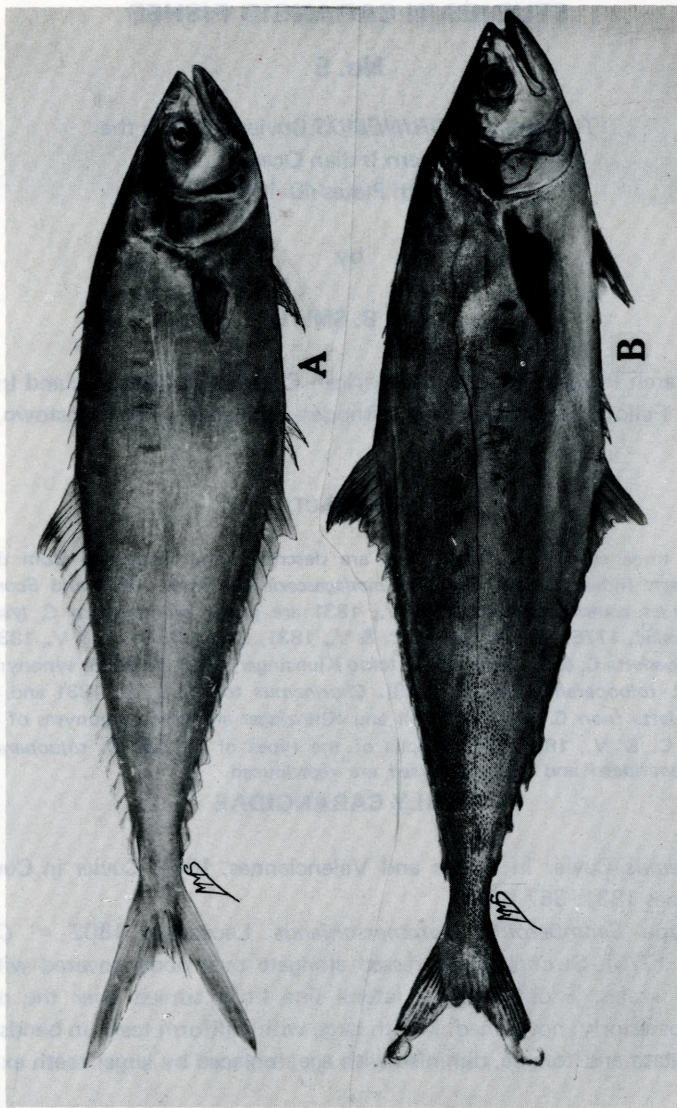


PLATE 40

A. *Chorinemus tala* Cuvier in
C & V No. Z1294 T.L.
220 mm (197 mm F.L.)
Zanzibar

B. Type of *Chorinemus sanc-*
tipetri Cuvier in C & V
Type No. 5893 T.L.
540 mm (490 mm F.L.)
Malabar

Few species of tropical parts of the Indo-Pacific, mostly small, some occur in shoals. Flesh delicate but fish must be skinned as small sharp scales are troublesome or dangerous.

There is considerable confusion in this genus that needs revision with types and adequate material. Only three species admitted here, distinguished as follows:-

- A. Scales narrow needle-like, indistinct, give skin a striated appearance. 18-20 lower gillrakers. Maxilla to below hind edge of pupil *tala*
- B. Scales broader, lanceolate, distinct.
 - I. Maxilla to below hind edge of eye. Small spots above and below front of lateral line. 17-19 lower gillrakers *tolooparah*
 - II. Maxilla to well behind eye. Large dark blotches along front of lateral line. About 11 lower gillrakers *lysan*

Chorinemus tala Cuvier in Cuvier and Valenciennes, 1831.

(PLATES 40,A & 41,B.)

Chorinemus tala Cuvier in Cuvier and Valenciennes 1831: 377 (277) (Malabar).
Chorinemus tol Cuvier in Cuvier and Valenciennes 1831: 385 (283) (India).
Playfair 1867: 861 (N.D.* Seychelles). Klunzinger 1884: 106 (Red Sea).
Barnard 1927: 564 (Natal). Weber and de Beaufort 1931: 283 (Natal to W. Pacific).
Smith 1949(-1965): 224, fig. 544 (S. Africa). Fourmanoir 1954: 220 (Comores).
Morrow 1954: 809 (E. Africa). Fourmanoir 1957: 217 (Mozambique Channel).
Fourmanoir and Guézé 1962: 14 (Réunion). Sanches 1963: 47, fig. 45 (Mozambique).
Kiener 1965: Pl. 19, fig. 30 (Madagascar).

Chorinemus moadetta (non. C. & V., 1831). Rüppell 1835: 45 (Red Sea).
Klunzinger 1871: 448 (Red Sea).

D2 I 20. A II+I 18-19. P 1, 17-18. Gillrakers 6-8+18-20 = 24-27 total. Depth 4.4-4.7, head 4.7-5.4 in fork length with age. Eye 4-4.6 in head, 1-1.3 in interorbital and in snout and 1.6-2.5 in postorbital length with age. Mouth large, maxilla extends below hind edge of pupil. Fine teeth in bands in each jaw, few exterior teeth larger. Fine teeth in patches on vomer, palatines and tongue, the vomerine patch longer than wide. The scales are small, slender, elongate, needle-shaped, and give the skin a striated appearance.

In life silvery with 5 or more vertically oval blotches, the anterior touching the lateral line. Front of soft dorsal dusky to black.

Described from five specimens, 185-285 mm total length, and from 340 mm type. Said to attain 500 mm. Ranges from Natal northwards over the tropical Indian Ocean and to the tropical western Pacific. Apparently not found by Williams in Kenya, not included in his 1958 revision.

There has been a great deal of confusion about this species and it is not possible to resolve this from the literature. *C. tala* is commonly stated to differ from other species in the greater depth of the body. However by kindness of Dr

* N.D. = no description.



PLATE 41

A. Type of *Lichia tolooparah*
 No. SMF 386, 206 mm
 from Ruppell

B. Type of *C. tala* Cuvier in
 C & V No. A6587 T.L.
 340 mm from Malabar

M. L. Bauchot I have examined the 340 mm type of *Chorinemus tala* Cuvier in C. & V., 1831, No. A6587 from Malabar (Plate 41,B.). This is in excellent condition but has lost all colour. It has D2 I 20. A II+I 19. P 1, 16-17. Gillrakers 6-7+18 = 24-25. Although it has one ray more in the anal and 1-2 fewer gillrakers than specimens from the western Indian Ocean it is in all other respects identical and hence this name must take precedence over *C. tol* Cuvier in C. & V., 1831.

Chorinemus tolooparah (Rüppell, 1828).

(PLATES 40,B, 41,A and 42,A.)

Lichia tolooparah Rüppell 1828: 91 (Red Sea).

Chorinemus tolooparah, Rüppell 1835: 44 (Red Sea). Tortonese 1937: 192(42) (Red Sea). Fourmanoir 1952: 186 (Europa Isl.); and, 1957: 216, Pl. 13,B (Comores). Kiener 1963: 80, 84, Pl. 47 (Madagascar).

Chorinemus sanctipetri Cuvier in Cuvier & Valenciennes 1831: 379 (279) Pl. 236 (Type locality Malabar). Meek 1899: 172 (Somaliland). Gilchrist & Thompson 1908: 186 (Natal). Barnard 1927: 564 (Natal, Delagoa Bay, Mozambique). Barnard 1947: 120, Pl. 14, fig. 11 (East coast Africa to East London). Baissac 1949: 29 (Mauritius). Smith 1949-1965: 224 (extends to Natal). Angot 1950: 186 (Soalara). Copley 1952: 107 (East Africa). Williams 1958: 418, Pl. 14, fig. 22 (East Africa). Fourmanoir & Guézé 1962: 14 (Réunion). Sanches 1963: 78 (Inhaca, Mozambique). Smith & Smith 1963: 20, Pl. 10E (Seychelles). Fourmanoir & Crosnier 1964: 17 (Mozambique Channel).

Scomberoides sanctipetri, Fowler 1925: 213 (Delagoa Bay).

Chorinemus moadetta Cuvier in Cuvier & Valenciennes 1831: 379 (281) (Red Sea).

Chorinemus mauritanus Cuvier in Cuvier & Valenciennes 1831: 382 (282) (Mauritius).

Chorinemus tolo Klunzinger 1871: 447 (Red Sea).

D2 I 20. A II+I 17-18. P1, 16-17. Gillrakers (0-2) 6-8+17-18 = 24-26 (2x24: 5x25: 1x26). Depth 3.5-4.5 with age, head 4.7-5.2 in fork length. Eye 4.2-6 in head, 1.2-1.5 in interorbital, 1.4-1.6 in snout and 2.4-2.9 in postorbital length. Maxilla to below hind edge of eye. Fine teeth in bands in jaws and in patches on palate and tongue. Lateral line with gentle undulate curve over pectoral. Scales broadly lanceolate.

In life silvery, darker above, fins light. Apical half of front dorsal lobe black. 6-7 small black blotches along close above lateral line, 4-5 similar close below, sometimes joined above and below across the lateral line.

Eight specimens, 180-540 mm total length, Durban, Aldabra, Seychelles, Red Sea, India, including types of *Lichia tolooparah* Rüppell, 1828 and of *Chorinemus sanctipetri* Cuvier in C. & V., 1831. Attains at least 800 mm.

There is a difference in gillraker count between our specimens and the East African data of Williams, who states (1958: 418) for *C. sanctipetri*, gillrakers 6-7+1+15 = 22-26 (whereas 6-7+1+15 = 22-23). My specimens have total rakers 24-26.

By kindness of Dr. W. Klausewitz I have examined the 206 mm type of *C. tolooparah* Rüppell, 1828, SMF 386, and find D2 I 20. A II+I 18. P 1, 17. Gillrakers 7+18 = 25 total.

The dark spots on the side have faded, but the black blotch on the dorsal lobe remains.

By kindness of Dr M. L. Bauchot I have examined the type of *Chorinemus sanctipetri* Cuvier in C. & V., 1831, i.e. No. 5893. It is 540 mm total, 490 mm fork length from Malabar (Plate 40,B). This has hastate scales, D2 I 20. A II+I 18. P 1, 17, and has (3)4+18 = 25 total gillrakers.

Some authors, including Weber and de Beaufort (1931: 276) maintain *C. sanctipetri* Cuvier in C. & V., as distinct from *C. tolooparah* Rüppell. This is based chiefly on the relative slenderness of the body in the two species.

There does seem to be rather wide variation in that feature in this species, but as with most carangid fishes there is a tendency to elongation with age. I have four specimens 180-285 mm taken at Durban and these show variation of body depth 3.5-4 in fork length.

In Table 1 are given relevant data of nine specimens, 180-750 mm. The 206 mm type of *C. tolooparah* (Plate 41,A) does at first sight appear to have a deeper body than most others, but as the data show this is not borne out by measurements. The scales on this type appear to be very slightly wider than those on others, but this is not significant. In all other features I find all the specimens listed in Table I identical. Hence Rüppell's name should be used for this widespread species, as is done here.

TABLE I

Chorinemus tolooparah (Rüppell)

			Type <i>tolooparah</i>					Type <i>sanctipetri</i> C & V	
Locality	Durban	Durban	Red Sea	Durban	Durban	Aldabra	Seychelles	India	Seychelles
Total length mm ..	180	188	206	220	285	305	305	540	750
Depth in fork length	3.5	4	3.6	3.9	3.6	4.1	4.1	4.3	4.5
Head in fork length	4.7	5	5.2	4.9	5.2	5	5.2	5.1	5.2
Head in depth	1.35	1.25	1.3	1.25	1.3	1.2	1.25	1.2	1.15
Eye in head	4.2	4.2	4.4	4.4	4.4	5	4.6	5.6	6
Gillrakers	8+18	7+18	7+18	7+18	7+18	7+17	8+17	6+18	—



PLATE 42

A. *Chorinemus tolooparah*
T.L. 750 mm from Mahé
Seychelles

B. *Chorinemus lysan* (Fors-
skal) T.L. 520 mm No:
167-6-29 Port Elizabeth.

Chorinemus lysan (Forsskål, 1775).

(PLATES 42, B & 43)

Scomber lysan Forsskål 1775: 54 (Red Sea). Klausewitz and Nielsen 1965: 22, Pl. 25 (Forsskål's type, Red Sea).

Lichia lysan, Rüppell, 1828: 91 (Red Sea).

Chorinemus lysan, Cuvier in Cuvier and Valenciennes 1831: 387 (284) (Red Sea). Rüppell 1835: 44 (Red Sea); Klunzinger 1871: 448 (Red Sea); and, 1884: 105 (Red Sea). Pellegrin 1914: 229 (Madagascar). Barnard 1927: 563 (Natal, Mozambique). Weber and de Beaufort 1931: 279, fig. 56b (S. and E. Africa to Pacific). Smith 1949(-65): 224 (S. & E. Africa). Angot 1950: 186 (Madagascar). Williams 1956: 32 (E. Africa). Fourmanoir 1957: 217, Pl. 13, C (Madagascar). Williams 1958: 416, Pl. 14, fig. 21 (E. Africa). Fourmanoir and Guézé 1962: 14 (Réunion). Kiener 1963: 117 photo (Madagascar); and, 1965 Pl. 19, fig. 28 (Madagascar).

Scomberoides commersonianus Lacépède 1802: 50 fig'd in 1800: Pl. 20, fig. 3 (Madagascar). Bleeker and Pollen 1875: 98 (N. D. Madagascar).

Chorinemus commersonianus, Cuvier in Cuvier and Valenciennes 1831: 370 (272) (Madagascar, Red Sea).

Scomber madagascariensis Shaw 1803: 590, Pl. 85 (Madagascar).

D2 I 20-21. A II+I 18. P 1, 19. Gillrakers 2-3+11(0-1) = 14-15 total. Head becomes lizard-like with age, the snout blunt. Depth 3.2-3.5, head 4.8-5 in fork length. Eye 3.8-5.3 in head, 1-1.5 in interorbital, about equals snout and 1.5-3 in postorbital, all with age.

Mouth large, maxilla to beyond eye. Fine teeth in bands in each jaw, in a rhomboid patch on vomer, an ovoid patch on palatines, on pterygoids and tongue, diminish with age. In the front of the lower jaw with age are larger wide-set bluntly conical antrorse teeth, uniserial more slender teeth within. Outer teeth in upper jaw enlarged. Scales broadly lanceolate.

In life silvery, with 5-8 large plumbeous blotches above and touching the lateral line, sometimes faint. Fins pale yellow to dusky. Described from three specimens, 130, 300 and 490 mm total length. Attains over 1000 mm. From Algoa Bay northwards over whole Indian Ocean and to the central tropical Pacific. A fine game and table fish.

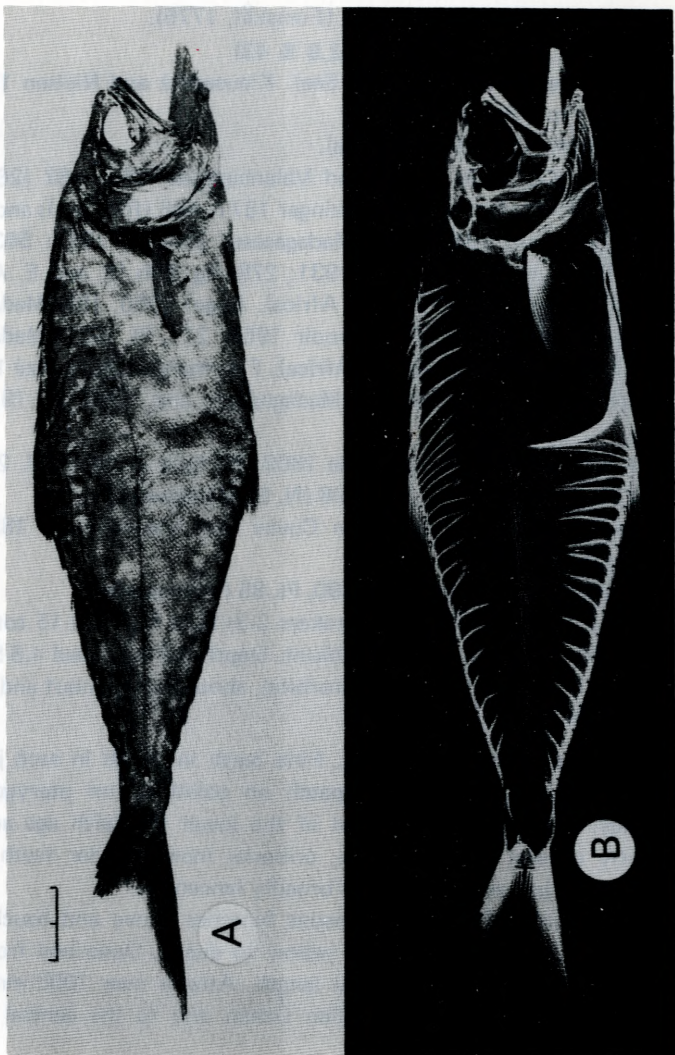


PLATE 43

Scomber lysan Forsskal Type No. 69 S.L. 216 mm Djidda (after
Klausewitz and Nielsen)

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