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ANK HAMILTON TALBOT AND MARY-LOUISE PENRITH

CTENOGOBIUS CLOATUS SMITH, 1960
A SYNONYM OF *CTENOGOBIUS SALDANHA*
(BARNARD, 1927)

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CTENOGOBIUS CLOATUS SMITH, 1960, A SYNONYM OF CTENOGOBIUS SALDANHA (BARNARD, 1927)

By

FRANK HAMILTON TALBOT and MARY-LOUISE PENRITH

South African Museum, Cape Town

(With 2 figures in the text and 1 plate)

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INTRODUCTION

New material in the South African Museum fish collections from Port Elizabeth, False Bay, and Saldanha Bay, has shown clearly that *Ctenogobius cloatus* Smith, described from Knysna, and *Ctenogobius saldanha* (Barnard), described from Saldanha Bay, are synonymous.

The material examined is as follows:

- S.A.M. 23277: 1 specimen, 79 mm., tidal swimming pool, St. James, False Bay;
S.A.M. 21488: 1 specimen, 33 mm., shallow water, Langebaan, Saldanha Bay;
S.A.M. 21489: 1 specimen, 30 mm., shallow water, Langebaan, Saldanha Bay;
S.A.M. 21490: 2 specimens, 34-37 mm., shallow water, Langebaan, Saldanha Bay;
S.A.M. 22034: 1 specimen, 40 mm., inter-tidal pool, Sea Point, Table Bay;
S.A.M. 17355: 1 specimen, 85 mm., Saldanha Bay (type of *saldanha* Barnard);
S.A.M. 23832: 6 specimens, 28-34 mm., dredged in 7 m. water, Saldanha Bay;
S.A.M. 23831: 4 specimens, 51-61 mm., inter-tidal pools, Port Elizabeth;
S.A.M. 24047: 4 specimens, 46.5-54 mm., tidal swimming pool, Port Elizabeth;
S.A.M. 24048: 3 specimens, 45.5-50 mm., inter-tidal pools, Port Elizabeth;
S.A.M. 23979: 3 specimens, 53-79 mm., inter-tidal pool, Strandfontein, False Bay;
S.A.M. 24049: 2 specimens, 67 mm., 70 mm., inter-tidal pool, Strandfontein, False Bay;
Rhodes Univ.: 1 specimen, 85 mm., lagoon, Knysna (type of *cloatus* Smith).

Ctenogobius saldanha (Barnard)
(pl. IV, figs. 1, 2)

Gobius saldanha Barnard, 1927, p. 823.

Bathygobius saldanha (Barnard), Smith, 1949, p. 331.

Monishia saldanha (Barnard), Smith, 1960, p. 304.

Ctenogobius cloatus Smith, 1960, p. 302.

Fin counts: D. VI + I 10-11; A. I 9-10; P. 19-23; C. 15 (branched rays only). Gill-rakers: 6-7 on lower arch, total 9. Scales 34-38, transverse 11. Depth 4.9-6.8. Head 3.0-3.6 in standard length. Teeth in jaw in several series; outer row markedly enlarged, inner rows viliform, no canines. Tongue truncate or feebly bilobed. Pectoral girdle without flaps, but with a low, indented ridge on the anterior border. Pectoral fin with upper 3-4 rays free, silk-like, markedly bifurcating (fig. 1). Pelvic fraenum (i.e. membrane connecting outer rays across base) strong and well developed (fig. 1). Eye 2.9-3.7 in head. Bony interorbital narrow, less than 5 in eye diameter, eyes adjacent. Pores and papillae of head shown in fig. 2.

Ground colour whitish, with three very broad, irregular, faintly dusky cross-bars on body. Sides irregularly spotted with black. Underparts white. Nape dusky with a lighter transverse bar. Head whitish grey. A few small dark

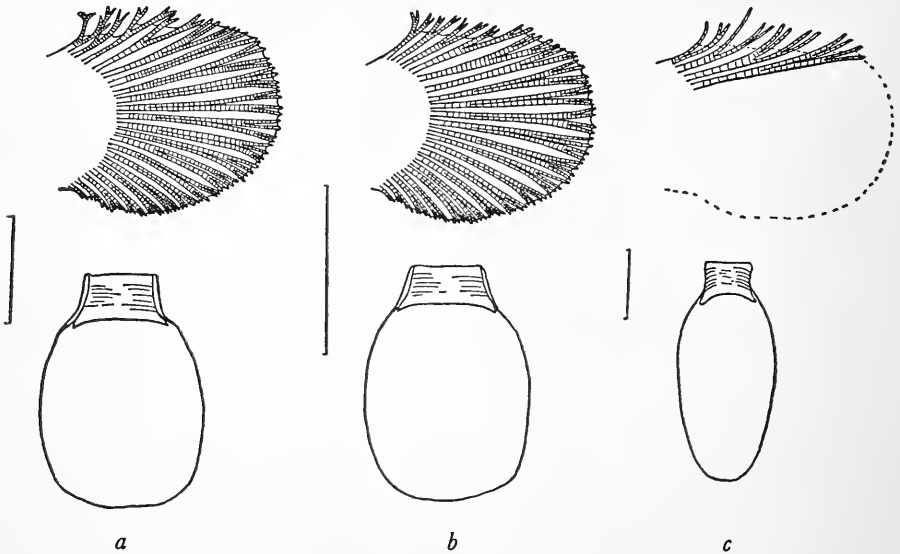


FIGURE 1.

Pectoral fin and pelvic fraenum of *Ctenogobius saldanha* (Barnard) from (a) Port Elizabeth; standard length 45.5 mm., (b) Saldanha Bay; standard length 35 mm., and (c) Knysna (type of *cloatus* Smith); standard length 85 mm. The fin is more contracted in (c) than in (a) and (b).

spots on preopercle, and usually four in a straight line along hind margin of opercle. Pectoral base dusky with several dark spots. Dorsal fins dusky with rows of black dots forming bands. A large black spot on the membrane between the fourth and fifth and the fifth and sixth dorsal spines. Pectoral, pelvic, anal and caudal fins dusky.

Head, nape, preopercle, and opercle naked; pectoral base, prepelvic, and belly with cycloid scales.

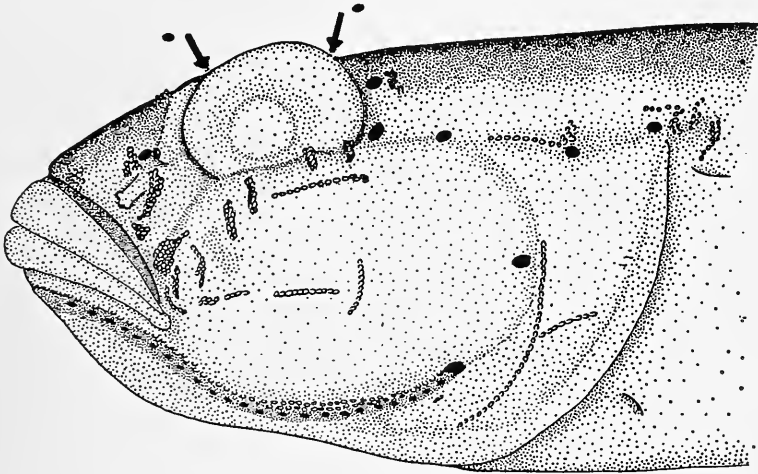


FIGURE 2.

Diagram of pores and papillae on head of *Ctenogobius saldanha* (Barnard).

DISCUSSION

A re-examination of the type of *saldanha* shows certain errors in the original description. The outer row of teeth in each jaw is clearly enlarged (not villiform throughout); there are 11 series of scales between the first anal spine and the dorsal fin base, not 10 as stated in Barnard's description; and the bases of the pectorals are scaled.

Smith's description of *cloatus* indicates the following differences from *saldanha*: strong development of the pelvic fraenum, absence of free upper pectoral rays in his specimens, enlargement of the outer row of teeth, number of transverse scale rows, shape of the tongue, and distribution.

The pelvic fraenum of *saldanha* shows no differences from that of the type of *cloatus* (fig. 1). In both cases the fraenum is well developed.

Smith's type has ragged fins with many rays broken off, and the fin membranes are damaged. Nevertheless, this specimen has the upper pectoral

rays very similar to those of *saldanha* (fig. 1) (both the type of *saldanha* and fresh specimens from the type locality). In addition, South African Museum specimens from Port Elizabeth have the upper rays similar to those of the type of *saldanha*.

The apparent differences in teeth and in number of transverse scale rows fall away after re-examination of the type of *saldanha*.

The tongue in both *cloatus* and in specimens of *saldanha* from the type locality is truncate or feebly bilobed. It is not adnate, and Barnard (1927) seems to have been correct in his suggestion that the apparently adnate tongue of the type was due to the fact that the specimen was preserved with the mouth unusually widely opened. Dehydration may also have played a part in this, and in the shrinkage of the tongue, which has obscured its shape.

Böhlke & Robins (1960) have shown that the pore system of the head is important in the classification of gobies. This was found to be identical in all specimens examined, including Smith's type specimen of *Ctenogobius cloatus* (fig. 2).

As has been found in another intertidal group of fishes, the Clinidae, and in gobies such as *Psammogobius knysnaensis* Smith and *Coryphopterus nudiceps* (C. & V.), distribution around the Cape from at least as far west as Saldanha Bay to Algoa Bay or farther occurs commonly.

We can find no difference between east and west coast specimens, and conclude that *cloatus* and *saldanha* are synonymous.

The well-developed fraenum, presence of prepelvic scales, naked head and nape, scale and fin counts, narrow bony interorbital, enlarged outer teeth, tongue shape, and restricted gill openings, place this species within the genus *Ctenogobius* Gill, 1858, as defined by Koumans (1953).

ACKNOWLEDGEMENTS

Acknowledgement is made to Professor J. L. B. Smith of the Department of Ichthyology, Rhodes University, Grahamstown, for the loan of the type specimen of *cloatus*, and to Miss R. M. Tietz, of the Port Elizabeth Museum, and Mr. M. J. Penrith of the South African Museum, who assisted in the collection of fresh material.

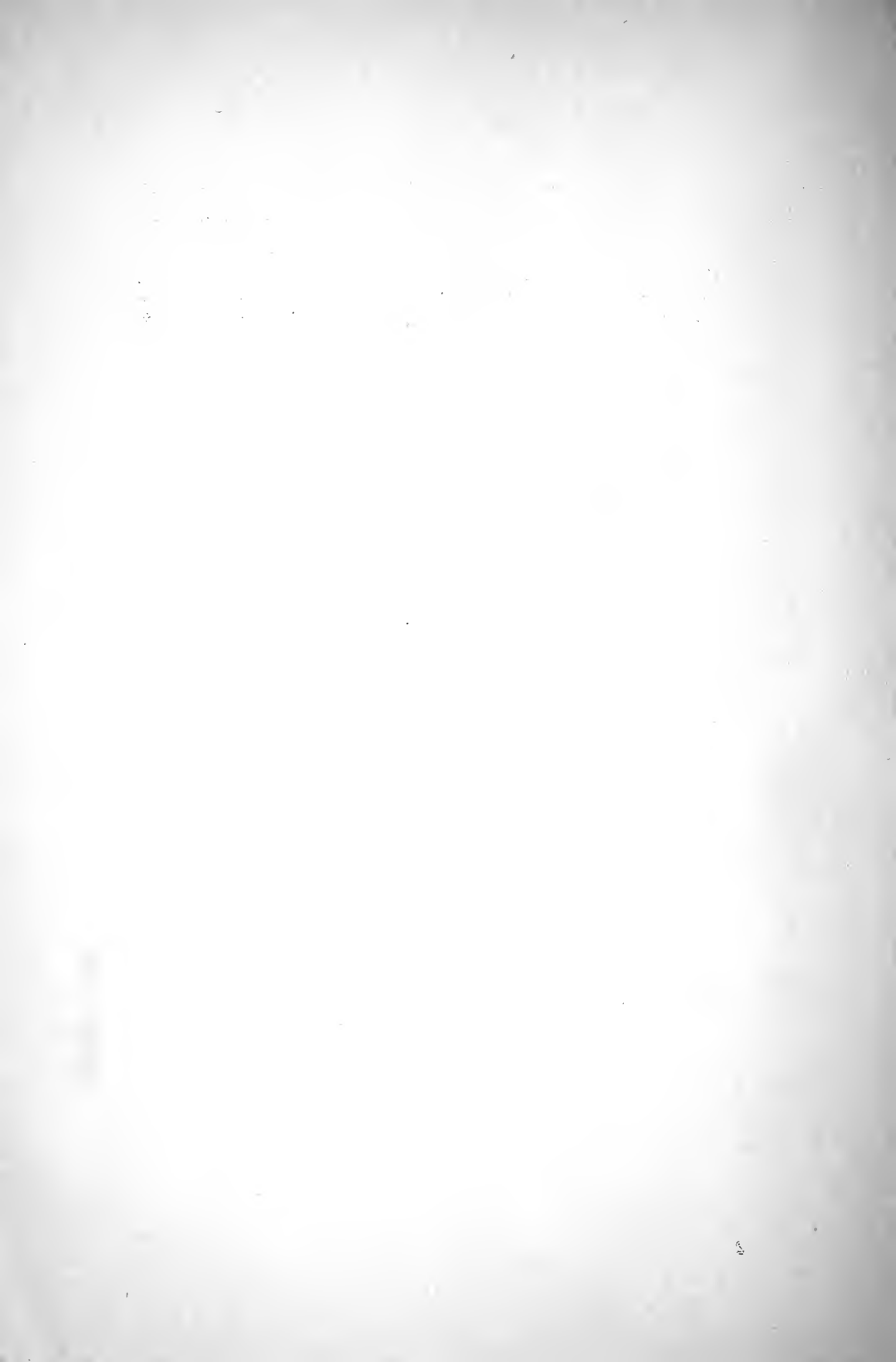
The Trustees of the South African Museum are grateful to the Council for Scientific and Industrial Research for the award of a grant to publish this paper.

SUMMARY

It is shown that *Ctenogobius cloatus* Smith is synonymous with *Ctenogobius saldanha* (Barnard) (Pisces: Gobiidae). *Ctenogobius saldanha* is redescribed.

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- SMITH, J. L. B. 1960. Fishes of the family Gobiidae in South Africa. *Ichthyol. Bull.* **18**: 299-314.





Ctenogobius seldanha (Barnard).

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MANUSCRIPTS

In duplicate (one set of illustrations), type-written, double spaced with good margins, including TABLE OF CONTENTS and SUMMARY. Position of text-figures and tables must be indicated.

ILLUSTRATIONS

So proportioned that when reduced they will occupy not more than $4\frac{3}{4}$ in. \times 7 in. ($7\frac{1}{2}$ in. including the caption). A scale (metric) must appear with all photographs.

REFERENCES

Authors' names and dates of publication given in text; full references at end of paper in alphabetical order of authors' names (Harvard system). References at end of paper must be given in this order:

Name of author, in capitals, followed by initials; names of joint authors connected by &, not 'and'. Year of publication; several papers by the same author in one year designated by suffixes a, b, etc. Full title of paper; initial capital letters only for first word and for proper names (except in German). Title of journal, abbreviated according to *World list of scientific periodicals* and underlined (italics). Series number, if any, in parenthesis, e.g. (3), (n.s.), (B.). Volume number in arabic numerals (without prefix 'vol. '), with wavy underlining (bold type). Part number, only if separate parts of one volume are independently numbered. Page numbers first and last, preceded by a colon (without prefix 'p'). Thus:

SMITH, A. B. 1956. New *Plonia* species from South Africa. *Ann. Mag. nat. Hist.* (12) **9**: 937-945.

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SMITH, C. D. 1954. South African *Plonias*. In Brown, X. Y. *Marine faunas*. 2nd ed. **3**: 63-95. London: Green.

SYNONYMY

Arranged according to chronology of names. Published scientific names by which a species has been previously designated (subsequent to 1758) are listed in chronological order, with abbreviated bibliographic references to descriptions or citations following in chronological order after each name. Full references must be given at the end of the paper. Articles and recommendations of the *International code of zoological nomenclature adopted by the XV International congress of zoology, London, July 1958*, are to be observed (particularly articles 22 and 51).

Examples: *Plonia capensis* Smith, 1954: 86, pl. 27, fig. 3. Green, 1955: 23, fig. 2.

When transferred to another genus:

Euplonia capensis (Smith) Brown, 1955: 259.

When misidentified as another species:

Plonia natalensis (non West), Jones, 1956: 18.

When another species has been called by the same name:

[non] *Plonia capensis*: Jones, 1957: 27 (= *natalensis* West).

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