

NEW AND RARE OPHIDIIFORM FISHES FROM THE EASTERN ATLANTIC: CANARY ISLANDS TO THE CAPE OF GOOD HOPE

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Abstract.—Ten species of ophidiiform fishes were trawled from the upper continental slopes between the Canary Islands and the Cape of Good Hope in the eastern Atlantic:—Family Ophidiidae: *Brotulotaenia crassa*, off S. Africa; *Bassogigas* sp., possibly *gillii*, Agulhas, first record outside of western N. Atlantic; *Luciobrotula nolfi*, n. sp., 22°N–2°S, large specimens with distinctive pale head; *Monomitopus metriostoma*, 22°N and 10°N; *Spectrunculus grandis*, 27°S. Family Bythitidae: *Cataetyx bruuni*, 11°S, third record; *Cataetyx chthamalorhynchus*, n. sp., 33°S, distinctive high counts, dorsal 140, anal 100, vertebrae 77; *Cataetyx laticeps*, Canary Islands to Cape of Good Hope, senior synonym of *C. memoriabilis*; *Cataetyx niki*, n. sp., 35°S, Agulhas, low counts, dorsal 91, 95, vertebrae 54, 56, head large 3.2, 3.1 in standard length, body short, depth at vent 5.1, 5.6 in standard length; *Diplacanthopoma* sp., 26°N, possibly undescribed.

Introduction

This paper on ophidiiform fishes is based mostly on collections made by Soviet vessels trawling along the upper continental slope in the eastern Atlantic between the Canary Islands and the vicinity of the Cape of Good Hope. Relevant material from other sources also has been used. Although relatively few in number, the specimens reported upon are important as they include 10 species, three or more of which are undescribed, document the synonymy of two nominal species, and extend the known ranges of others. Classification, methods, and definitions follow Cohen and Nielsen (1978).

Family Ophidiidae

Brotulotaenia crassa Parr

Off South Africa, "Fiolent" trawl 31. 3 March 1974.

IOM uncat., 1 specimen, standard length 385 mm. Dorsal fin rays 125; anal fin rays 99; total vertebrae 92; head length 7 in standard length; body depth at vent 17.4 in standard length; preanal 3.5 in standard length; color of body light blue-gray, fins darker, muzzle dusky.

This specimen may be identified as *B. crassa* by comparing the data given

above with the diagnostic table presented by Cohen (1974a, Table 2) and the key given by Shcherbachev (1980).

Although the locality for this specimen is imprecise, the fish may be considered as coming from within the known range of the species as given by Shcherbachev (1980).

Bassogigas sp.

Agulhas, "Fiolet." 1973.

IOM uncat., 1 specimen, standard length 810 mm. Dorsal fin rays 106; anal fin rays 84; pectoral fin rays 28; caudal fin rays 8; ventral fins with 2 rays in each; developed gill rakers $2 + 1 + 6 = 9$; vertebrae $15 + 46 = 61$.

Body depth at vent 6.2 in standard length. Head length 4.6 in standard length; dorsal profile rising rather abruptly from the interorbital to a hump on the nape. Eye small, 12.5 in head length. Anterior nostril a simple pore with no raised rim. Maxillary vertically expanded and free posteriorly, its depth approximately equal to the snout length. Opercular spine strong, short, sharp-pointed. Preopercle with a free posterior margin, lacking spines. Teeth granular; vomerine tooth patch V-shaped; median basibranchial tooth patches 2. Pectoral fin falling far short of vent, rounded, none of the rays modified. Lateral line single, distinct, originating near the upper angle of the gill opening and extending posteriorly dorsad to the midline of the body, not evident on the posterior one-fourth of the body. Color brown, darker on the head and fins.

Bassogigas has been restricted by Nielsen (1980) to a single species *B. gillii*, heretofore captured only in the tropical and temperate western North Atlantic. The present specimen represents a considerable extension of known range for the genus. The specific identity of this specimen, whether *B. gillii* or an undescribed species, will be reported on by J. G. Nielsen.

Luciobrotula nolfi, new species

Figs. 1, 2 (4a, 4b, 5)

Luciobrotula bartschi (not of Smith and Radcliffe in Radcliffe 1913), Nielsen and Nybelin, 1963:201, figs. 6–7.

Luciobrotula corethromycter (not of Cohen, 1964); Cohen, 1974b:109, footnote.

Luciobrotula sp., Nolf, 1980:88, pl. 11, figs. 12–13.

Holotype.—ZIL 45772; 22°10'N, 17°20'W, 860–810 m; "Zvezda Kryma" stat. 157.

Paratypes.—ZMMU P-16002; 09°04'N, 17°36.8'W, 950–980 m; "Poltava" stat. 71. IRSNB 506; 06°00'N, 04°15'E, 400 m; "Thierry," Guinean Trawling Survey II, 24 March 1964. USNM 198606; 02°30.9'N, 08°52'E, 549 m; "Ger-

Table 1.—Diagnostic characters in species of *Luciobrotula*.

Character	Species			
	<i>L. nolfi</i>	<i>L. corethromycter</i>	<i>L. bartschi</i>	<i>L. lineata</i>
Color	Large specimens with body and fins dark; head pale	Body usually pale, lighter than fins; head variable	As in <i>corethromycter</i>	—
Body shape (Fig. 3)	Relatively short in larger fish	Relatively long in larger fish	Intermediate	Relatively short
No. of abdominal centra (Table 3)	16	15–16	14–15	15
Termination of tubular lateral line	Near level of anal fin origin	As in <i>nolfi</i>	As in <i>nolfi</i>	Near level of dorsal fin origin
Otolith (Fig. 2)	No concavity in dorsal rim	Large specimens with pronounced concavity in dorsal rim	As in <i>nolfi</i>	—

onimo" stat. 214, 5 Sept. 1963. ZMUC P77390, P77391, 02°09'N, 09°27'E, 260–650 m; "Atlantide" stat. 120.

Diagnosis and comparisons.—Diagnostic characters are summarized in Table 1. Among the four named species of *Luciobrotula*, *L. lineata*, known only from the holotype, is highly distinctive due to its short lateral line. *Luciobrotula bartschi*, *corethromycter*, and *nolfi* are quite similar to each other, in particular at sizes less than about 200 mm. In larger fishes, however, the unique color pattern and relatively shorter body of *nolfi* distinguish it from *corethromycter* and *bartschi*. When *L. corethromycter* was originally described, it was separated from *bartschi* on the basis of counts and measurements. Most of the original diagnostic characters have been invalidated by the study of additional material of *corethromycter*. Because of allometric growth a proper evaluation of morphometric characters in separating the two nominal species must await the availability of additional material of larger examples of *bartschi*. For the present, however, evidence from otoliths (Fig. 2) provides sufficient reason to recognize the two species as distinct.

Description.—Measurements are presented in Table 2 and counts in Tables 2 and 3.

Body relatively short, becoming more so with increase in absolute size (Fig. 3), depth at vent 4.7 to 7.6 in standard length. Tail not greatly extended

Table 2.—Measurements in mm and counts for *Luciobrotula nolfi*.

Characters	Holotype		Paratypes			
	ZIL 45772	ZMMU P-16002	IRSNB 506	USNM 198606	ZMUC P77391	ZMUC P77390
Standard length	355	590	400	255	164	137
Preal length	202	312	230	138	78.5	66.2
Predorsal length	117	182	142	77.9	47.1	39.7
Head length	94.5	150	111	65.2	41.1	33.2
Body depth at vent	60.0	108	84.5	41.0	24.4	18.1
Snout length	23.5	37.5	30.3	17.0	9.7	7.5
Upper jaw length	47.2	79.8	59.1	33.4	20.4	16.9
Maxillary depth	15.0	29.5	19.1	10.8	6.6	5.7
Pectoral fin length	42.0	66.2	48.6	31.3	18.3	16.3
Ventral fin length	32.8	47.0	37.9	24.2	16.7	15.4
Horizontal diameter eye	9.5	13.3	11.1	7.1	4.7	4.6
Interorbital width	15.9	28.4	24.3	11.6	7.0	6.0
Dorsal fin rays	91	93	89	86	95	93
Anal fin rays	69	66	67	70	68	66
Pectoral fin rays	27	27	27	28	28	28
Vertebrae	16 + 37 = 53	16 + 38 = 54	16 + 37 = 53	16 + 38 = 54	16 + 37 = 53	16 + 38 = 54
Lateral scale rows	140	145	135	145	135	130

or whiplike. Head 3.6 to 4.1 in standard length, somewhat compressed posteriorly, depressed anteriorly. Dorsal fin originating behind nape, over mid-length to posterior half of pectoral fin. Proximal three-fourths or more of vertical fins covered with thick, scale-covered skin. Caudal fin exerted, with 12 rays. Pectoral fin short, 2.0–2.3 in head length, broadly rounded and paddle-shaped with a fleshy, scale-covered, lobed base. Ventral fins immediately adjacent, each with two rays, the medial longer, which are joined proximally.

Body completely covered with small, cycloid scales arranged in regular rows. Head mostly covered with small scales; premaxillary sheath and snout naked.

Lateral line single, a tube extending along side of body about midway between the dorsal profile and midline, originating near angle of opercle and terminating close to level of vent. Pores present either directly on the lateral line or at the ends of short branches above or below the line as in *L. corethromycter* (Cohen, 1964, fig. 3). On head, lateral canal with a single pore mounted on a small papilla above the upper angle of the gill opening; supraorbital canal with three pores, one above the upper lip between two fleshy folds, two on the snout; infraorbital pores five to seven; preoperculo-mandibular pores seven or eight.

Snout depressed, mostly naked, the tip bearing a tuft of fleshy lappets,

Table 3.—Counts in species of *Luciobrotula*.

	Dorsal fin rays																	
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
<i>nolfi</i>	1	—	—	1	—	1	—	2	—	1								
<i>corethromycter</i>						1	3	2	3	4	4	2	—	2	—	—	—	1
<i>bartschi</i>		1	1	—	—	2												
<i>lineata</i>								1										
	Anal fin rays											Pectoral fin rays						
	66	67	68	69	70	71	72	73	74	75	76	77	25	26	27	28	29	
<i>nolfi</i>	2	1	—	1	2											3	3	
<i>corethromycter</i>		1	3	—	2	7	5	2	1	—	—	1				1	7	
<i>bartschi</i>			1	—	2	—	2	—	1					1	1	—	3	
<i>lineata</i>												1					1	
	Total vertebrae					Abdominal vertebrae												
	52	53	54	55	56	14	15	16										
<i>nolfi</i>			3	3												6		
<i>corethromycter</i>			1	1	14	6							11	10				
<i>bartschi</i>		3	1	1	1	1						2	4					
<i>lineata</i>					1								1					

which are similar to those of *L. corethromycter* (Cohen, 1964, fig. 2). Opercular spine, near upper angle of opercle, broad, flattened and skin-covered, scarcely evident.

Eye elliptical, proportionally larger in small specimens, 7.2 to 11.3 times in head, 1.3 to 2.2 in interorbital. Interorbital distance 4.6 to 5.9 times in head length.

Posterior nostril a circular opening located at about mid-length on snout. Anterior nostril with a raised, fleshy rim, slightly closer to tip of snout than to posterior nostril.

Jaws large, extending one eye diameter or more beyond rear margin of eye. The suborbital sheaths the shaft of the maxillary; however, the broadly expanded posterior part of the bone is free. Branchiostegal rays eight and developed gill rakers three in all specimens. Wide bands of teeth present on the dentaries, premaxillaries and palatines; vomerine tooth patch with widely flaring wings. In the four smallest specimens all teeth are granular; in the two larger ones, however, irregular series of larger, sharp-pointed conical to needle-like teeth are present along the outer margins of the premaxillary and palatine, the center of the dentary, and on the vomer. There is a single median and two paired basibranchial tooth patches. There is also a tooth patch at the base of each fifth gill arch (incorrectly called a paired basibranchial tooth patch by Cohen 1964).

The saccular otolith is characterized by a large and high area of the inner

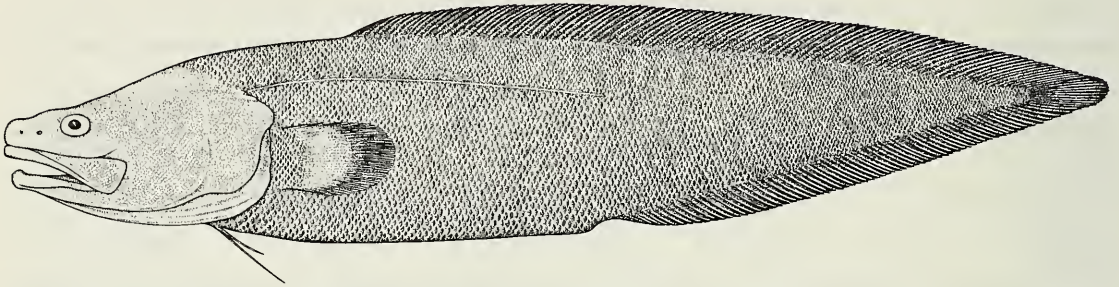


Fig. 1. *Luciobrotula nolfi*, holotype, ZIL 45772, standard length 355 mm. Drawn by Keiko Hiratsuka Moore.

face between the sulcus and the dorsal rim (Nolf, personal communication; Fig. 2, 4b).

Color in the two largest specimens is highly distinctive with the body and vertical fins dark brown and the head and pectoral fins nearly lacking in pigment. The third largest fish (the holotype) has the body and all fins dark and the head, although paler than the body, with considerable amounts of pigment. The fourth largest specimen has dark fins and both the body and head a medium brown. In the two smallest specimens the fins are dark and the body and head are light brown. This species appears to be characterized, therefore, by an ontogenetic change in color pattern with the body becoming darker and the head lighter as size increases.

Luciobrotula nolfi has been caught in the tropical eastern Atlantic from 22°10'N to 02°30'S at depths ranging from 260–650 m to 950–980 m.

This species is named for Dr. Dirk Nolf, who first called my attention to the fact that *Luciobrotula* from the eastern and western Atlantic are different and who graciously provided the information on otoliths included in the present paper.

Monomitopus metriostoma (Vaillant)

IOM uncat., 3 specimens; 22°50'N, 17°20'W; 1440–1520 m; “Zvezda Kryma” stat. 256. IOM uncat., 5 specimens; 9°55'N, 17°33'W; 750–780 m; “Poltava” stat. 70.

Selected counts and measurements are presented in Table 4. The three specimens collected by “Zvezda Kryma” differ from the “Poltava” specimens and those studied by Nielsen and Nybelin (1963) in having more pectoral fin rays (34–38 versus 27–31), a smaller eye (5.3 in head length versus 3.8–4.5), and a deeper habitat (1440–1520 m versus 190–850 m).

Of the 13 nominal species presently referred to *Monomitopus* (Cohen and Nielsen 1978), a genus much in need of revision, only *M. metriostoma* has been recorded from the eastern Atlantic, where it is apparently widely distributed (Nielsen and Nybelin 1963). Until the differences noted above can

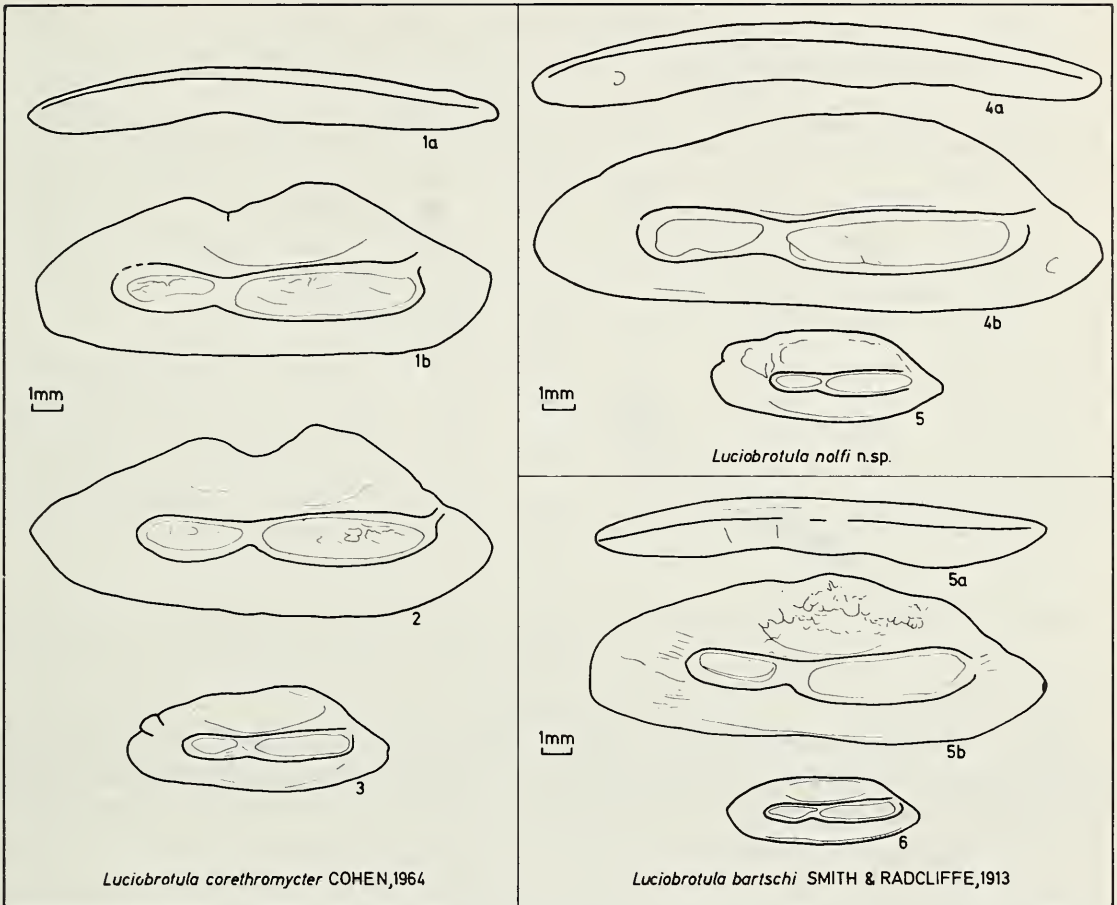


Fig. 2. Otoliths of three species of *Luciobrotula*. *L. corethromycter*: 1a) Ventral view, from a 47 cm total length (TL) fish; 1b) Left otolith, inner face, TL 47 cm; 2) Left, inner, TL 50 cm; 3) Left, inner, TL 23 cm. *L. nolfi*: 4a) Ventral view; 5b) Left, inner; 5) Left, inner, TL 14.8 cm. *L. bartschi*: 5a) Ventral view, TL 33 cm; 5b) Left, inner, TL 33 cm; 6) Left, inner, TL 17 cm. Drawing by Dirk Nolf, from Nolf (1980).

be more fully investigated it seems best to refer all of the present material to *M. metriostoma*.

Spectrunculus grandis (Günther)

26°42.5'S, 13°41.5'E, 800 m; "Poltava" stat. 489.

IOM uncat., 1 specimen, standard length 420 mm.

This specimen was included in a recent revision of the genus by Nielsen and Hureau (1980), who discussed variation, synonymy, and distribution.

Family Bythitidae

Genus *Cataetyx*

The present collection contains four species of this rarely encountered genus in which eight species were tentatively included by Cohen and Nielsen

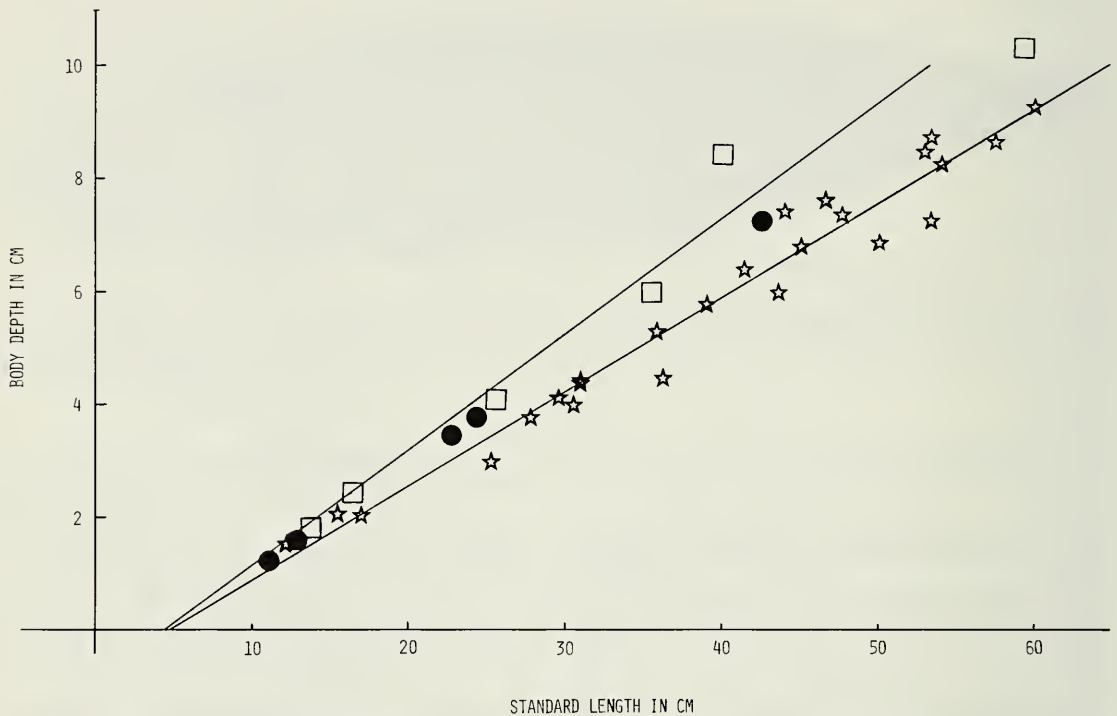


Fig. 3. Relationship between body depth at vent and standard length in three species of *Luciobrotula*. *L. nolfi*, squares; *L. corethromycter*, stars; *L. bartschi*, circles. Machine plotted least squares regressions shown for *L. nolfi* (upper line) and *L. corethromycter* (lower line).

(1978). In this paper two more are described as new, and one is placed in synonymy. Still other species remain to be described, variation analyzed, and interrelationships studied. These topics will be considered in a revision of the genus that is being prepared.

Cataetyx bruuni (Nielsen and Nybelin)

10°54'S, 13°23'E, 520 m; "Fiolent" trawl 79, 24 Feb. 1976.

IOM uncat., 2 specimens, a male 88 mm SL and a female 108 mm SL; additional data will be presented at a later date.

The present capture is the first record of the species since its original description (Nielsen and Nybelin 1963) and represents a third locality, which is geographically between the previous two.

Cataetyx chthamalorhynchus, new species

Figs. 4, 5

Holotype.—ZIL 45773, ♂, 33°04'S, 16°43'E, 1000 m, "Poltava" 425, 24 Jan. 1970.

Diagnosis.—A species of *Cataetyx* with granular teeth; dorsal fin rays about 140; anal fin rays 100; vertebrae 77; eyes directed dorsolaterally, 7.3

Table 4.—Counts and measurements in mm for *Monomitopus metriostoma*.

Characters	Specimens							
	"Zvezda Kryma" 256				"Poltava" 70			
Dorsal fin rays	102	104	104	102	102	—	100	—
Anal fin rays	85	88	88	85	—	85	—	—
Pectoral fin rays	34	38	35	29	—	29	—	—
Vertebrae	13 + 47 = 60	13 + 47 = 60	13 + 47 = 60	12 + 48 = 60	12 + 48 = 60	12 + 48 = 60	12 + 48 = 60	13 + ?
Standard length	205	201	206	147	138	135	120	110
Body depth at vent	39.3	33.9	36.5	25.4	21.9	19.3	18.5	15.9
Head length	47.2	43.0	44.1	33.5	32.0	29.4	27.0	23.2
Eye diameter, horizontal	9.0	8.1	8.3	8.3	7.1	7.8	6.8	5.4
Upper jaw length	22.5	20.5	23.8	17.6	15.7	16.0	14.3	12.9

in head; interorbital 6.8 in head; snout greatly depressed, with a sharp, retrorse spine behind the posterior nostril.

Description.—Measurements in mm: standard length 353; preanal length 183; predorsal length 130; head length 89.0; body depth at vent 44.3; snout length 29.6; upper jaw length 42.4; maxillary depth 11.9; pectoral fin length 37.2; pectoral fin base depth 14.6; ventral fin length 22.0; horizontal eye diameter 12.1; interorbital width 13.1. Dorsal fin rays about 140, precise number of rays not clear at posterior end of fin; anal fin rays 100; pectoral fin rays 28; branchiostegal rays 9; vertebrae 18 + 59 = 77; approximate number of lateral scale rows 205.

Body relatively slender, greatest depth between the head and dorsal fin origin, depth at vent 8 times in standard length. Head one-fourth of standard length, its dorsal outline sloping at about 30° to the orbital region, the snout rather flat; rear part of head about as broad as it is deep, snout strongly depressed. Predorsal distance about 37 percent of standard length. Vertical fins covered with loose, pigmented skin basally, the rays free distally. Caudal fin probably with 10 rays (perhaps slightly damaged). Pectoral fin 2.4 in head, covered with naked skin, not broad and paddle-shaped, borne on a fleshy scale-covered peduncle that is deeper than it is long. Ventral fins immediately adjacent to each other, each with a single ray, inserted more than an eye diameter behind the symphysis of the cleithra.

Body completely covered with small cycloid scales, mostly represented by scale pockets in this specimen. Head scales lacking from snout anterior to level of rear nostrils, sparsely distributed on rear part of snout; only a few scales on rear of lower jaw mandibles; present on branchial membranes between rays 6 and 8. No scales on expanded rear part of maxillary.

Lateral line not readily apparent (possibly due to abrasion), although traces of it can be seen in the midline of the tail. Lateral head canal with a

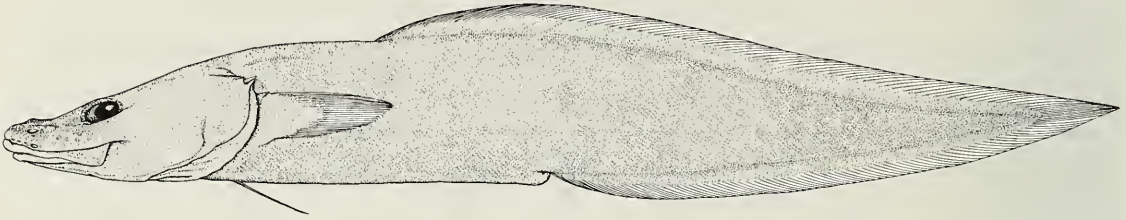


Fig. 4. *Cataetyx chthamalorhynchus*, holotype, ZIL 45773, standard length 353 mm. Drawn by Keiko Hiratsuka Moore.

single pore; skin naked over rear part of canal near pore. Supraorbital pore one, at tip of snout medial to anterior nostril. Infraorbital pores seven, in a row in the fold of skin over upper jaw. Preoperculo-mandibular canal with seven or eight pores, two at tip of lower jaw, three along lower jaw, and two or three in the preopercular fold. The snout bears rather prominent, pale-colored pit organs that contrast with the brown-pigmented skin around them and resemble scale pockets; the pit organs are interspersed with small brown papillae.

Snout strongly depressed, greatest width about equal to length. Lower jaw inferior. Posterior nostril a prominent pit located near mid-length of snout. Anterior nostril a short, thin-skinned tube at tip of snout. Eye elliptical, dorso-laterally directed, 7.4 in head, 1.1 in interorbital.

A strong, sharp-pointed spine projects near the upper angle of the opercle but does not extend beyond the opercular flap. A sharp, emergent, retrorse spine is present behind the posterior nostril. A sharp-pointed emergent spine is present on the cleithrum above the base of the pectoral peduncle.

The posterior end of maxillary falls slightly short of rear margin of eye. The suborbital sheaths the dorsal rim of the maxillary. Developed gill rakers three, interspersed with low spiny plates; two plates on the upper arm and 12 following the last gill raker. Wide bands of granular teeth on the dentaries and premaxillaries, narrow bands on the palatine and a broadly V-shaped patch on the head of the vomer.

Color probably a uniform brown, specimen rather abraded. Orobranchial cavity dusky.

Male intromittent organ on a short fleshy peduncle. Testes paired, scarcely developed. Lining of peritoneum black. Posterior bend of stomach extending beyond level of rear margin of pectoral fin.

The name is taken from the Greek *chthamalos*, low and *rhynchos*, snout and refers to the depressed snout of this species.

Discussion.—*Cataetyx chthamalorhynchus* may be easily distinguished from any named species of the genus by the diagnosis given above. A closely similar undescribed species has been recorded from New Zealand by McCann (1972) and incorrectly identified as *C. messieri* (Günther, 1878). I have examined McCann's specimen as well as additional material from New



Fig. 5. *Cataetyx chthamalarhynchus*, holotype, ZIL 45773, head length 89 mm. Photographs by Joseph L. Russo.

Zealand and will report on them and discuss their differences from *C. chthamalarhynchus* in a subsequent paper. For the present, however, it is appropriate to mention that McCann's counts of 162 dorsal fin rays and 138 anal fin rays are greatly in error. My own counts, taken from an X-ray photograph of his specimen (NZOI E773), are 137 and 102, respectively. The dorsal and anal fin rays are deeply branched, and it seems likely that McCann counted a number of branches as entire rays.

Cataetyx laticeps Koefoed

Cataetyx messieri (not of Günther, 1887); Gilchrist, 1905.

Cataetyx memoriabilis Meyer-Rochow, 1970.

Five specimens from five localities ranging from near the Canary Islands, which is close to the type-locality of *C. laticeps*, to off the Cape of Good Hope, which is close to the type-locality of *C. memoriabilis*. Locality data and counts and measurements are given in Table 5.

Of the eight species tentatively assigned to *Cataetyx* by Cohen and Nielsen (1978), several are distinctive, flat-snouted, brown fishes that grow quite large (reaching 765 mm SL). Included in this category are *C. simus* Garman, 1899, from the tropical eastern Pacific; *C. laticeps* Koefoed, 1927, from near the Canary Islands, and *C. memoriabilis* from off the Cape of Good Hope (incorrectly identified as *C. messieri* by Gilchrist, 1905, who was followed by several subsequent authors). Similar-appearing fishes have been caught in the Gulf of Mexico and tropical western Atlantic (unreported), the Mediterranean (recorded as *C. laticeps* by Geistdoerfer and Rannou, 1971, 1972, and Relini Orsi and Gavagnin, 1974), and southwest of Ireland (N. Merrett, personal communication). The problem of whether specimens from all of the above localities represent a single species or two or more species or subspecies is beyond the scope of the present paper and will be addressed in a revision of *Cataetyx*. However, I believe that the five specimens reported here, which were caught near two type-localities and at intermediate localities, are conspecific with each other and with the type specimens of *C. laticeps* and *C. memoriabilis*.

Cataetyx laticeps was named on the basis of a single, relatively small fish (standard length 260 mm); *C. memoriabilis* was described from three larger examples. I have examined one of the type specimens of *C. memoriabilis* (ZMH 4321, a 638 mm SL ♀, listed as the holotype on p. 39 of the original description but as a paratype on p. 43) and an X-ray photograph of the holotype of *C. laticeps*.

In the original description of *C. memoriabilis*, that species is distinguished from *laticeps* on the basis of two characters. *C. memoriabilis*: branchiostegal rays seven; anus beyond the midpoint of the body. *C. laticeps*: branchiostegal rays nine; anus at the midpoint of the body. I find eight branchiostegal rays in the type specimen of *C. memoriabilis* that I have examined and eight or nine in the five other specimens that I have examined (Table 5). With regard to position of the anus, this character is apparently related to absolute size, with smaller specimens having it more anteriorly placed on the body (Fig. 6).

Cataetyx niki, new species

Figs. 7, 8

Holotype.—ZIL 45774, ♀, 35°04'S, 24°20'E, 1000 m, "Fiolent," 17 Aug. 1973.

Paratype.—USNM 226788, ♂, Agulhas, 1100 m, "Fiolent," 1973.

Diagnosis.—A large, brown species of *Cataetyx* with granular teeth; dor-

Table 5.—Measurements and counts on five eastern Atlantic specimens of *Cataetys laticeps*.

	♀			♂			♀			♀		
	mm	%SL		mm	%SL		mm	%SL		mm	%SL	
Locality	27°36'N, 13°48'W 1450 m ZVEZDA KRYMA 313 IOM uncat.		22°30'N, 17°10'W 1200–1420 m ZVEZDA KRYMA 191 IOM uncat.	6°28'S, 11°08'E 1050 m FIOLENT 7.02.76 ZMMSU P-15053	33°36'S, 16°38'E 1200 m POLTAVA 430 USNM 226792		35°18'S, 18°29'E 1120–1200 m FIOLENT 28.03.74 ZMMSU P-15052					
Sex	♀		♂	♀	♀		♀		♀			♀
Standard length	496		655	425		404		664				
Preanal length	269	54.0	372	239	56.2	214	53.0	371	55.9			
Predorsal length	187	37.7	247	162	38.1	141	34.9	238	35.8			
Head length	126	25.4	169	117	27.5	105	26.0	161	24.2			
Body depth at vent	65.7	13.2	85.5	57.7	13.6	55.8	13.8	84.6	12.7			
Snout length	29.4	5.9	38.4	27.2	6.4	22.3	5.5	39.8	6.0			
Upper jaw length	48.4	11.8	79.5	55.4	13.0	46.6	11.5	75.7	11.4			
Maxillary depth	18.2	3.7	26.7	17.8	4.2	13.6	3.4	26.7	4.0			
Pectoral fin length	58.0	11.7	76.5	47.3	11.1	49.1	12.1	72.7	10.9			
Pectoral fin base depth	21.2	4.3	27.6	17.9	4.2	18.3	4.5	30.5	4.6			
Ventral fin length	38.0	7.7	58.2	39.0	9.2	31.2	7.7	34.9	5.3			
Horizontal diameter eye	17.7	3.6	21.5	15.7	3.7	13.8	3.4	18.0	2.7			
Interorbital width	21.2	4.3	27.5	18.4	4.3	16.6	4.1	24.1	3.6			
Dorsal fin rays	99		107	98		105		106				
Anal fin rays	75		83	—		77		78				
Pectoral fin rays	30		30	29		30		30				
Branchiostegal rays	9		8	8		8		8				
Vertebrae	16 + 44 = 60		16 + 45 = 61	17 + 43 = 60		16 + 45 = 61		16 + 44 = 60				
Lateral scale rows	about 160		—	about 170		about 190		about 190				
Lateral canal pores	1		1	1		1		1				
Supraorbital canal	1		1	1		1		1				
Infraorbital canal	6		6	6		6		6				
Preoperculo-mandibular canal	9		10	9		9		9				

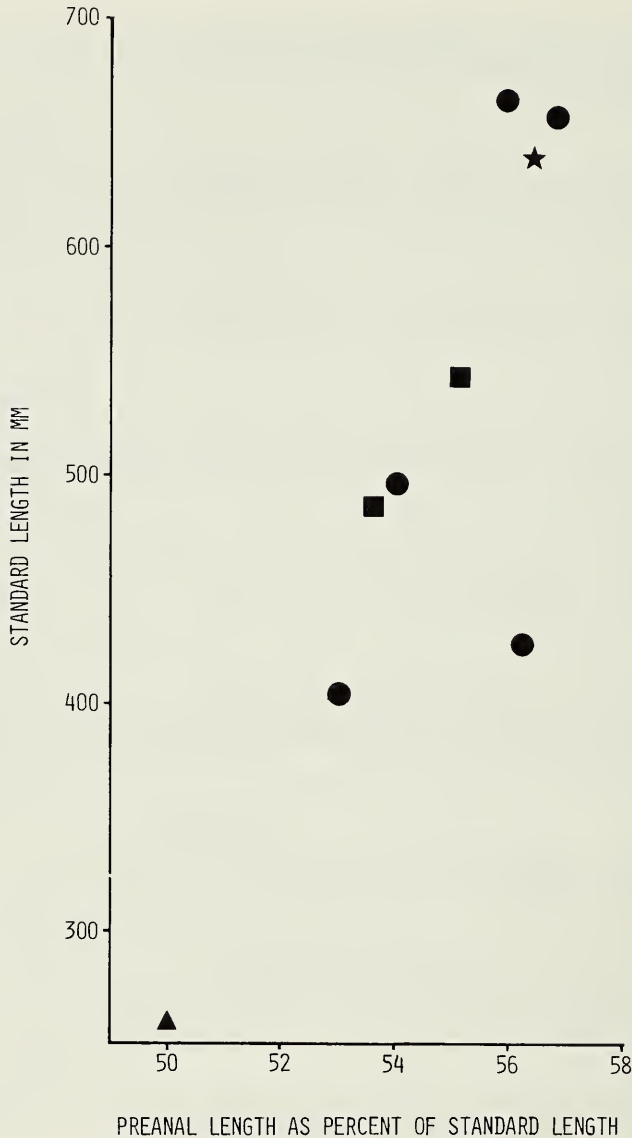


Fig. 6. Relationships of preanal length to standard length in eastern Atlantic *Cataetyx laticeps*. Triangle is holotype of *C. laticeps* (data from Koefoed 1927); squares are types of *C. memoriabilis* (data from Meyer-Rochow 1970); star is type of *C. memoriabilis* (my measurement); circles are specimens measured by me (Table 5). Drafted by Ruth Gibbons.

sal fin rays 91, 95; vertebrae 54, 56; interorbital 3.4, 3.6 times in head length; eyes directed more laterally than dorsally; head length 3.2, 3.1 in standard length; body depth at vent 5.1, 5.6.

Description.—Measurements in mm and counts are given for the holotype first followed by those of the paratype in parentheses. Standard length 640 (625), approximate as specimens are somewhat distorted; preanal length 450 (385), approximate; predorsal length 290 (275), approximate; head length 202 (200); body depth at vent 125 (111); snout length 51.0 (46.5); upper jaw

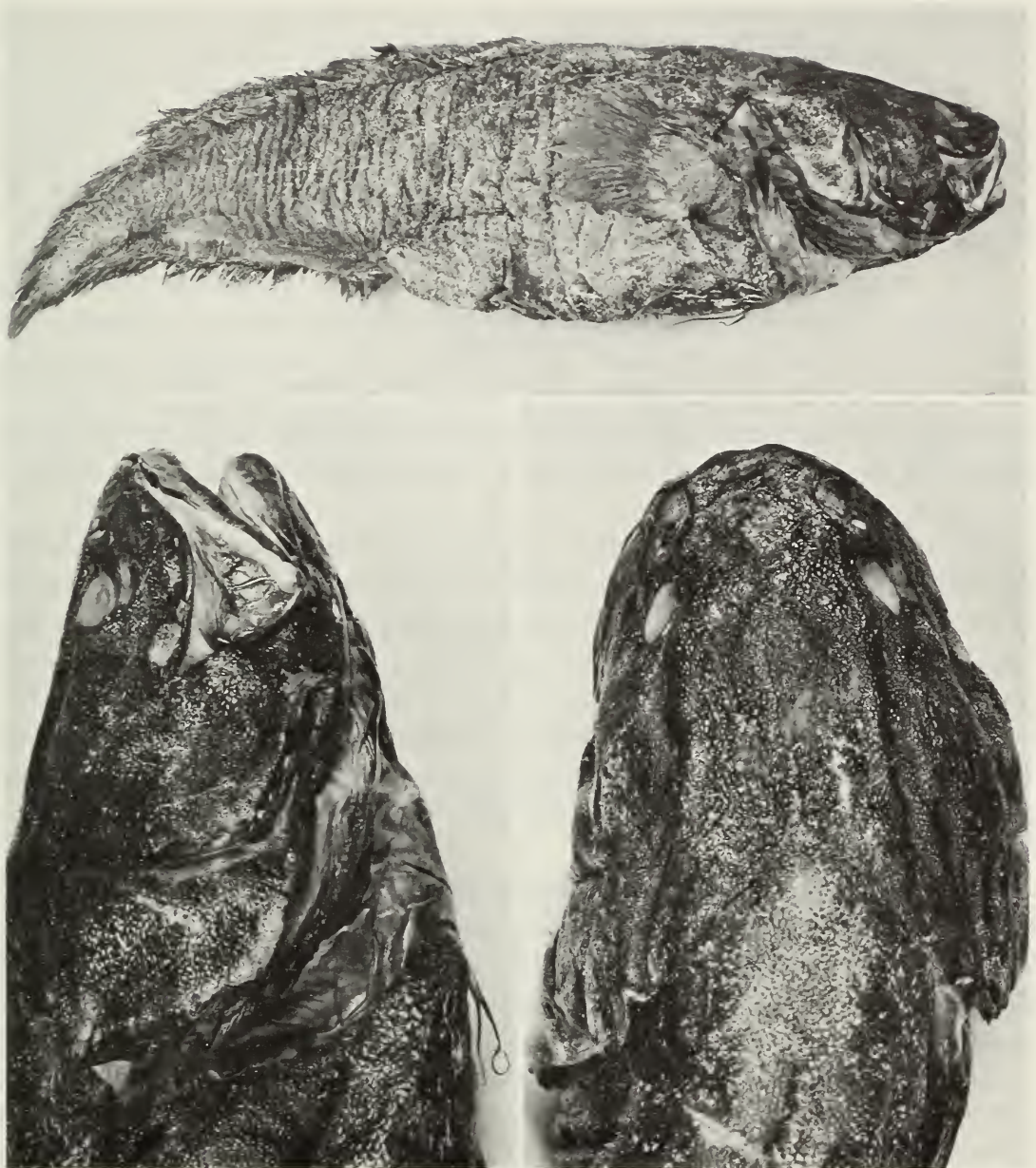


Fig. 7. *Cataetyx niki*, holotype, ZIL 45774, standard length 640 mm, head length 202 mm. Photographs by Joseph L. Russo.

length 97.5 (100); maxillary depth 30.0 (30.0); pectoral fin length 93.0 (88.0); pectoral fin base depth 60 (54.5); ventral fin length 72.0 (68.0); horizontal eye diameter 22.3 (22.0); interorbital width 58.5 (56.0). Dorsal fin rays 91 (95); anal fin rays 69 (77); pectoral fin rays 30 (29); branchiostegal rays 8 (9); vertebrae 16 + 38 = 54 (16 + 40 = 56); approximate number of lateral scale rows 205 (210).

Body relatively short and deep, the tail not long and attenuate. Head large, nearly one-third of standard length, broader than deep. Dorsal fin

originating well posterior to nape at about 45 percent of standard length. Vertical fins covered with rather thin, scale-less skin. Caudal fin not exerted, with 10 rays. Pectoral fin short, 2.2–2.3 in head, broadly rounded and paddle-shaped, borne on a fleshy, scale-covered peduncle that is about as long as it is deep; skin covering the rays without scales. Ventral fins immediately adjacent, each with a single ray, inserted more than an eye diameter behind the symphysis of the cleithra.

Body completely covered with tiny cycloid scales. Head nearly completely covered with scales dorsally and laterally; scales present ventrally along rami of jaws and on branchial membranes over the middle rays; scales absent from anterior suborbital area, around and between the anterior and posterior nostrils, and at the tip of snout; a small patch of scales present on expanded posterior part of maxillary in the holotype but this area naked in the paratype.

Lateral line marked by a narrow, light-colored line that originates behind the lateral head pore, arches up slightly and descends part way to the midline at the level of the vent, where it is interrupted and resumes in the midline, extending posteriorly to nearly the end of the tail. Lateral head canal with a single large pore above the angle of gill opening. The single supraorbital pore at tip of snout medial to anterior nostril. The five infraorbital pores in a row in the fold of skin above the upper jaw. Preoperculo-mandibular canal with eight pores, two at tip of lower jaw, two along mandible, and four in the preopercular fold.

Snout depressed, about two times broader than long. Lower jaw inferior. Posterior nostril a prominent, thick-rimmed circular opening that is closer to eye than to tip of snout. Anterior nostril a short, fleshy tube, slightly flared distally, at tip of snout. Eye elliptical, 9.1 in head length and 2.5–2.6 in interorbital.

A strong, sharp-pointed spine is barely emergent near the upper angle of the opercle and does not extend beyond the opercular flap. No emergent spine beneath eye, in vicinity of posterior nostril, or on pectoral girdle above base of fin.

The jaws are broad and capacious, extending about an eye diameter beyond the rear margin of the eye. The suborbital sheaths the shaft of the maxillary; however, the broadly expanded posterior part of the bone is free. Developed gill rakers three, bearing spiny pads at their tips. Wide bands of small granular teeth present on the dentaries, premaxillaries, and palatines; the vomerine tooth patch is broadly V-shaped.

Color a uniform dark brown.

Male intromittent organ on a broad, bilobed peduncle. Only the male paratype was dissected; testes paired, about 8 cm long. Lining of peritoneum light brown. Posterior elbow of stomach at about level of rear margin of

pectoral fin. Swimbladder very broad, extending posteriorly slightly beyond the stomach, with a tough thick wall.

This species is named for Dr. Nikolai V. Parin.

Discussion.—Possible relationships will be discussed in a future paper. For the present I can say only that *C. niki* is not very similar to any known *Cataetyx* species and can be distinguished easily from all of them by the diagnosis given above.

Diplacanthopoma sp.

26°10'N, 15°10'W; 900 m; "Zvezda Kryma" stat. 143.

IOM uncat., 1 ♂. Measurements in mm: standard length 190, perhaps slightly longer as tip of tail may be regenerated; preanal length 94.8; predorsal length 62.1; body depth at vent 32.0; preventral length 45.2; head length 55.8; snout length 13.1; horizontal eye diameter 11.4; interorbital width 13.7 (approximate); upper jaw length 24.6; maxillary depth 9.0; pectoral fin base depth 9.6; pectoral fin length 31.2; ventral fin length 25.1. Dorsal fin rays 172 (possibly several more); anal fin rays 125 (possibly several more); pectoral fin rays 28; ventral fin rays 1-1; caudal fin rays ? 13 (fin possibly regenerated); vertebrae 20 + 56 = 76 (possibly more); branchiostegal rays 8 (the anterior one very small); approximate number of lateral scale rows 140. Head canal pores: lateral 2; supraorbital 2; infraorbital ? 5; preoperculo-mandibular 7.—

This specimen constitutes the first record of the genus from the eastern Atlantic. Of the eight described species listed in *Diplacanthopoma* by Cohen and Nielsen (1978), most are so poorly known that proper identification of the present specimen is not now possible. It may represent an undescribed species, as it has notably higher dorsal and anal fin ray counts than any other specimen that I have examined. It will be treated in greater detail in a revision of the genus.

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Zoological Museum, Moscow Lomonosov State University (ZMMSU); Zoological Museum, University of Copenhagen (ZMUC).

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