

Five New Species and a New Genus  
of Indian Ocean Blennioid Fishes,  
Tribe Salariaiini, with a Key to  
Genera of the Tribe

VICTOR G. SPRINGER  
and  
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## ABSTRACT

Springer, Victor G., and August E. Spreitzer. Five New Species and a New Genus of Indian Ocean Blennioid Fishes, Tribe Salariini, with a Key to Genera of the Tribe. *Smithsonian Contributions to Zoology*, number 268, 20 pages, 11 figures, 4 tables, 1978.—*Dodekablennos fraseri*, new genus and species, and *Antennablennius anuchalis*, new species, are described from Mauritius. *Alloblennius parvus* and *Mimoblennius cas*, both new species, are described from Grande Comore Island, and *Mimoblennius rusi*, new species, is described from Kwazulu, South Africa. The new species are illustrated, as are the other species of *Mimoblennius* and *Alloblennius* (two each). *Cirrisalarias bunares*, previously known only from Ceylon and Grande Comore Island, is recorded from Tutuila, American Samoa. A revised key to the genera of the tribe Salariini is given.

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# Five New Species and a New Genus of Indian Ocean Blennioid Fishes, Tribe Salariaiini, with a Key to Genera of the Tribe

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## Introduction

The blennioid fish tribe Salariaiini was synopsized by Smith-Vaniz and Springer (1971). Since that study, one new genus, *Cirrisalarias* Springer (1976), and eight new species, one *Cirrisalarias* (Springer, 1976) and seven *Ecsenius* (Springer, 1972; McKinney and Springer, 1976), have been described in the Salariaiini. In the present study, we describe a new genus and species, *Dodekablennos fraseri*, and four new species in the genera *Alloblennius*, *Antennablennius*, and *Mimoblennius*, all salariaiinins. Smith-Vaniz and Springer (1971) gave a key to the genera of Salariaiini. The key is revised below to accommodate *Cirrisalarias* and *Dodekablennos* and to incorporate new information on the other genera. Finally, we take this opportunity to report *Cirrisalarias bunares*, previously known only from Ceylon and Grande Comore Island, from Tutuila Island, American Samoa (specimens cataloged as USNM 216762).

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**METHODS.**—The methods and terminology we follow are the same as, or slight, obvious modifications of those given in Smith-Vaniz and Springer (1971). The institutional abbreviations, now fairly standard in systematic ichthyological publications, can be found in Smith-Vaniz and Springer (1971) or Springer and Gomon (1975).

**ACKNOWLEDGMENTS.**—We extend our appreciation to the following individuals for the loan or gift of specimens upon which our study is based: G. R. Allen (WAM), A. Ben-Tuvia (HUI), W. N. Eschmeyer and J. E. McCosker (CAS), J. E. Randall (BPBM), R. Winterbottom (formerly at RUSI), and R. Wass, American Samoa. J. F. McKinney (formerly at National Museum of Natural History, Smithsonian) brought important specimens to our attention. The collection of specimens from Grande Comore Island was made possible by a grant from the Charline H. Breeden Foundation, J. E. McCosker, principal investigator. A draft of our manuscript was critically reviewed by R. H. Gibbs, Jr., M. F. Gomon, and I. Kornfield (National Museum of Natural History, Smithsonian). All figures of specimens were drawn by J. R. Schroeder.

### Key to the Genera of the Tribe Salariaiini

1. Nape cirri numerous, comblike, transversely broad based, either continuous across nape or interrupted at midline of nape by narrow hiatus no greater than 25 percent of base of either patch of cirri; lateral line complete, extending to, or almost to, caudal-fin base .....2  
     Nape cirri, if present, not as above (often simple, flaplike, or in two small, widely separated patches); lateral line complete or incomplete .....4
2. Segmented dorsal-fin rays 14-16; segmented anal-fin rays 14-17 (rarely 14); teeth freely movable in both jaws; upper jaw teeth subequal in breadth to lower jaw teeth; lower jaw teeth 85-135, about half as numerous as in upper jaw; 1 or 2 canine teeth posteriorly on each dentary; vomer edentate ..... *Cirripectes* Swainson, 1839  
     Segmented dorsal-fin rays 11-13; segmented anal-fin rays 12-14; teeth freely movable in upper jaw, scarcely movable in lower jaw; lower jaw teeth nearly twice as broad as upper jaw teeth; lower jaw teeth less than 65, about one-third as numerous as in upper jaw; canines present or absent posteriorly on each dentary; vomerine teeth present or absent .....3
3. Upper lip crenulate; supraorbital cirrus multifid; lateral line with numerous vertically paired side branches anteriorly; no imbricate scalelike flaps covering anterior lateral-line pores; pair of fleshy processes (varying from papilla-like to barbel-like) on each side of chin associated with anterior mandibular canal pores just behind lower lip; dentary canines absent; vomer edentate ..... *Exallias* Jordan and Evermann, 1905  
     Upper lip entire; supraorbital cirrus simple; lateral line without side branches; imbricate scalelike flaps covering anterior lateral-line pores; no fleshy processes on chin; dentary canines present; vomer with teeth ..... *Pereulixia* Smith, 1959
4. No cirri present on nape or eye .....5  
     Cirri present on either nape or eye or on both .....7
5. Some caudal-fin rays noticeably branched; median supratemporal commissural pores 2 or more ..... *Antennablennius* Fowler, 1931<sup>1</sup>  
     All caudal-fin rays simple or only tips of some rays weakly forked; median supratemporal commissural pores 1 .....6
6. Pectoral-fin rays 12-16 (12 in less than 5 percent of specimens of any species); caudal-fin rays simple; males without fleshy median crest on top of head ..... *Ecsenius* McCulloch, 1923  
     Pectoral-fin rays 12; caudal-fin rays weakly forked at tips; males with fleshy median crest on top of head ..... *Dodeablennios* Springer and Spreitzer, new genus
7. Dorsal-fin spines 9-11; caudal-fin rays simple; pectoral-fin rays 15-18 (usually 16) .....  
     ..... *Atrosalaria* Whitley, 1933  
     Dorsal-fin spines 11-17 (rarely 11 in any genus); caudal-fin rays simple or forked; pectoral-fin rays 13-16 (rarely 16) .....8
8. Total dorsal-fin elements 21-23; segmented dorsal-fin rays 9-12; segmented anal-fin rays 10-13 ..... *Stanulus* Smith, 1959  
     Total dorsal-fin elements 26-38; segmented dorsal-fin rays 13-24; segmented anal-fin rays 14-28 .....9
9. Upper jaw teeth freely movable, exceeding 100 in adults .....10  
     Upper jaw teeth immovable or nearly so, 18-80 .....19
10. Caudal-fin rays simple; segmented anal-fin rays 23-28 .....11  
     Some caudal-fin rays forked near tips, at least in adults; segmented anal-fin rays 17-25 .....12
11. Prominent fleshy disk or appendage behind lower lip (Smith-Vaniz and Springer, 1971, fig. 10) ..... *Andamia* Blyth, 1858  
     No fleshy disk or appendage behind lower lip ..... *Alticus* Commerson in Lacepède, 1800
12. All the following characters present: fleshy crest on top of head, no nuchal cirri, nasal cirri simple (rarely with single, short side branch), supraorbital cirri pinnately branched (at least in adults), and single pore present in median area of supratemporal commissural canal ..... *Praealticus* Schultz and Chapman, 1960  
     One or more of above characters absent .....13
13. Apparent segmented pelvic-fin rays 2 or 3<sup>2</sup> .....14  
     Apparent segmented pelvic-fin rays 4 .....16
14. Gill opening restricted to side of head above level of ventralmost pectoral-fin ray; cirri associated with 2-4 preoperculo-mandibular canal pores on each side; fleshy flap (usually darkly pigmented) at base of first dorsal-fin spine ..... *Crossosalarias* Smith-Vaniz and Springer, 1971  
     Gill opening continuous across ventral surface of head; no cirri associated with preoperculo-mandibular canal pores; no fleshy flap at base of first dorsal-fin spine .....15



15. Terminal anal-fin ray completely free from caudal peduncle; dorsal-fin spines 13 or 14; segmented pelvic-fin rays 3<sup>2</sup>; anterior anal-fin rays not elongate ..... *Istiblennius* Whitley, 1943<sup>3</sup>  
Terminal anal-fin ray partially bound to caudal peduncle by membrane; dorsal-fin spines 12 or 13 (usually 12); segmented pelvic-fin rays 2<sup>2</sup>; anterior anal-fin rays often elongate in mature males ..... *Salaris* Cuvier, 1816<sup>4</sup>
16. Dorsal fin without notch between spinous and segmented ray portions (slight notch present in postlarvae); segmented dorsal-fin rays 19–24; segmented anal-fin rays 20–22; pectoral-fin rays usually 15 ..... *Ophioblennius* Gill, 1860  
Dorsal fin with notch between spinous and segmented ray portions; segmented dorsal-fin rays 13–18; segmented anal-fin rays 14–19; pectoral-fin rays usually 14 ..... 17
17. Dorsal-fin spines usually 12; vomer edentate; patch of cirri on each side of nape; restricted to eastern Pacific ..... *Scartichthys* Jordan and Evermann, 1898  
Dorsal-fin spines usually 13 (last spine often greatly reduced); vomerine teeth present or absent (easily broken off); nape cirri absent or present and variable (one on each side in most species); genera circumtropical or restricted to Indo-West Pacific ..... 18
18. High, thin, fleshy crest present on top of head (lacking in some females); dentary without posterior canine tooth; vomer edentate ..... *Istiblennius* Whitley, 1943<sup>5</sup>  
Fleshy crest absent or present only as low ridge; dentary with posterior canine tooth; vomerine teeth present in most specimens ..... *Entomacrodus* Gill, 1859
19. Upper jaw teeth more than 70; lower jaw teeth more than 40; segmented dorsal-fin rays 14–17 ..... 20  
Upper jaw teeth 18–50; lower jaw teeth 16–38; segmented dorsal-fin rays 15–21 ..... 21
20. Thin, fleshy crest on top of head (low and poorly developed in females); pectoral-fin rays usually 13; segmented pelvic-fin rays 2; vomer edentate; infraorbital bones 5 ..... *Glyptoparus* Smith, 1959  
Crest on top of head absent or present only as low ridge; pectoral-fin rays usually 15; segmented pelvic-fin rays 3; teeth present on vomer; infraorbital bones 4 ..... *Nannosalarias* Smith-Vaniz and Springer, 1971
21. Caudal-fin rays simple ..... 22  
Some caudal-fin rays forked near tips ..... 24
22. Head with simple cirrus on rim of anterior nostril, above eye and on nape (nape cirrus minute); nostrils small, porelike, greatest dimension more than five times in orbital diameter; upper jaw teeth more than 35; infraorbital bones 5 ..... *Litobranchus* Smith-Vaniz and Springer, 1971  
Head conspicuous for numerous cirri, which cover snout region; nape cirri absent; nostrils relatively enormous (but obscured by cirri), greatest dimension three times or less in orbital diameter; upper jaw teeth fewer than 30; infraorbital bones 2 or 4 ..... 23
23. Pectoral-fin rays usually 14; upper lip without free dorsal margin extending around snout; all cirri in interorbital region associated with rims of posterior nostrils; one median supratemporal commissural sensory canal pore; more than 20 teeth in either jaw; infraorbital bones 4 ..... *Cirrisalaris* Springer, 1976  
Pectoral-fin rays usually 13; upper lip with free dorsal margin extending around snout; some cirri in interorbital region not associated with fins of posterior nostrils; two median supratemporal commissural sensory canal pores (arranged one behind the other); less than 20 teeth in either jaw; infraorbital bones 2 ..... *Medusablennius* Springer, 1966
24. Dorsal-fin spines usually 13; nasal, supraorbital, and nuchal cirri present, simple to multifid ..... *Mimoblennius* Smith-Vaniz and Springer, 1971  
Dorsal-fin spines usually 12; nasal, supraorbital, and nuchal cirri present or absent (all three present only in *Hirculops*), simple when present ..... 25
25. Posterior dentary canines well developed; vomer with small teeth; anteriormost preopercular canal pore position with a vertical pair of pores (see Smith-Vaniz and Springer, 1971, figs. 43, 45, 46); posteriormost epipleural rib on vertebral 19–27 ..... 26  
Posterior dentary canines absent or minute; vomer edentate; anteriormost preopercular canal pore position with a simple pore (see Smith-Vaniz and Springer, 1971, figs. 47–50); posteriormost epipleural rib on vertebral 11–16 ..... 27
26. Nuchal cirri present; eye diameter 1.7–2.5 in supraorbital cirrus length; precaudal vertebrae 11 ..... *Hirculops* Smith, 1959  
Nuchal cirri absent; eye diameter 0.5–1.5 in supraorbital cirrus length; precaudal vertebrae 10 ..... *Rhabdoblennius* Whitley, 1930
27. Supraorbital cirri present; nuchal cirri present or absent; nasal and nuchal cirri shorter than

orbital diameter; fleshy median crest on top of head absent; infraorbital bones 4 .....  
 ..... *Alloblennius* Smith-Vaniz and Springer, 1971  
 Supraorbital cirri absent; nuchal cirri present; nasal and nuchal cirri shorter to much longer  
 than orbital diameter; fleshy median crest on top of head present or absent; infraorbital  
 bones 5 ..... *Antennablennius* Whitley, 1930<sup>1</sup>

<sup>1</sup> *Antennablennius* keys out twice in this key (see key couplet 27). Most species of *Antennablennius* have nuchal cirri, but some females of one species (*A. bifilum?*), and the only known specimen (male) of *A. anuchalis*, lack nuchal cirri, and they alone key out here.

<sup>2</sup> All Salariaiini have a pelvic-fin spine and three or four rays. The spine and often the innermost ray are reduced and visible only in skeletal preparations. Even where the innermost ray is visible externally, it may be much reduced in length and so closely applied to the adjacent ray that it is easily overlooked.

<sup>3</sup> *Istiblennius* keys out twice in this key (see key couplet 18).

<sup>4</sup> Roux (1976) has shown that the first edition of Cuvier's *Règne Animal* appeared in 1816, rather than 1817 as printed in the publication.

<sup>5</sup> While most species of *Istiblennius* have three segmented pelvic-fin rays, *I. unicolor* has four, and it alone keys out here (see also key couplet 15).

***Alloblennius* Smith-Vaniz and Springer**

***Alloblennius parvus*, new species**

FIGURE 1

DESCRIPTION (\* indicates character for holotype where variation occurs).—Dorsal fin XII\* or XIII (XIII in only one of 36 specimens), 18 (4 specimens), 19\* (23), or 20 (9); total elements 30 (3), 31\* (24), or 32 (8); terminal ray bound by mem-

brane to caudal peduncle. Anal fin II,20 (3), 21\* (24), or 22 (8); terminal ray bound by membrane to caudal peduncle. Caudal fin: segmented rays 13 (8 or 9 branched, once); dorsal procurrent rays 6–8 (7\*); ventral procurrent rays 5–7 (6\*); total elements 24–28 (26\*); ventral hypural plate and hypural 5 autogenous; epurals 2. Pectoral-fin rays 13 or 14\* (rarely 13 and only unilaterally). Pelvic fin I,3, spine and innermost segmented ray inapparent except in skeletal preparations. Vertebrae 10 + 28 (11), 29\* (23), or 30 (2). Posteriormost

TABLE 1.—Comparison of certain meristic characters of the species of *Alloblennius*

Species	segmented dorsal-fin rays						segmented anal-fin rays					caudal vertebrae					
	16	17	18	19	20	$\bar{x}$	19	20	21	22	$\bar{x}$	26	27	28	29	30	$\bar{x}$
<i>pictus</i>																	
Gulf of Aqaba																	
males			13	21	3	18.7	2	26	10	21.2		13	19				27.6
females			4	15		18.8	2	12	5	21.2	1	4	12				27.6
Ethiopia																	
males			2	39	23	18.3	1	16	46	1	20.7	5	41	16			27.2
females	1	5	30	3		17.9	3	23	14		20.3	6	24	2			26.9
<i>jugularis</i>																	
Gulf of Aqaba																	
males			3	4		18.6	1	6		20.9	1	5	1				28.0
females	1	1	2			18.2	2	2		20.5	1	3	1				28.0
Egypt																	
males			2	4		18.7	1	5		20.8		5	1				28.2
Ethiopia																	
males			12	11	1	18.5	8	14	2	20.8	10	12	2				27.7
females			6	3		18.3	4	5		20.6	3	5	1				27.8
<i>parvus</i>																	
Grande Comore																	
males			2	11	6	19.2	2	12	5	21.2		4	14	1			28.8
females			2	12	3	19.1	1	12	3	21.1		7	9	1			28.6

epipleural rib on vertebra 11\*–13. Infraorbital bones 4 or 5 (5 unilaterally in one of three specimens examined). Vomer edentate. Rostral cartilage unossified. Median ethmoid present. Frontals separate, not ankylosed. Nasal bones tubular, curving laterally ventrally and surrounding anterior margin of anterior nostril. Lateral extrascapular autogenous. Postcleithra 2, normal.

Dentary a closed capsule with replacement teeth entering functional series through foramina in bone; canines absent; total dentary incisoriform teeth sexually dimorphic: 25–26 in males, 26–28 in females ( $t = 3.49$ ,  $df = 18$ ,  $.005 > p > .002$ ). Total premaxillary teeth sexually dimorphic: 30–35 in males, 33–35 in females ( $t = 3.79$ ,  $df = 18$ ,  $.002 > p > .001$ ). Number of teeth in either jaw not correlated with standard length in size range of available specimens.

Lateral line tubular, continuous, pores simple, terminating below vertical from base of 2nd to 4th (usually 3rd) dorsal-fin spine. Median supratemporal commissural pores 2 (1) or 3\* (35).

Fleshy median occipital crest absent in both sexes. Nuchal cirri absent. Short, simple cirrus above eye, on anterior and posterior rims of anterior nostril, and on anterior rim of posterior nostril. Epithelium of area between dorsal part of upper lip and anterior interorbital region papillose in large males, normal in females and small males.

*Pigmentation* (preserved): Head and body pale with few scattered melanophores, mostly concentrated dorsolaterally on anterior half of body. Melanophores scattered variably on head; many on upper lip, snout, and interorbital area. Gill membrane black posterior to level of lower jaw in males; membrane much paler in females, pigment sometimes restricted to posterior border. No dark spots on orbital conjunctiva dorsoanteriorly. Prepelvic area black from isthmus halfway to level of pectoral-fin base in males, paler in females. Pelvic fins immaculate. Pectoral fins with melanophores along some rays; patches of melanophores distally in membranes between lower rays. Dorsal fin with black spot distally between first and second spines; many diffuse circles of melanophores centered on spines and rays in remainder of fin. Caudal fin with vertical rows of small, dark circles of pigment arranged in oblique bands; lower posterior margin dusky. Anal fin with submarginal dusky band; band uniform in males, with alternate rays unpig-

mented in females; tips of spines and rays unpigmented.

*ETYMOLOGY*.—From the Latin *parvus*, meaning little, and referring to the small size of the species.

*COMPARISONS*.—The three species of *Alloblennius* are quite similar, and we are unwilling to suggest interrelationships among them. The following characters will distinguish the species:

1. Ventral hypural plate autogenous in *parvus* and *jugularis*, fused to urostylar complex in *pictus*.

2. Nape cirri absent in *parvus* and *pictus*, usually present in *jugularis*.

3. Anterior rim of posterior nostril bears a slender cirrus in *parvus*, a broad flap in *jugularis*, and is undistinguished in *pictus*.

4. Anterior nostril with simple cirrus on posterior rim in *jugularis* and *pictus*, on both anterior and posterior rims in *parvus*.

5. Innermost (third) segmented pelvic-fin ray obvious in adults and some juveniles of *jugularis*, not obvious (except in skeletal preparations) in any specimens of *parvus* and *pictus*.

6. Total lower jaw teeth in males 25–26 ( $N = 10$ ) in *parvus*, 30–34 ( $N = 5$ ) in *jugularis*, and 33–36 ( $N = 11$ ) in *pictus*.

7. Dark spot usually present at 9 and 10 o'clock positions on conjunctiva of each eye (not to be confused with spots that may be present around margin of iris) in *jugularis* (Figure 2), absent in *parvus* and *pictus*.

8. The extent and intensity of the dark pigment on the ventral side of the head and belly of presumably mature males is distinctive, although difficult to describe because of intraspecific variability. In *parvus* (Figure 1), the chin is pale and sharply delimited from the remainder of the ventral side of the head and prepelvic area, which are darkly pigmented. In *jugularis* (Figure 2), the ventral surface of the head is darkly pigmented except for a pair of inconspicuous, pale spots on the chin and a pair of conspicuous, large, pale spots, devoid of melanophores, midway between the tip of the chin and the margin of the gill membrane; the prepelvic area and venter have uniformly dark pigment. In *pictus* (Figure 3), the ventral surface of the head, prepelvic area, and belly may all be more or less uniformly pigmented, or there may be a pair of large, pale spots, similar in size and position to the pair of large, conspicuous spots under the head in *jugularis* (there is a peppering

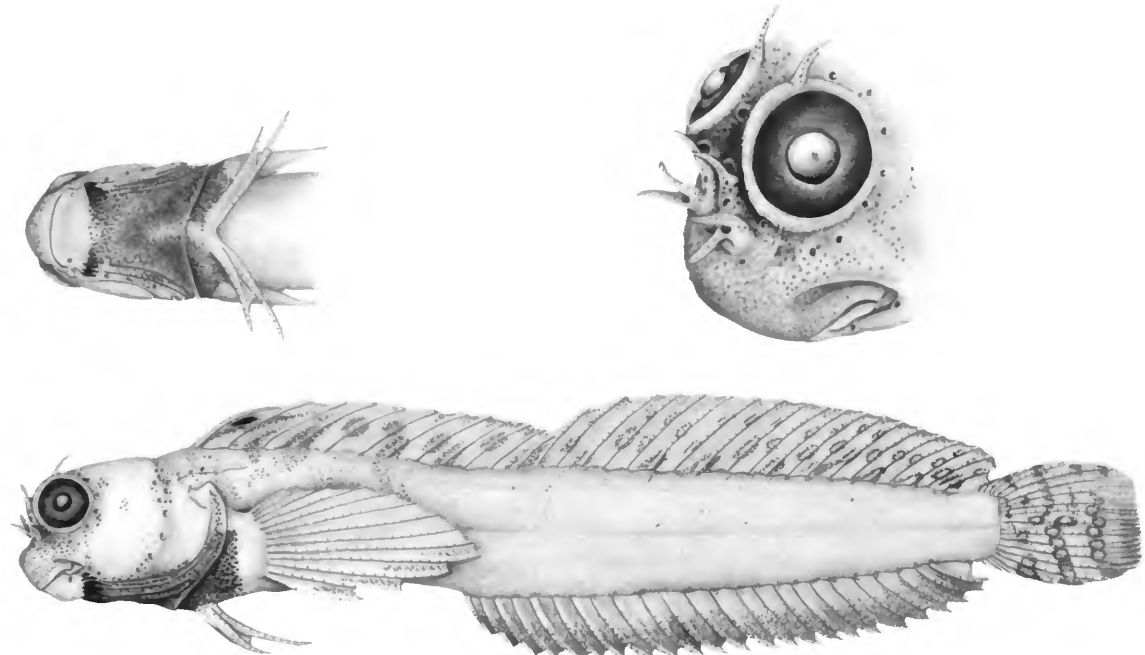


FIGURE 1.—*Alloblennius parvus*, USNM 216310, paratype, male, 22.9 mm SL, Grande Comore Island.

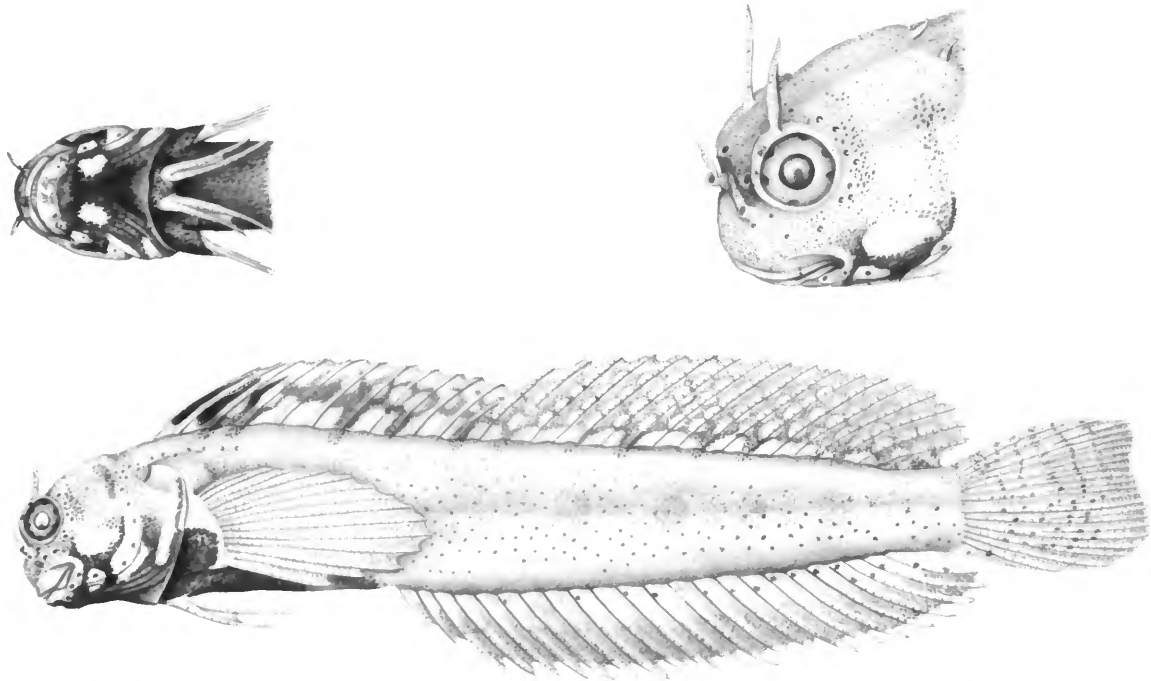


FIGURE 2.—*Alloblennius jugularis*, HUI E62/417g, male, 33.4 mm SL, Cundabilu, Dahlak Archipelago, southern Red Sea.

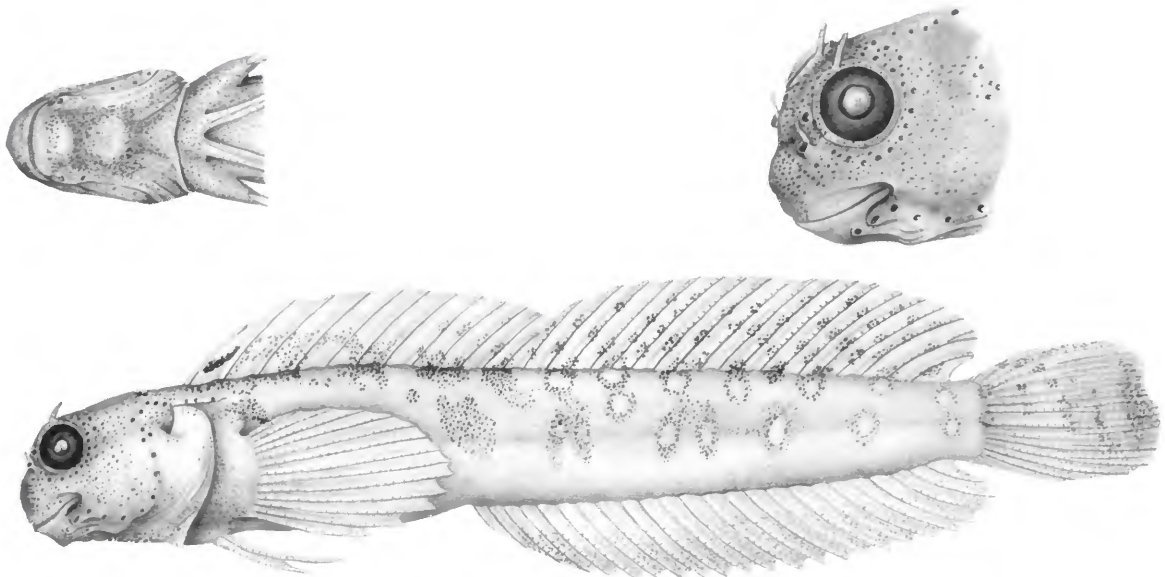


FIGURE 3.—*Alloblennius pictus*, USNM 203766, male, 31.3 mm SL, Strait of Jubal, Red Sea.

of fine melanophores overlying the spots in *pictus*).

In addition, the species differ in certain meristic characters, particularly number of caudal vertebrae (Table 1, data for *jugularis* and *pictus* based on specimens cited in Smith-Vaniz and Springer, 1971; see discussion and geographic variation for *pictus* data in same reference). The meristic characters of *jugularis* and *parvus* show no statistically significant sexual dimorphism, and those of *jugularis* show no significant geographically associated variation.

Based on available specimens, *A. parvus* attains a much smaller maximum size (25.7 mm; N = 37) than either *A. jugularis* (48.8 mm; N = 50) or *A. pictus* (32.6 mm; erroneously given as 35.4 mm by Smith-Vaniz and Springer, 1971; N = 104).

There is a possibility that *Antennablennius anuchalis*, described elsewhere in this paper, would be assigned to *Alloblennius* if more information on that species were available. It is also possible that *A. anuchalis* is intermediate between *Alloblennius* and *Antennablennius* and, thus, eliminates the significance of the supposed differences between the two genera. In that case, *Alloblennius* would be a junior synonym of *Antennablennius*; hence, for reasons of stability, we have chosen to describe *anuchalis* as a species of *Antennablennius*.

*Antennablennius anuchalis* differs from all species

of *Alloblennius* in lacking orbital cirri. The only known specimen of *A. anuchalis* has five infraorbital bones on each side. All of the specimens of *Alloblennius* examined for infraorbital bones (3 *parvus*, 2 *pictus*, 2 *jugularis*) have four bones on each side, except one specimen of *A. parvus*, which has four on one side and five on the other.

For further comparison, the following eight characters of *A. anuchalis* are given in the same order as they appear above for species of *Alloblennius*: (1) the ventral hypural plate is autogenous; (2) nape cirri are absent; (3) the anterior rim of the posterior nostril is undistinguished; (4) a simple cirrus is present only on the posterior rim of the anterior nostril; (5) the innermost pelvic-fin ray is obvious; (6) total lower jaw teeth in the only male number 29; (7) there are no dark spots on the conjunctiva of the eye; (8) the ventral side of the head is mostly unpigmented, with faint indications of two or three slender, chevronlike markings; there is a faint patch of melanophores in the prepelvic area; the belly is immaculate.

REMARKS.—Smith-Vaniz and Springer (1971) believed that *Alloblennius* was a genus endemic to the Red Sea. Its presence in the Comores Islands, some distance south of the Red Sea, indicates that the genus is widely distributed, at least in the western Indian Ocean.

**HOLOTYPE.**—CAS 33590, male, 25.1 mm SL; Grande Comore Island, N'Gouni Reef, ca. 0.5 km north of Iconi; in surge channel at far end of small cove; coarse coral sand bottom; depth to 5 m; 1 Mar 1975; J. E. McCosker, S. Mead, D. Powell, J. Breeden; field number, JEM 75-29.

**PARATYPES** (all Grande Comore Island).—CAS 36966 (10, 17.1–23.5 mm SL), ANSP 137862 (7, 18.9–25.7), BPBM 20467 (4, 15.3–20.8), RUSI 913 (5, 16.1–20.7), and USNM 216309 (6, 18.7–26.2, including three cleared and stained), all taken with the holotype. BMNH 1977.1.10.13–15 (3, 19.7–20.6), lava-flow tidal flats ca. 1 km north of Hotel Coelacanth; depth, to 5 m; surge channels, tidepools, and over edge of dropoff; 15 Feb 1975; J. E. McCosker, M. D. Lagios, L. Gunther; field number, JEM 75-11 (formerly CAS 33601). USNM 216310 (1, 22.9), lava-flow tidal flats ca. 1 km N of Hotel Coelacanth; depth to 2 m; S. and J. E. McCosker, M. D. Lagios, J. Breeden, L. Gunther; 9 Feb 1975; field number, JEM 75-4 (formerly CAS 33606).

### *Antennablennius* Fowler

#### *Antennablennius anuchalis*, new species

##### FIGURE 4

**DESCRIPTION** (based on one male, 28.8 mm SL).—Dorsal fin XII,20; terminal ray bound by membrane to caudal peduncle. Caudal fin: segmented rays 13, two dorsal-most and three ventral-most rays simple, remaining rays branched once; dorsal procurrent rays 8; ventral procurrent rays 7; ventral hypural plate and hypural 5 autogenous; epurals 2. Pectoral-fin rays 14-14. Pelvic fins I,3; spine inapparent, innermost (third) segmented ray apparent. Vertebrae 10 + 29. Posterior-most epipleural rib on vertebra 14; posterior-most pleural rib on vertebra 10. Infraorbital bones 5-5. Total dentary incisoriform teeth 29; posterior canines probably absent (exceptionally small if present). Total premaxillary teeth 31.

Lateral line tubular, continuous, pores simple, terminating below vertical from base of sixth dorsal-fin spine. Median supratemporal commissural pores 9. Anterior-most (first) preopercular pore position with simple pore.

No fleshy median occipital crest on head. No

nuchal or supraorbital cirri. Short, simple cirrus on posterior rim of anterior nostril; no cirri on posterior nostrils.

Many osteological characters were not examined for fear of damaging the only specimen.

**Pigmentation** (preserved): Head dotted with tiny melanophores, darker below and posterior to eye; lower half of cheek and opercle unpigmented; ventral surface unpigmented except for faint indications of one or two dusky chevronlike markings; slender dusky stripe extending across opercle ventrally onto branchiostegal membranes. Body pale with midlateral row of eight sparse patches of melanophores, suggesting bands; about five patches of melanophores dorsally along body contour. Slender, dusky bar on fleshy pectoral-fin base. Prepelvic area and bases of pelvic fins with sparsely distributed melanophores. Dorsal fin: spinous portion with three dusky, irregular bands and narrow, dusky distal margin that intensifies as black spot between first and second spines; segmented-ray portion with dusky spots, mainly overlying rays, aligned in stripelike rows. Anal fin with broad, dusky marginal band, ray tips unpigmented. Pectoral fin with small, faint patch of melanophores at base; posterior and ventral areas covered with sparsely distributed melanophores, remainder of fin unmarked. Caudal fin with three or four irregular, dusky bands.

**ETYMOLOGY.**—From the Greek prefix *a-* (now commonly used in combination with words derived from both Latin and Greek), meaning “without,” and the Latin *nucha*, meaning “nape,” in reference to the absence of nape cirri, exceptional for an *Antennablennius* species. The specific name is here used as a noun in apposition.

**COMPARISONS.**—Our assignment of *anuchalis* to *Antennablennius* is provisional. The only available specimen of *anuchalis* lacks both orbital and nape cirri, a condition known otherwise in the Salariai only in *Ecsenius*, *Dodekablennos*, and exceptionally in some females of *Antennablennius bifilum*. *Antennablennius anuchalis* differs from all *Ecsenius* species in having several branched caudal-fin rays (only simple rays in *Ecsenius*), no anterior canine teeth (both anterior and posterior canine teeth present in *Ecsenius*), and five infraorbital bones (four in *Ecsenius*). It differs from *Dodekablennos* in having 13 pectoral-fin rays (versus 12), the terminal anal-fin ray attached to the caudal peduncle by mem-

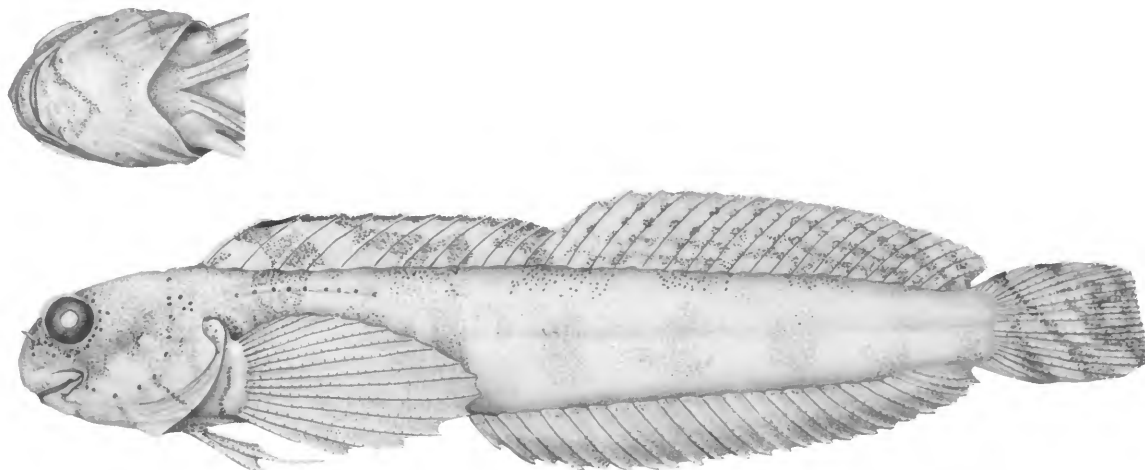


FIGURE 4.—*Antennablennius anuchalis*, RUSI 2136, holotype, male, 28.8 mm SL, Mauritius.

brane (versus free from the caudal peduncle), fewer teeth (see description of *Dodekablennios*), more middorsal supratemporal commissural pores (9 versus 1), and in lacking a fleshy, bladelike occipital crest (present in males of *Dodekablennios*).

Aside from lacking nuchal cirri, *A. anuchalis* differs from all the other species of *Antennablennius* we have examined in having many more middorsal supratemporal commissural pores (1–4 pores in the other species).

Excluding *anuchalis*, there are 10 nominal species of *Antennablennius*, which genus has not been critically revised. We have examined the types of all but three of the nominal species: (1) *A. variopunctatus* (Jatzow and Lenz), for which the types are lost, but which was illustrated as having notably long nasal cirri (very short in *anuchalis*) and described as having 14 dorsal-fin spines (an unusually high number for any *Antennablennius* species, all of which usually have 12; the original description of *A. variopunctatus* may have been in error); (2) *A. velifer* Smith, a probable junior synonym of *A. variopunctatus* (we have examined specimens identifiable as *A. velifer* and they also have long nasal cirri, but only 12 or 13 dorsal-fin spines); and (3) *A. sexfasciatus* (von Bonde), which Smith (1949) synonymized with *A. bifilum* (Günther). *Antennablennius anuchalis* differs from *A. bifilum*, including its junior synonym, *A. persicus* (Günther), in having a less robust head: head depth in *A. anuchalis* is about 16 percent SL, whereas head depth is 20–21

percent SL in similar-sized specimens of *A. bifilum*.

Among the remaining nominal species of *Antennablennius*, *anuchalis* also differs from *A. hypenetes* (Klunzinger) and *A. simonyi* (Steindachner), and its junior synonym, *A. girad* Fraser-Brunner, in lacking a fleshy bladelike crest on top of the head. It also differs from *A. australis* Fraser-Brunner in having the nasal cirrus length much less than half the orbital diameter (versus more than half) and in having the head less deep (more than 20 percent SL in *australis*). It differs from *A. adenensis* Fraser-Brunner in lacking a filamentous first dorsal-fin spine, possibly an anomalous condition in the holotype of *A. adenensis*.

There is a possibility that *A. anuchalis* should be assigned to *Alloblennius* instead of *Antennablennius*. For discussion of this matter and the possibility that *Alloblennius* should be synonymized under *Antennablennius* see the discussion in the comparisons section under *Alloblennius parvus*.

**HOLOTYPE.**—RUSI 2136, male, 28.8 mm SL, Mauritius, 1.0 mi (0.6 km) E of Beauchamp on road near Jacotet Bay, 0.3 mi (0.18 km) E of Ste. Marie Bridge; water 76°F (24.4°C), slight current, no turbidity, clear; salinity, oceanic; major habitat, tide pool with deep vertical wall of rock, some sessile brown algae, bottom composed of volcanic and calcareous sand and rocks; depth, surface to 5 ft (1.5 m); originally fixed in 10% formalin and Ionol; 17 Mar 1971; T. H. Fraser; field number, THF-SA-29.

***Dodekablennos*, new genus**

DIAGNOSIS (\* indicates character for holotype of *Dodekablennos fraseri*, where variation is noted).—Dentary an open capsule with replacement teeth entering functional series through excavated area in jaw bone. Posterior dentary canine present. Premaxillary and dentary incisoriform teeth movable, 55–63\* in upper jaw, 44–47\* in lower jaw (based on four specimens, 26.5–38.5 mm SL). Vomer toothed. Dorsal fin XII, 19\* or 20. Anal fin II, 21 (terminal pterygiophore supporting a single ray). Segmented caudal-fin rays 13, two to six branched at tips. Pectoral-fin rays 12. Pelvic fin I, 3 (spine inapparent, innermost ray apparent). Vertebrae 10 + 27\* or 28. Posteriormost pleural rib on vertebra 11; posteriormost epipleural rib on vertebra 13\* or 14. Terminal dorsal-fin ray bound by membrane to caudal peduncle; terminal anal-fin ray free of peduncle. Lateral line extending posteriorly to below vertical from base of dorsal-fin spine VIII–X\*, consisting of long, continuous tube followed by few, short, isolated, bipored tubes. No scalelike flaps covering lateral-line pores. Preoperculummandibular pores without associated cirri. Single median supratemporal commissural pore. Single pore at anteriormost preopercular pore position. Upper lip without free dorsal margin anteriorly. No fleshy disk or appendage behind lower lip. Gill membranes forming free fold across isthmus (gill opening not restricted to side of head). Fleshy median crest on top of head of males, absent on female. Nuchal and supraorbital cirri absent. Simple cirrus present on posterior rim of anterior nostril; posterior nostril without cirri. No cirri on interorbital region. Postcleithra consisting of two elongate bones, dorsal end of ventral element overlapping ventral end of dorsal element. Lateral extrascapular not fused with pterotic. Median ethmoid present, ossified. Infraorbital bones 5. Rostral cartilage unossified. Frontals not ankylosed. Ventral hypural plate not fused to urostylar complex; hypural 5 autogenous; one or two epurals (if one, apparently result of fusion of two epurals). Nasal bones tubular, not modified for support of anterior nostril.

ETYMOLOGY.—From the Greek *dodeka*, meaning “twelve,” and *blennos*, meaning “blenny,” and referring to the characteristic dorsal-fin spine and pectoral-fin ray counts of 12; gender, masculine.

RELATIONSHIPS AND COMPARISONS.—Among the Salariini, only *Dodekablennos* and a few species (perhaps only one) of *Istiblennius* typically have so few as 12 pectoral-fin rays (the other species of *Istiblennius* usually have 14 rays; a count of 12 rays occurs only as an unusual individual variation in some species of the other salariinin genera). *Dodekablennos* is readily distinguished from all *Istiblennius* species in lacking nape and orbital cirri, and in having: many fewer than 65 teeth in each jaw (versus more than 150), vomerine teeth, only 12 dorsal-fin spines (versus usually 13), and only 2–6 branched caudal-fin rays (versus usually 9).

*Dodekablennos* is a specialized genus, and we do not believe it is closely related to *Istiblennius* or its allies (genera in groups 2, 5, 7, and 13 of Smith-Vaniz and Springer, 1971, fig. 51), all of which have nape cirri (primitive for the Salariini) and a large number of teeth in each jaw (specialized). Indeed, we have difficulty in allying it closely to any other salariinin genus, and it can be distinguished from each just as readily as it can be distinguished from *Istiblennius*.

The absence of both nape and orbital cirri in *Dodekablennos* (a specialized condition) occurs normally otherwise only in *Ecsenius* and, perhaps, the new species of *Antennablennius* (*A. anuchalis*) we describe above based on only one specimen. Aside from number of pectoral-fin rays, *Dodekablennos* differs from *Ecsenius* and *Antennablennius* and its relatives (genera in groups 15, 16, 20, and 21 of Smith-Vaniz and Springer, 1971, fig. 51, and *Cirrisalarias* Springer, 1976) in not having the terminal anal-fin ray bound by membrane to the caudal peduncle (an unspecialized condition) and in having 2–6 branched caudal-fin rays (0 in *Ecsenius*, typically 0 or 9 in the other genera of Salariini, except *Praealticus*, which has 0–9, usually 4–8). Males of *Dodekablennos* have a fleshy, bladelike crest on top of the head, which is lacking in both sexes of *Ecsenius*.

The following combination of characters will distinguish *Dodekablennos* from all other genera of Salariini: dorsal-fin spines 12, pectoral-fin rays 12; nape and orbital cirri absent; terminal anal-fin ray free (not bound by membrane to caudal peduncle); branched caudal-fin rays 2–6; fleshy, bladelike crest present on head of males; vomerine teeth present; less than 65 teeth in either jaw.

TYPE-SPECIES.—*Dodekablennos fraseri*, new species.



*Dodekablennios fraseri*, new species

FIGURE 5

**DESCRIPTION** (characters in generic diagnosis not repeated).—Color pattern of preserved specimens (based on three males, 29.8–38.5 mm SL, female, 26.5 mm SL). Head dusky, paler ventrally, with faintly dusky chevron (smaller specimens) or X-shaped marking (largest specimen); dusky bar extending ventrally from midventral margin of orbit across lip, separated posteriorly by paler area from diffuse dusky bar extending ventrally from just posterior to eye across corner of mouth to ventral surface of head (contributing to formation of dusky chevron); upper lip pale with dusky spots; crest of male with dusky spots. Dark dusky bar on prepectoral area. Side of body with seven or eight dark dusky bands separated by pale interspaces; anteriormost band diffuse dorsally on body; all bands extending onto dorsal fin; posterior bands tending to fork dorsally in males, both dorsally and ventrally in females; in largest specimen posteriormost band is expanded and extends ventro-posteriorly well out onto caudal fin joining dusky stripe along ventral margin of fin. Dorsal-fin spines and rays variably dusky; males with intense black spots distally on each of first three interradial

membranes; female without black spots. Anal fin dusky, becoming darker submarginally; tips of spines and rays unpigmented.

**ETYMOLOGY.**—Named for Thomas H. Fraser, who collected all the specimens, recognized their distinctiveness, but allowed us to describe them.

**DISTRIBUTION.**—Known only from Mauritius.

**HOLOTYPE.**—RUSI 858 (out of former 2272 and 74–311), male, 37.1 mm SL; E side of Jacotet Bay, 1.7 mi (ca. 2.8 km) W of Riambel (area called “Point of Rocks”), Mauritius; tide pool connected to ocean at all but lowest tides of year; no coral reef protecting shore from open ocean waves; volcanic rock and coarse volcanic sand; clear, no turbidity; current slight; salinity, oceanic; rich growth of mostly attached brown algae, mainly a sargassum community; original preservative, 10% formalin; depth of capture, 0–2 ft (0–0.6 m); 26 Mar 1971; T. H. Fraser; field number, THF-SA-43.

**PARATYPES.**—RUSI 860 (out of former 2272 and 74–311), male, 38.5 mm SL (now cleared and stained); RUSI 859 (formerly RUSI 2273 and 74–311), female, 26.5 mm SL; USNM 216423 (out of former RUSI 2272 and 74–311), male, 29.8 mm SL; all collected with the holotype.

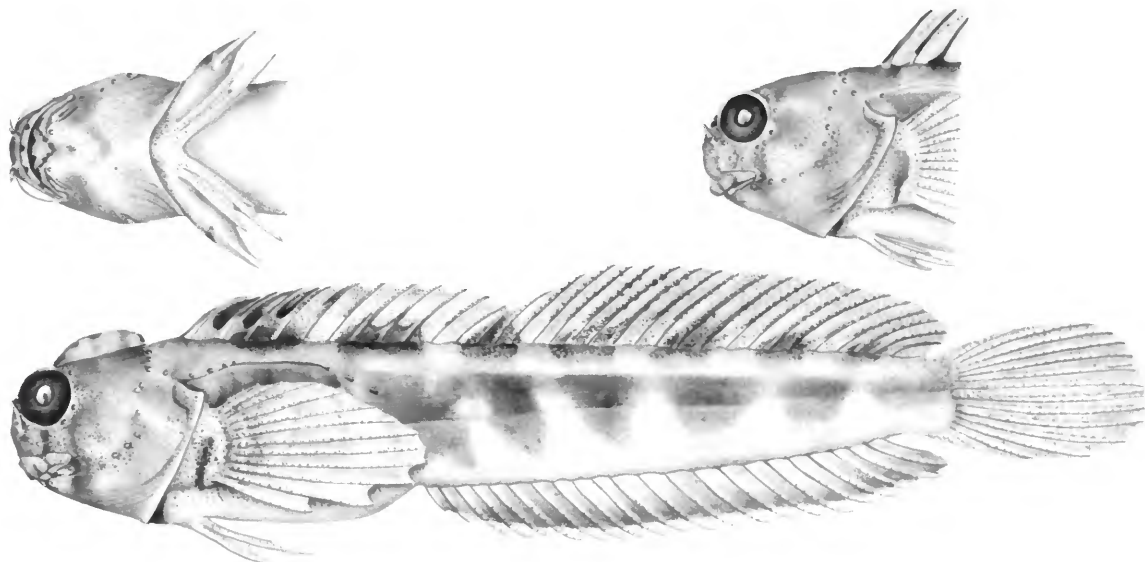


FIGURE 5.—*Dodekablennios fraseri*, paratypes, Mauritius: USNM 216423, male, 29.8 mm SL, entire lateral view and underside of head; RUSI 859, female, 26.2 mm SL, lateral view of head.

### *Mimoblennius* Smith-Vaniz and Springer

We describe two new species of *Mimoblennius* below, bringing the total to four in the genus. All four species are allopatric and quite similar, and we are not confident that nomenclatural distinctions are warranted. The two previously described species have relatively broad distributions (Figure 6) and within each species there are marked population differences (Tables 2 and 3). The two new species are each known from a single locality. The fact that the various populations within each of the widespread species are morphologically linked to the exclusion of any other species, inclined us toward our taxonomic actions. Rather than present a key to the species, we refer the reader to Tables 2-4 and Figure 7 for purposes of identification. The same tables and figure serve as the main bases for comparisons of the new species.

The new material of *Mimoblennius*, including specimens of the previously described species, expands the ranges for certain characters of *Mimoblennius* as given by Smith-Vaniz and Springer (1971). The pertinent characters are as follows:

Dorsal fin XII-XIV (rarely XII or XIV), 15-19 (rarely 15); vertebrae 10 + 25-29 = 35-39; total premaxillary teeth 30-38, total dentary incisoriform teeth 24-32; supraorbital cirri simple to multifid.

**MATERIAL EXAMINED** (of the described species, not available to Smith-Vaniz and Springer, 1971).—*Mimoblennius atrocinctus* (Figure 10). CEYLON: Trincomalee, USNM 214225 (6 specimens, 19.3-29.6 mm SL), 216528 (10, 22.5-35.2), 216530 (15.9), 216533 (28.1), 216677 (2, 25.4-27.0), 216678 (30.9), 216702 (18.3), 216707 (24.9), and 216708 (25.1); Batticaloa, USNM 216529 (9, 18.1-38.7); Hikkaduwa, USNM 216532 (23.8), 216676 (12, 15.6-30.7). TAIWAN: USNM 216531 (39.1). WESTERN AUSTRALIA: Dampier Archipelago, Kendrew Island, WAM P24612 (2, 36.6-46.7), P24644 (35.0), and P25111-035 (5, 17.8-37.4); Lady Nora Island, WAM P25117-028 (25.3).

*Mimoblennius cirrosus* (Figure 11). ISRAEL: Elat, Gulf of Aqaba, BPBM 17877 (29.1) and 18320 (2, 31.1-31.6). SUDAN: Port Sudan, Red Sea, BPBM 19713 (28.2).

Masuda, et al. (1975) reported collecting *Mimoblennius atrocinctus* at Chichi-Jima, Bonin Islands; the Ryukyu Islands; and Wakayama Prefecture, Japan. Based on their illustration and description of the species, we accept these records and have included them as open triangles on the map in

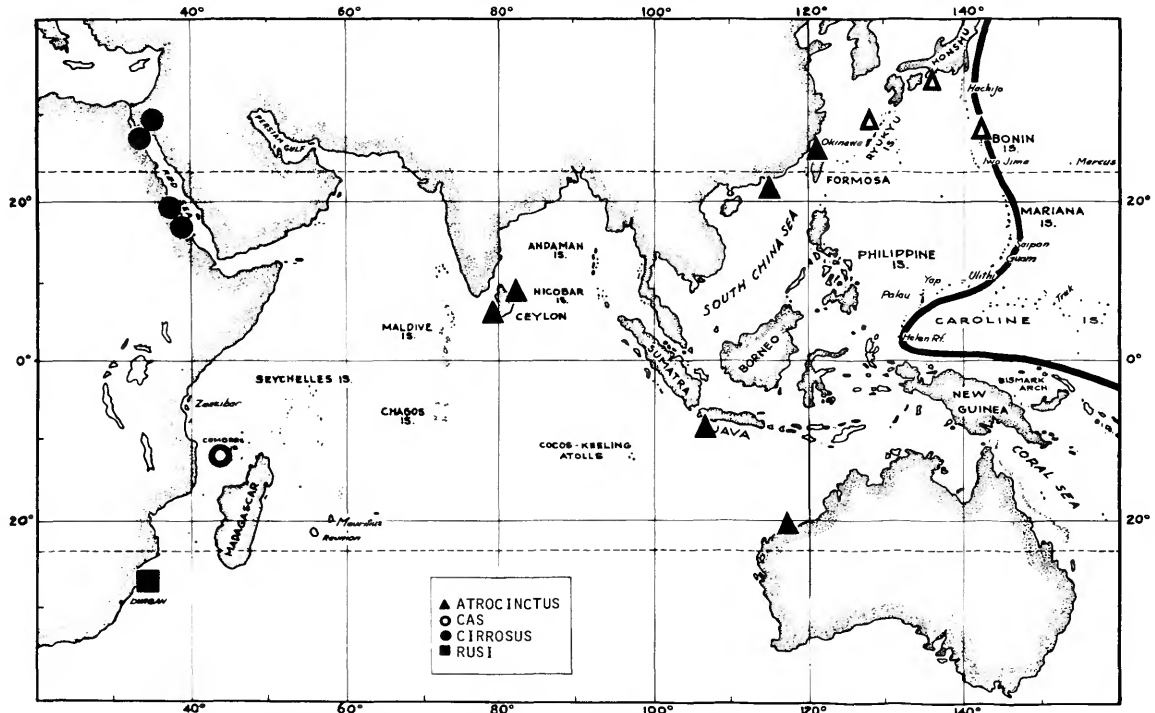


FIGURE 6. — Distribution of the species of *Mimoblennius*. (Open triangles = acceptable literature records of *M. atrocinctus* — see text; heavy line = approximate position of Andesite Line.)

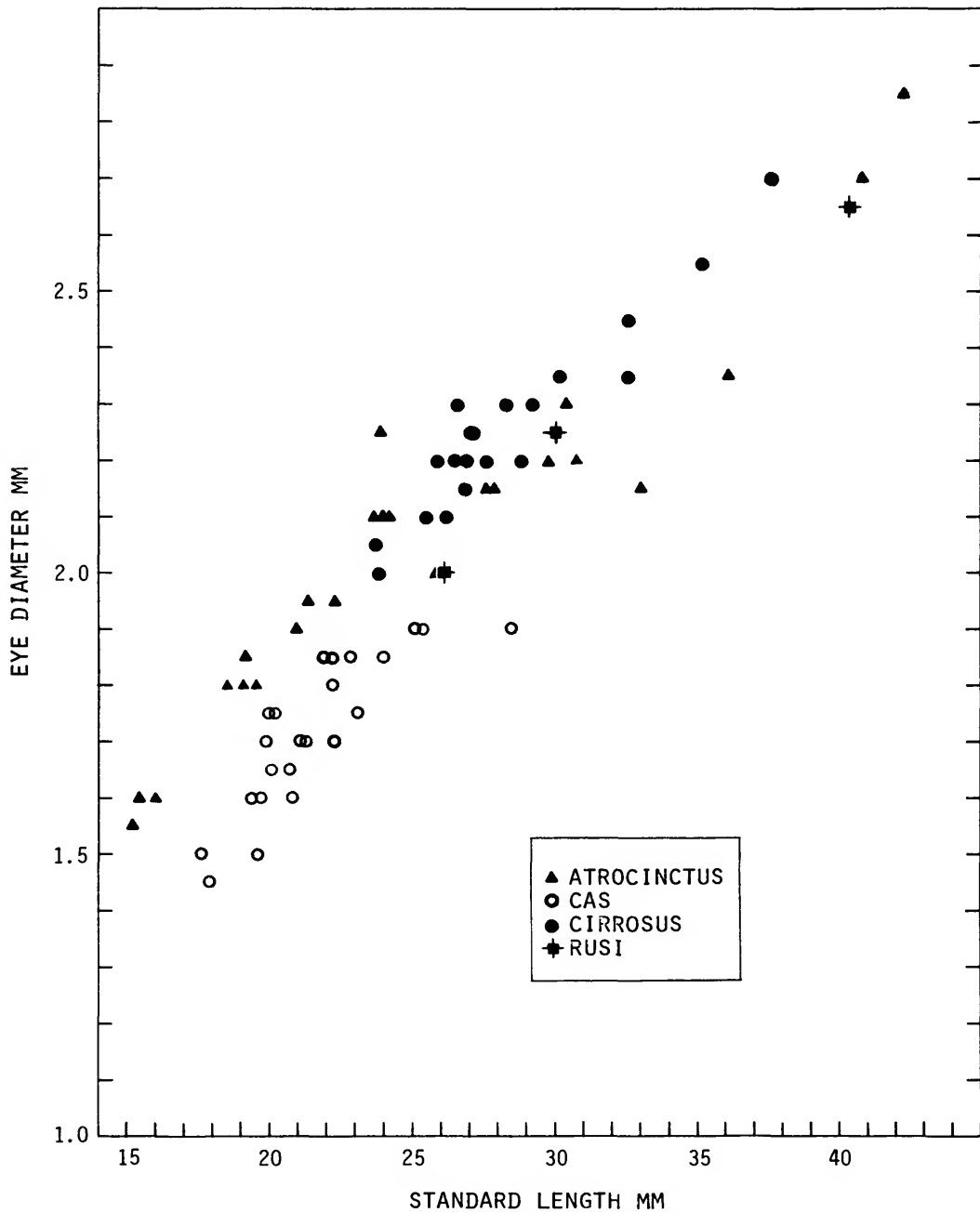


FIGURE 7.—Eye diameter versus standard length in the species of *Mimoblennius*.

Figure 6, which illustrates the known distribution of *Mimoblennius*.

*Mimoblennius* appears to be a continentally restricted genus that does not occur on the Pacific

tectonic plate. The western margin of this plate generally conforms to the Andesite Line of Born (1932), which forms the eastern distribution limits of many fish taxa (Springer, 1971; Springer ms).

TABLE 2.—Frequency distributions for certain meristic characters of the species of *Mimoblennius*

Species	segmented dorsal-fin rays						total dorsal-fin elements					
	15	16	17	18	19	$\bar{x}$	28	29	30	31	32	$\bar{x}$
<u>cas</u>												
Grande Comore		8	64	10		17.0	8	63	10			30.0
<u>rusi</u>												
South Africa			1	2		17.7	2	1				30.3
<u>atrocinctus</u>												
Taiwan					1					1		
Hong Kong				2	3	17.8			2	3	1	30.8
Ceylon				1	1	16.5	1	14	9	1		29.4
Christmas Island	1	12	11						1			
Dampier Archipelago				1	8	18.9					9	32.0
<u>cirrosus</u>												
Gulf of Aqaba				2	9	7	18.3		2	9	7	31.3
Sudan					1						1	
Dahlak Archipelago				3	12	17.8			4	11		30.7

Species	segmented anal-fin rays					caudal vertebrae					
	19	20	21	22	$\bar{x}$	25	26	27	28	29	$\bar{x}$
<u>cas</u>											
Grande Comore	9	64	8		20.0			50	30	2	27.4
<u>rusi</u>											
South Africa		3			20.0			3			27.0
<u>atrocinctus</u>											
Taiwan			1							1	
Hong Kong			2	3	1	20.8				6	28.0
Ceylon	17	8			19.3	3	13	8	1		26.3
Christmas Island			1						1		
Dampier Archipelago				2	7	21.8			3	6	28.7
<u>cirrosus</u>											
Gulf of Aqaba		2	12	4	21.1			7	11		27.6
Sudan					1					1	
Dahlak Archipelago		3	12		20.8			6	8		27.6

***Mimoblennius rusi*, new species**

## FIGURE 8

DESCRIPTION (based on three males; \* denotes character of holotype where variation occurs).—Dorsal fin XII\*–XIII, 17–18\*; total elements 30\* or 31. Anal fin II, 20. Caudal fin: segmented rays 12\* or 13 (9 branched); dorsal procurrent rays 7 or 8\*; ventral procurrent rays 7; total elements 27; ventral hypural plate and hypural 5 autogenous; epurals 2. Pectoral-fin rays 14. Pelvic fin I, 3, spine and innermost ray inapparent except in skeletal preparations. Vertebrae 10 + 27. Total premaxillary teeth 35, 36, or 38\*. Total dentary incisoriform teeth 30 or 32\*; minute posterior canine present on each dentary. Continuous tubular portion of lateral line short, followed posteriorly by several

unconnected, bipored tubes; posteriormost tube lying below vertical from base of 8th\* or 10th dorsal-fin spine. Median supratemporal commissural pores 3.

Fleshy median crest on top of head absent. Simple cirrus over each eye. Nape cirrus a simple flap. Nasal cirri 2–4, present only on posterior rim of anterior nostril.

*Pigmentation:* Head and body pale. Midside of body with series of up to seven large, squarish, dusky blotches separated by pale interspaces; each blotch may consist of fusion of two less distinct bars (large, saddle-like blotch on illustrated specimen in Figure 8 is present only on one side, and is apparently atypical); small, dusky spots scattered variously over pale areas; large, faintly dusky blotches may border pale interspaces ventrally.

TABLE 3. — Frequency distributions for certain meristic characters of the species of *Mimoblennius*

Species	number of supraorbital cirri						number of anterior nostril cirri					
	1	2	3	4	5	$\bar{x}$	1	2	3	4	5	$\bar{x}$
<u>cas</u>												
Grande Comore	76	1				1.0	12	20	1			1.7
<u>rusi</u>												
South Africa	3					1.0	1	1	1			3.0
<u>atrocinctus</u>												
Taiwan		1					1					
Hong Kong	1	2				1.7	1	1	-	-	1	2.7
Ceylon	3	35	1			1.9	7	28	3	1		1.9
Christmas Island		1						1				
Dampier Archipelago		8				2.0	6	2				2.2
<u>cirrosus</u>												
Gulf of Aqaba	1	8	2			2.1	7	3	1			1.5
Sudan			1					1				
Dahlak Archipelago	1	3	3	4	1	1	3.3	3	10			1.8

Species	posteriormost lateral-line pore below dorsal-fin spine											$\bar{x}$
	3	4	5	6	7	8	9	10	11	12		
<u>cas</u>												
Grande Comore						4	12	4	12	10	7	9.7
<u>rusi</u>												
South Africa						1	-	2				9.3
<u>atrocinctus</u>												
Taiwan							1					
Hong Kong										1		
Ceylon				1	2	2	3	7	10	10	4	9.6
Dampier Archipelago						1	2	2	2	1		9.0
<u>cirrosus</u>												
Gulf of Aqaba		1	6	1	3							4.5
Sudan		1										
Dahlak Archipelago				2	5	5						6.2

TABLE 4. — Comparison of the diagnostic characters of the species of *Mimoblennius*

Character	Species			
	<u>rusi</u>	<u>cas</u>	<u>atrocinctus</u>	<u>cirrosus</u>
Number of supraorbital cirri	1	1 (rarely 2)	2-3 (rarely 1)	2-5 (rarely 1)
Cirri on anterior rim of posterior nostril	absent	absent to multifid	absent	simple flap or multifid
Posteriormost lateral-line pore below vertical from dorsal-fin spine (see Table 2)	8-10	8-12 (rarely 7)	5-12	3-7
Total premaxillary teeth (N)	35-38 (3)	34-37 (14)	30-37 (27)	30-34 (13)
Total dentary incisoriform teeth (N)	30-32 (3)	26-29 (15)	24-32 (27)	24-30 (14)
Dark spot between first two dorsal-fin spines	present	absent	present	present
Eye diameter (see Figure 7)	possibly same as for <u>cas</u>	smaller than <u>atrocinctus</u> and probably <u>cirrosus</u> at SL less than 30 mm	larger than <u>cas</u> at SL less than 30 mm	possibly same as <u>atrocinctus</u>
Maximum standard length (N)	40.2 (3)	32.4 (141)	46.7 (53)	37.0 (34)

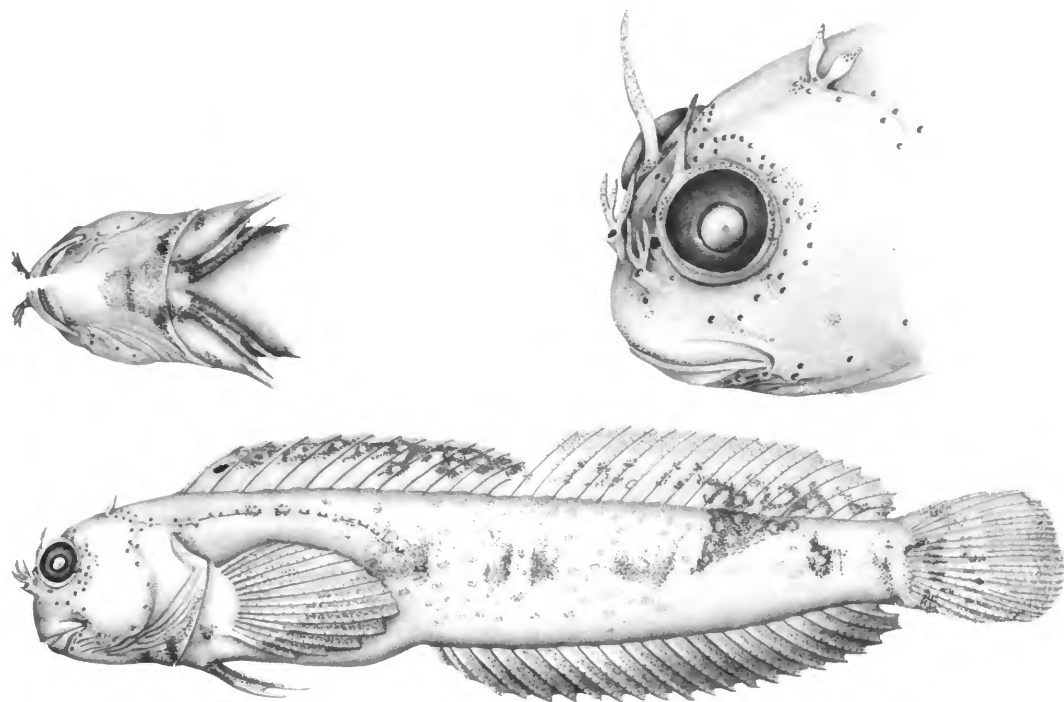


FIGURE 8. —*Mimoblennius rusi*, USNM 216554, paratype, male, 40.3 mm SL, Kwazulu, South Africa.

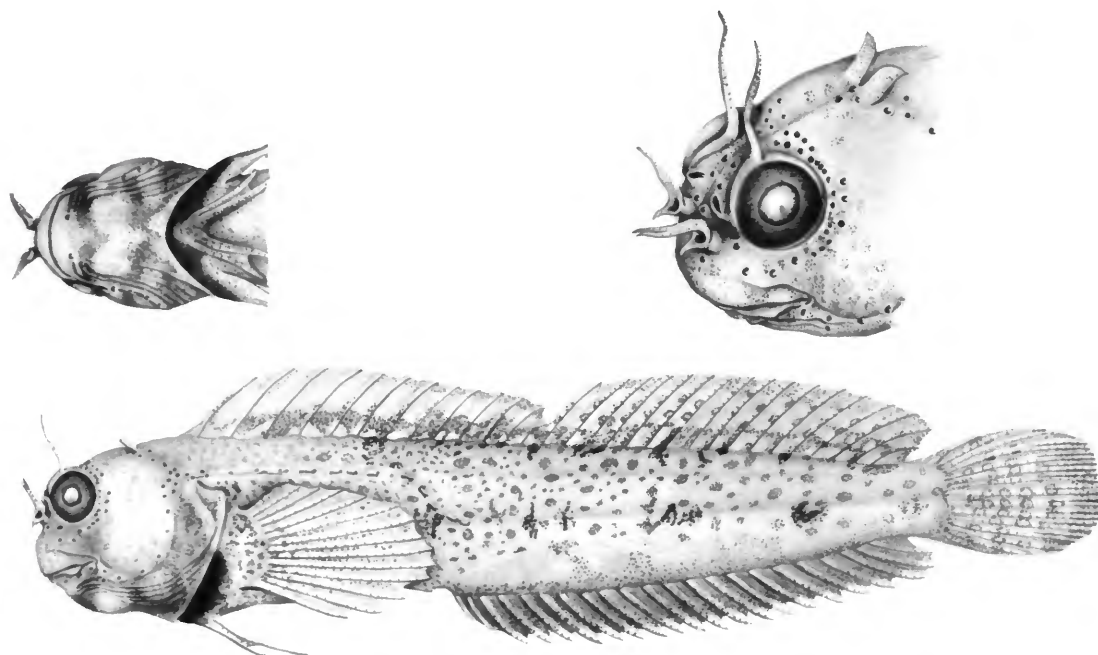


FIGURE 9. —*Mimoblennius cas*, USNM 216307, paratype, male, 32.3 mm SL, Grande Comore Island.

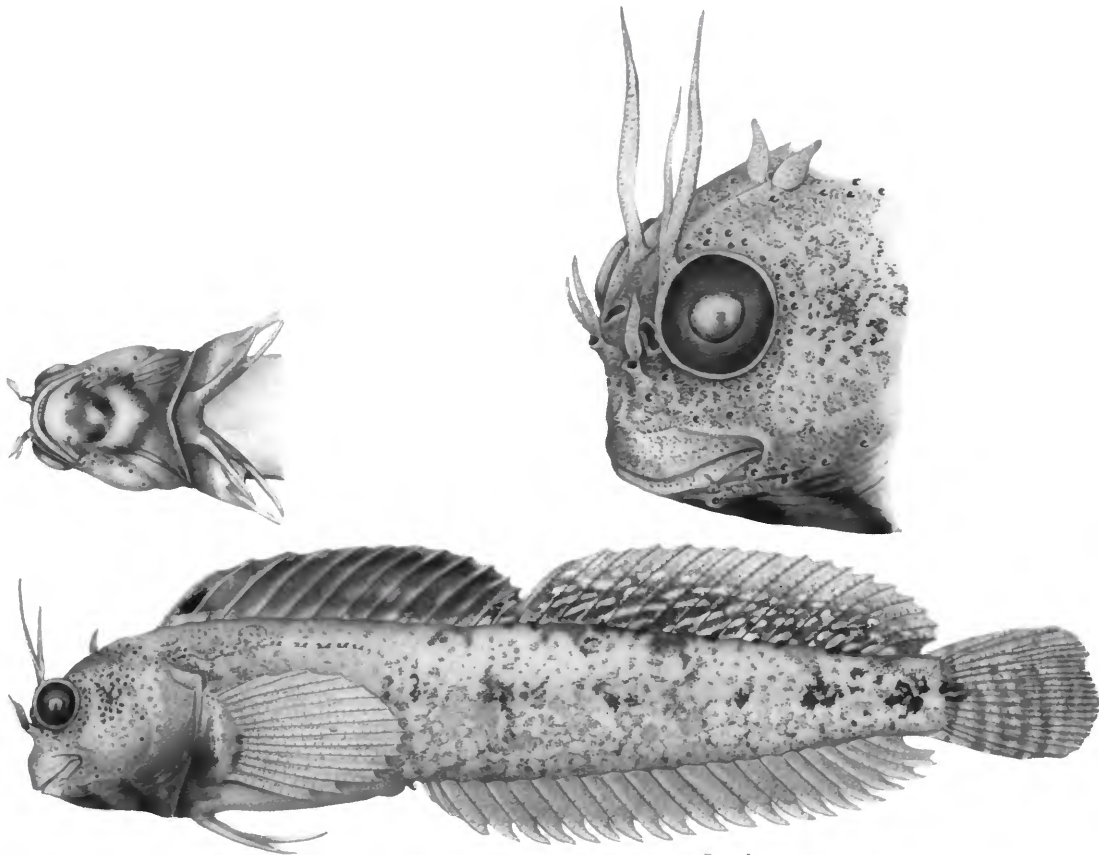
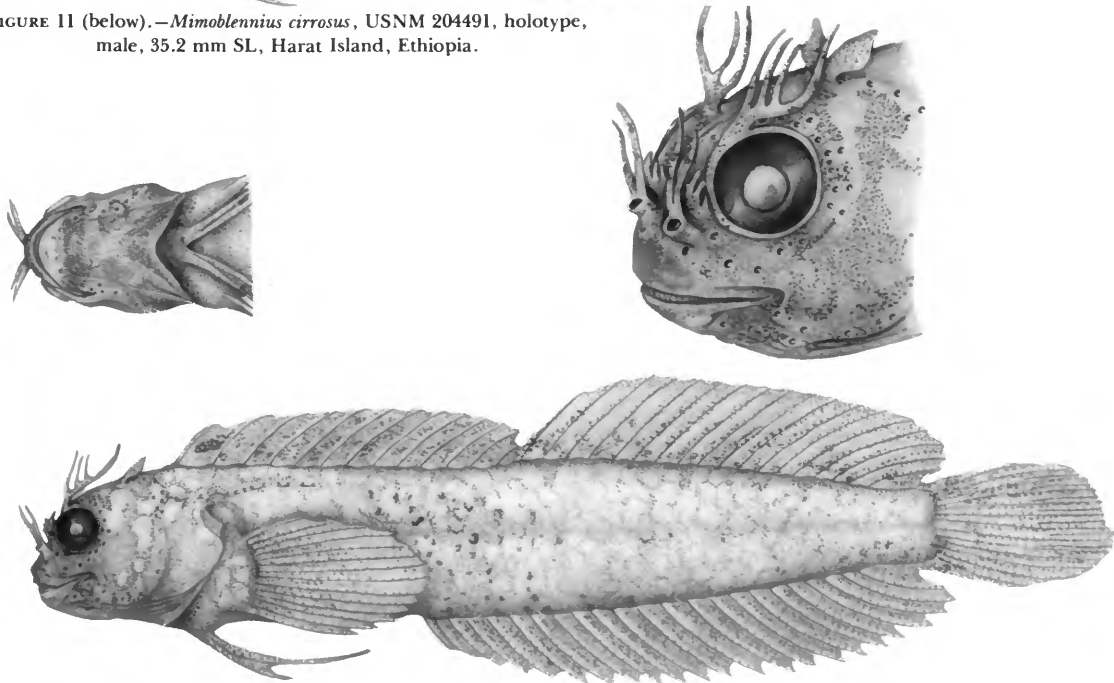


FIGURE 11 (below).—*Mimoblennius cirrosus*, USNM 204491, holotype, male, 35.2 mm SL, Harat Island, Ethiopia.



Venter variable, immaculate in two paratypes, finely dotted in holotype. Ventral prepectoral area with dusky spot, which may be loosely associated with dusky area between ventral pectoral-fin base and pelvic fins. Pre- and interpelvic area dusky to immaculate.

Side of head with dusky blotch near orbital margin posteriorly in two specimens, blotch absent in third; snout region dusky anteriorly; ventral surface of head with two or three almost parallel, dark, transverse bars (chevrons), anteriormost bar just posterior to level of rictus, squarish or slender, may be absent or connected to second bar by paler dusky pigment; second bar may be connected to posteriormost by paler dusky pigment; posteriormost bar on or near posterior margin of gill membrane ventrally, bar may be incomplete across isthmus.

Dorsal fin: spinous portion with black spot at midlevel of membrane between first two spines, remainder of portion immaculate basally with dusky mottling distally; segmented-ray portion with irregular dusky mottling basally, followed dorsally by immaculate stripe, and narrow, finely dusky distal stripe. Anal fin dusky, darker distally, with tips of most rays immaculate (smallest specimen with basal half of fin immaculate). Caudal fin with melanophores outlining rays; narrow band of sparse melanophores distally; dusky spots on middle to lower rays. Pectoral-fin rays outlined with melanophores, uppermost portion of fin immaculate, becoming dusky ventrally. Pelvic-fin immaculate or dusky basally.

ETYMOLOGY.—The specific epithet, *rusi*, is an arbitrary combination of letters, here treated as a noun in apposition. RUSI is also the acronym for the J.L.B. Smith Institute of Ichthyology, Rhodes University.

COMPARISONS (Table 4).—*Mimoblennius rusi* is most similar to *M. cas*, which is also its geographically closest congener. Both species agree in typically having simple supraorbital cirri, whereas the other two *Mimoblennius* species typically have two or more supraorbital cirri. *Mimoblennius rusi* also probably agrees with *M. cas* in having a relatively smaller eye (Figure 7) than does either of the other two species, but more specimens of *M. rusi* are needed to confirm this character. *Mimoblennius rusi* differs from *M. cas* in having a dark spot in the membrane between the first two dorsal-fin

spines (lacking in *M. cas*), in having more dentary incisoriform teeth (the smallest specimen of *M. rusi*, 30 mm SL, has more teeth than any of the specimens of *M. cas* examined for this character, including specimens over 30 mm SL), and *M. rusi* attains a larger size than *M. cas*. Except for lacking the dark dorsal-fin spot, we have seen specimens of *M. cas* that have color patterns essentially the same as found in *M. rusi*.

HOLOTYPE.—RUSI 800, male, 30.0 mm SL; South Africa (Indian Ocean coast), Kwazulu, reef 6.5 km N of Island Rock, in 2 m deep gully with sand bottom, open to sea (about 3.9 km N of Soowana Bay), 27°13'21"S, 032°47'48"E; 28 July 1976; R. Winterbottom, et al; field number RW76-22; out of former RUSI 76-21.

PARATYPES.—RUSI 801 (26.1 mm SL), male, and USNM 216554 (40.3 mm SL), male, both taken with holotype (both out of former RUSI 76-21).

#### *Mimoblennius cas*, new species

FIGURE 9

DESCRIPTION (\* denotes characters of holotype where variation occurs).—Dorsal fin XII–XIV (usually XIII\*), 16–18 (17\*); total elements 29–31 (30\*). Anal fin II, 19–21 (20\*). Caudal fin: segmented rays 13 (9 branched, once); dorsal procurrent rays 6–9\*; ventral procurrent rays 6–8 (7\*); total elements 26–29\*; ventral hypural plate and hypural 5 autogenous; epurals 2. Pectoral-fin rays 13–15 (14\*; rarely 13 or 15). Pelvic fin I, 3, spine and innermost ray inapparent except in skeletal preparations. Vertebrae 10 + 27\*–29. Total premaxillary teeth 34–37 (holotype not counted). Total dentary incisoriform teeth 26–29; minute posterior canine usually present on each dentary. Continuous tubular portion of lateral line short, followed by several unconnected, bipored tubes, posteriormost tube lying below vertical from base of 7th–12th (10th\*) dorsal-fin spine. Median supratemporal commissural pores 3.

Fleshy median crest on top of head absent. Simple cirrus (rarely two) over each eye. Nape cirrus a simple flap. Cirri on posterior rim of anterior nostril 1\*–3, on anterior rim 0–3 (usually 1\*), on anterior rim of posterior nostril 0\*–multifid (much reduced in size), on posterior rim 0.

Pigmentation: Head and body generally pale. Sides varying from almost immaculate to bearing



midlateral series of up to six large, irregular, dark spots separated by paler interspaces; numerous tiny, circular spots scattered dorsally over paler areas; midlateral series of large spots may be linked, forming stripelike marking; up to six dusky saddle-like marks present along dorsal body contour; large, faintly dusky blotches may extend dorsally from anal-fin base into pale interspaces between midlateral series of dark spots.

Dorsal fin: spinous portion with dusky basal stripe separated by immaculate area from narrower, dusky distal margin, which often occurs only posteriorly; segmented-ray portion with two or three linear series of dusky spots, often consisting of circles of melanophores centered on rays. Anal fin uniformly dusky with tips of elements immaculate; small specimens with fin unpigmented basally. Caudal fin variable, often with up to five irregular bands composed of circles of dusky melanophores centered on rays; distal margin with broad, dusky band. Pectoral fin variably dusky in males, pigment restricted to rays and to membrane distally between ventral rays in females. Pelvic fin dusky basally in males, immaculate in females.

ETYMOLOGY.—The specific epithet, *cas*, is an arbitrary combination of letters, here treated as a noun in apposition. CAS is also the acronym for the California Academy of Sciences.

COMPARISONS (Table 4).—See "Comparisons" under *Mimoblennius rusi*.

HOLOTYPE.—CAS 33603, male, 28.5 mm SL; Grande Comore Island, lava flow tidal flats ca. 1 km N of Hotel Coelacanthé; depth, to 5 m; surge channels, tidepools, and over edge of dropoff; 15 Feb 1975; J. E. McCosker, M. D. Lagios, L. Gunther; field number, JEM 75-11.

PARATYPES.—All Grande Comore Island. CAS 36965 (28, 14.9-25.3 mm SL) and USNM 216308 (10, 18.7-25.9, including 5 cleared and stained), taken with holotype. CAS 33430 (29, 16.2-32.4), and (all out of CAS 33430) ANSP 137863 (20, 15.2-29.7), BPBM 20466 (20, 16.4-26.5), and RUSI 914 (20, 21.4-30.5), N'Gouni Reef, ca. 0.5 km N of Iconi; surge channel at far end of small cove; rock and coarse coral sand bottom; depth, to 5 m; 1 Mar 1975; J. E. McCosker, S. Mead, D. Powell, J. Breeden; field number, JEM 75-29. BMNH 1977.1.10.4-12 (9, 18.2-31.4), lava flow tidal flats ca. 1 km N of Hotel Coelacanthé; depth, to 2 m; 9 Feb 1975; J. E. and S. McCosker, M. D. Lagios, J. Breeden, L. Gunther; field number, JEM 75-4 (formerly CAS 33248). USNM 216307 (4, 20.2-32.3), lava flow tidal flats ca. 1 km N of Hotel Coelacanthé; depth, to 2 m; 8 Feb 1975; J. E. and S. McCosker, M. D. Lagios, J. Breeden; field number, JEM 75-2 (formerly CAS 33041).

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