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A Review of the Blenniid Fishes of the Genus *Ophioblennius* Gill

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A review of the genus *Ophioblennius, sensu strictu,* indicates the presence of two species each represented by two subspecies. *O. s. steindachneri* is widespread in the eastern Pacific from California to Peru but absent from Clipperton Island where a new endemic subspecies, *O. s. clippertonensis,* is described. *O. a. atlanticus* is known from the west coast of Africa and adjacent islands to the eastern coast of Brazil. *O. a. macclurei* is widespread in the Caribbean Atlantic.

SEVERAL genera and species of salariine blennies have been described which were based on larvae. These larvae were considered to form a natural group differentiated from the other blenniids in having hooked canines anteriorly in both jaws and forked caudal fins. Reid (1943), unaware of some species, last reviewed this larval group and described new genera and species. Norman (1943), missing Reid's paper, listed the nominal genera and species, described a new subgenus, and gave the group subfamily rank, Ophioblenniinae, after the oldest genus *Ophioblennius* Gill (1860). At the same time, Norman, not cognizant of the relationships of these larvae, placed the adults in a different subfamily, Salariinae.

De Beaufort and Chapman (1951) were first to recognize the ophioblenniids as representing larvae, and they synonymized one of the larval genera, *Gloriella* Schultz, with *Cirripectus* Swainson. They also synonymized one of the nominal *Ophioblennius* species with a *Cirripectus.* However, it is inherent in their discussion that they recognized *Ophioblennius* as the valid oldest name for a genus of American blennies although they did not link it with any species. Because of this latter fact and the lack of critical examination of the several nominal ophioblenniid larval species, studies are still appearing incorporating incorrect and misleading nomenclature relating to both the larvae and adults. The present study attempts to bring together that information relating to the systematics of one genus, *Ophioblennius, sensu strictu.* It is perhaps unfortunate that this generic name holds priority as it has also come to denote a particular type of larva in the same manner as did the name *Leptocephalus.*

I have excluded mention of several nominal species known only under the genus *Ophioblennius* because they are unrelated to the genus in the strict sense. I am unable to refer some of them to other blenniid genera. The nominal species not treated here can be found in either Reid's or Norman's papers.

Through the generous cooperation of colleagues here and abroad I have been able to examine or obtain information from most of the types and much of the available material. I wish to thank the following individuals and their institutions for their efforts on behalf of this study: M. L. Bauchot, J. E. Böhlke, D. K. Caldwell, W. I. Follett, H. H. Hildebrand, P. Kähsbauer, E. A. Lachner, J. E. Morrow, C. R. Robins, R. Rosenblatt, L. P. Schultz, D. W. Tucker, B. W. Walker, W. B. Young.

Drs. E. A. Lachner and B. B. Collette read the manuscript critically and offered valuable suggestions for its improvement.

The following abbreviations have been used in the material lists: ANSP—Academy of Natural Sciences of Philadelphia; BMNH—British Museum of Natural History; BOC—Bingham Oceanographic Collection; CAS—California Academy of Sciences; FSM—Florida State Museum, Gainesville; BLBG—Bureau of Commercial Fisheries Biological Laboratory, Brunswick, Georgia; MNHN—Museum National de Histoire Naturelle, Paris; NMV—Naturhistorisches Museum, Vienna; SIO— Scripps Institute of Oceanography; UCC—University of Corpus Christi, Texas; UCLA—University of California at Los Angeles; UMML—University of Miami Marine Laboratory, Florida; USNM—United States National Museum; VM—Vanderbilt Museum, New York.

Ophioblennius Gill

Blennophis Valenciennes *in* Webb and Berthelot, 1843, Iles Canaries. Poissons, p. 60 (type *B. webbi* Valenciennes by monotypy; genus preoccupied by *Blennophis*

[1] The research for this study was conducted while the author was on the staff of the Florida State Board of Conservation Marine Laboratory. This paper constitutes Contribution No. 61 of that institution.

Swainson, 1839, Nat. Hist. Class. 2, p. 75, a genus of Clinidae).

Ophioblennius Gill, 1860, Proc. Acad. Nat. Sci. Philad. 12:103 (substitute name for *Blennophis* Valenciennes).

Labroblennius Borodin, 1928, Bull. Vanderb. Oceanogr. Mus. 1 (1):31 (type *L. nicholsi* Borodin by monotypy).

Cynoscartes Norman, 1943, Ann. Mag. Nat. Hist. 11, 10 (72):810 (a subgenus, type *Salarias atlanticus* Valenciennes by original designation).

Hepatoscartes Fowler, 1944, Acad. Nat. Sci. Philad., Monogr. 6:230 (type *H. umbrifasciatus* Fowler by monotypy).

Dorsal fin consisting of 12 flexible spines (11 or 13 in less than one per cent of specimens) and 19–24 segmented unbranched rays; the last dorsal spine much shorter and slenderer than any other dorsal element; scarcely any indentation separating the spinous and rayed portions of the fin in adults. Anal fin composed of two soft spines and 20–25 segmented rays, all unbranched except the last which is split to the base (here counted as one). Pectorals with 14–16 (usually 15) simple rays. Caudal with 13 segmented rays, the middle nine of which are usually branched; the fin forked in larvae, becoming irregularly margined in adults, but with the ventral rays always the longest. Pelvics with one spine (not visible externally) and four simple rays, the innermost of which is much shorter and slenderer than the others and frequently difficult to see.

A group of cirri present on the margin of the anterior nostril; a single cirrus above each eye; either a pair of cirri (Atlantic species) or a small patch of three or more cirri (Pacific species) on either side of the nape. In one Pacific specimen there were two cirri in one nape patch and four in the other. In specimens over 90 mm standard length (S. L.) of *O. atlanticus* the two nape cirri may become stout and develop several branches. In the Pacific *O. steindachneri* each cirrus of the nape patch may branch considerably in specimens over 80 mm S. L. The interspace between the two patches of nuchal cirri is considerably broader than the linear base of either patch.

Lateral line of two disconnected portions; the dorsal (anterior) portion beginning as a gentle curve and extending posteriorly for about half the body length; the posterior (ventral) portion beginning as a sharp or gentle downward curve just below and anterior to the end of the dorsal portion, and extending mid-laterally on the sides to the mid-base of the caudal fin. The posterior portion of the lateral line is not developed on the larvae.

Dentition of the larval stage (ophioblennius) is characterized by four upward and outward curving strong canines anteriorly in the upper jaw and four downward and outward curving canines anteriorly in the lower jaw. There is an upward and rearward curved canine on either side of the lower jaw which is well separated from the anterior canines. In metamorphosing larvae the comblike teeth of the adult are also present; these number over 175 (usually over 200) in each jaw. The anterior canines of both jaws are apparently lost simultaneously during metamorphosis as all undamaged specimens examined either had all or none of them. The posterior canines of the lower jaw are retained in the adult, where they become stronger and more recurved. No palatine teeth are present.

The larvae are pale and have the head comparatively compressed. The head broadens considerably and the body becomes dark violet brown after metamorphosis. The body is sometimes irregularly banded in Pacific and eastern Atlantic adults.

There is a dark ocellus behind the eye, large (frequently equal to eye diameter), with a distinct pale border in most Pacific and some eastern Atlantic specimens; small (about equal to pupil) without a distinct pale border in most Atlantic specimens. Frequently the ocellus is obscured by the dark coloration of the head.

Sexual dimorphism is present in adults. Males bear a fleshy rugose knob on each anal spine; the anterior knob contains the genital opening. Females incorporate and obscure the first anal spine in a triangular fleshy fold which embodies the genital opening; the second spine is unmodified.

The larvae of *Ophioblennius* are frequently taken pelagically over deep water. The adults are restricted to shallow waters and dwell among rocks and coral reefs in the warm latitudes of the Atlantic and eastern Pacific; unmetamorphosed larvae are frequently taken with adults.

The largest larva of *O. atlanticus* was 58 mm but few seen were over 42 mm and

the smallest metamorphosed specimen was slightly less than 32 mm. The largest larva of *O. steindachneri* was 66 mm but few seen were over 49 mm and the smallest metamorphosed specimen was 39 mm.

The genus comprises two species each with two subspecies, one of which is described as new. *Ophioblennius steindachneri* can always be separated from *O. atlanticus* by the nuchal cirri which never total less than six in the two patches (two or three in a single patch in less than one per cent of specimens) in the former and never more than four in the latter (invariably two in a single patch), with the exception in the latter that in some large adults the nuchal cirri become dendritic, but obviously arising from two basal cirri on each side of the nape. The species are allopatric.

The meristic separation which I have chosen for subspecies recognition is represented in Tables 1 and 2. Considered also was the fact that in each species the geographic range of at least one subspecies comprised an extensive continuum covering several thousand miles of coastline while the other subspecies was either extensively distributed or not, but in each instance indicated characters (counts) which were quite divergent even though overlapping. This method has served as the rationale for my past recognition of subspecies in blennioids.

According to Norman (1943) who used the name *Cynoscartes* for the adults, *Ophioblennius* is closest to *Scartichthys* from which it differs in having the posterior canines strongly developed, as opposed to weak or absent, the lateral line interrupted, as opposed to continuous, the dorsal not indented (but indented somewhat in larvae), and in having more dorsal and anal fin rays (no overlaps).

Ophioblennius steindachneri steindachneri Jordan and Evermann

Fig. 1, Tables 1 and 2

Blennophis (Ophioblennius) webbi, Steindachner, 1879, Ichth. Beitr. 8:41 (5 specimens 70 mm, from Navidad near Mazatlán and the Tres Marias Islands, Mexico, a misidentification).

Ophioblennius steindachneri Jordan and Evermann, 1896, U. S. Comm. Fish and Fish. Rept. Comm. 21 (1895) :472 (name with no description).

Ophioblennius steindachneri Jordan and Evermann, 1898, Bull. U. S. Nat. Mus. 47 (3) :2401 (near Mazatlán and Tres Marias Islands, Mexico; no specimens seen by them; no types designated. Presumably based on Steindachner's, 1879, description).

Labroblennius nicholsi Borodin, 1928, Bull. Vanderbilt Oceanogr. Mus. 1 (1) :31 (Costa Rica, Pacific Ocean).

Ophioblennius pinchoti Fowler, 1932, Proc. U. S. Nat. Mus. 80 (6) :13 (Charles Island, Galápagos).

Ophioblennius lanieri Seale, 1940, Allan Hancock Pacific Exped. 9 (1) :40 (Galápagos).

Hepatoscartes umbrifasciatus Fowler, 1944, Acad. Nat. Sci. Philad. Monogr. 6:230 (Playa Muerto, Panama).

Ophioblennius erythraeus Fowler, 1944, Acad. Nat. Sci. Philad. Monogr. 6:251 (Santelmo Bay, Rey Island, Perlas Group, Panama).

Ophioblennius s. steindachneri is presumably based on a description by Steindachner of material he misidentified as *Blennophis webbi* (= *O. atlanticus*). I have examined one of Steindachner's specimens (see material below), the only one available to me and though it is in poor condition I have elected to designate it as lectotype. The specimen is 51.4 mm S. L., D. XII, 22; A. II, 23; pectorals 15–15; nuchal cirri 8–6. It is a larva and has the full complement of larval canine teeth.

Borodin gave incorrect counts for the types of *Labroblennius nicholsi.* I have examined his specimens and find them to be large larval stages of *O. s. steindachneri. O. pinchoti* is based on an early larva of *O. s. steindachneri* which has not begun to darken. *Hepatoscartes umbrifasciatus* is one of the few descriptions of *O. s. steindachneri* as an adult. Most other Pacific references to the adult have employed the trivial name *atlanticus.* Counts I have made from an X ray taken by W. I. Follett, of the badly damaged holotype of *O. lanieri* indicate the presence of 12 spines and 22 rays in the dorsal fin. Although the distal portions of the last few spines are for the most part missing, the X ray shows an abrupt change in the size and nature of the fin ray insertions after the twelfth element. Since the insertions are essentially the same through the twelfth dorsal element of *Ophioblennius,* and markedly enlarged after that, I have assumed the condition noted in the X ray

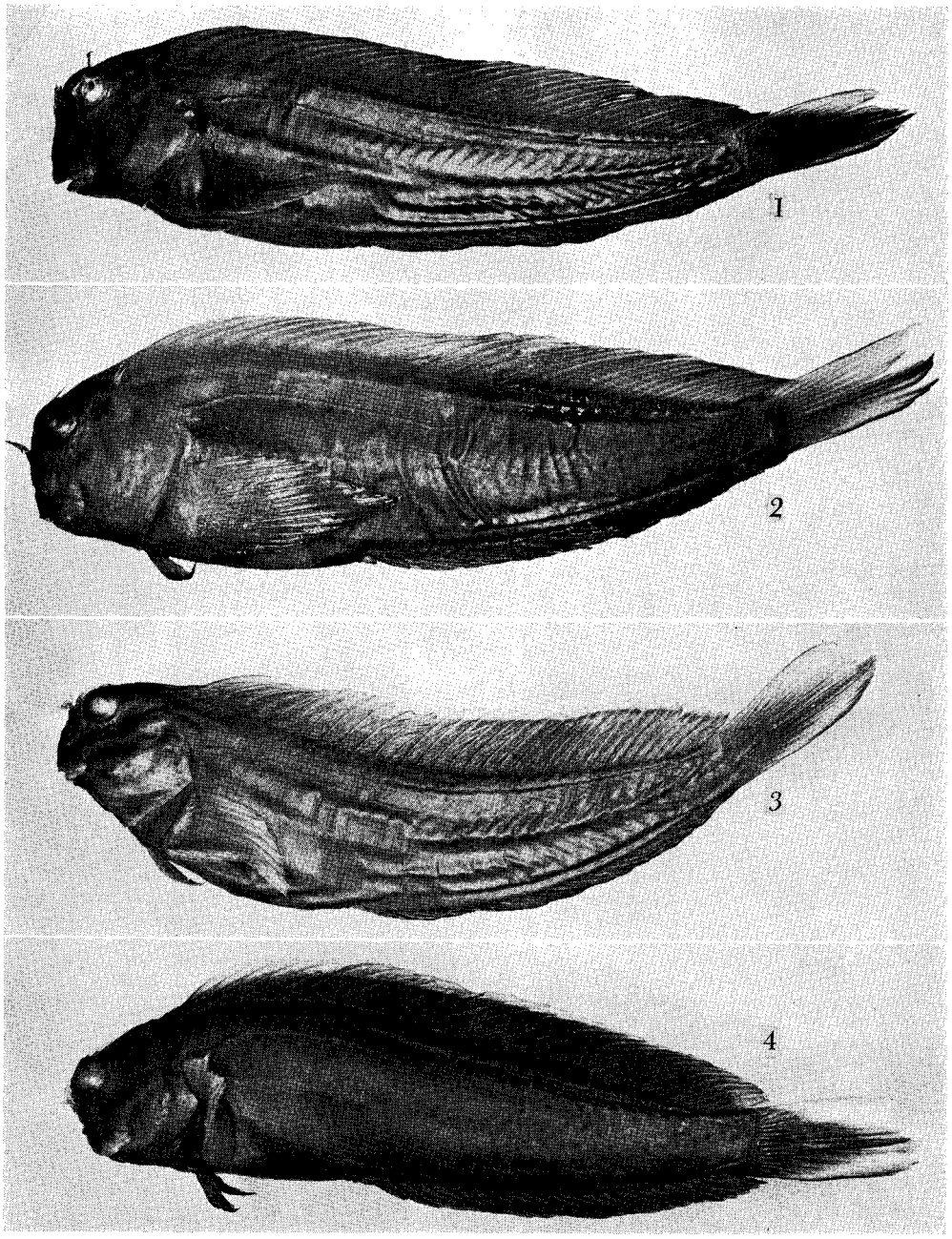

Fig. 1. *Ophioblennius s. steindachneri,* UCLA W52–258, a female, 81 mm standard length, from San Lucas Bay, Baja California, Gulf of California, Mexico.

Fig. 2. *Ophioblennius s. clippertonensis,* UCLA W58–296, a paratypic male, 79 mm standard length, from Clipperton Island, Pacific Ocean.

Fig. 3. *Ophioblennius a. atlanticus,* BMNH 1953.11.1.518–525, a male, 93 mm standard length, from Gorgolho, near Funchal, Madeira Islands.

Fig. 4. *Ophioblennius a. macclurei,* UMML 4684, a male, 71 mm standard length, from the southwest end of Key Biscayne, Dade County, Florida.

TABLE 1. TOTAL NUMBER OF DORSAL AND ANAL FIN RAY ELEMENTS IN SPECIMENS OF THE FOUR SUBSPECIES COMPRISING THE GENUS *Ophioblennius*

	DORSAL						ANAL					
	31	32	33	34	35	36	22	23	24	25	26	27
O. a. macclurei												
Bermuda	—	3	—	—	—	—	—	3	—	—	—	—
North Carolina	—	1	—	—	—	—	—	1	—	—	—	—
Florida	3	11	1	—	—	—	2	14	—	—	—	—
Bahamas	4	23	1	—	—	—	5	23	—	—	—	—
Alacran Reef, Gulf of Mexico	17	28	4	—	—	—	12	37	—	—	—	—
St. Andrew's Island	5	10	—	—	—	—	3	12	—	—	—	—
Cuba	4	15	—	—	—	—	4	15	—	—	—	—
Jamaica	6	40	2	—	—	—	5	42	1	—	—	—
Haiti	2	—	—	—	—	—	1	1	—	—	—	—
Virgin Islands	5	20	—	—	—	—	1	23	1	—	—	—
Anguilla Island	1	5	—	—	—	—	1	5	—	—	—	—
Barbados	2	9	—	—	—	—	1	10	—	—	—	—
Petit Ueirs	1	2	—	—	—	—	1	2	—	—	—	—
Venezucla	4	14	1	—	—	—	—	19	—	—	—	—
Panama	1	5	—	—	—	—	2	5	—	—	—	—
O. a. atlanticus												
Madeira Islands	—	—	2	4	1	1	—	—	3	5	—	—
Canary Islands	—	—	3	3	—	—	—	—	1	3	—	—
Ascension (or St. Helena)	—	—	—	2	—	—	—	—	—	2	—	—
Brazil[1]	—	—	(1)	(3)1	(3)	(1)	—	—	—	(5)1	(3)	—
O. s steindachneri												
Mexico												
Guadalupe Islands[2]	—	—	1	2	—	—	—	—	—	3	—	—
Guaymas	—	—	1	5	1	—	—	—	—	7	—	—
Cape San Lucas	—	—	1	45	4	—	—	—	2	48	—	—
Mazatlán	—	—	1	—	1	—	—	—	—	2	—	—
Tres Marias Islands	—	—	—	1	—	—	—	—	—	1	—	—
Revillagigedo Islands	—	—	2	20	3	—	—	—	1	24	—	—
Costa Rica	—	—	1	1	—	—	—	—	1	1	—	—
Panama	—	—	6	34	3	—	—	—	6	35	4	—
Galápagos Islands	—	—	—	17	—	—	—	—	—	18	—	—
Colombia	—	—	—	1	—	—	—	—	—	1	—	—
Peru	—	—	—	6	—	—	—	—	—	7	—	—
O. s. clippertonensis												
Clipperton Island	—	—	—	5	46	9	—	—	—	4	55	1

[1] Parenthetical frequencies after Pinto (1955). See discussion under *O. a. atlanticus*.
[2] Counts furnished by Richard Rosenblatt from S10 60–14.

to be the break between spines and rays. The specimen is smaller than any other member of this species I have examined and it is possible that the absence of cirri is due to their not having formed, or possibly as a result of damage, if the present condition of the specimen is indicative of its condition at the time of description. For the anal fin the X ray shows one spine, the base only of a second element presumably a spine, and 22 rays, the last split to the base (according to Follett, personal communication); thus the count II, 22, which is a known variant from the normal II, 23. *Ophioblennius erythraeus* was described as being close to *O. pinchoti,* but only nebulous differences were mentioned and they do not exist in fact.

This subspecies is differentiated from *O. s. clippertonensis* in having a lower average number of dorsal and anal fin ray elements and a higher average number of cirri in both nuchal patches (Tables 1 and 2).

TABLE 2. TOTAL NUMBER OF NUCHAL CIRRI (BOTH PATCHES) IN SPECIMENS (46–100 MM STANDARD LENGTH) OF *Ophioblennius s. steindachneri* AND *Ophioblennius s. clippertonensis*

	6	7	8	9	10	11	12	13	14	15	16	17	18	19 – 27
steindachneri														
Mexico														
Guaymas	—	—	—	—	1	3	2	—	—	—	—	—	—	—
Cape San Lucas	—	—	—	1	1	6	18	3	2	4	1	—	1	2 —
Mazatlán	—	—	—	—	—	—	1	1	1	—	—	—	—	— —
Revillagigedos	—	—	—	—	2	4	7	2	2	1	1	—	—	— —
Costa Rica	—	—	—	—	—	—	1	1	—	—	—	—	—	— —
Panama	—	—	1	1	4	3	14	8	5	6	—	—	—	— —
Galápagos Islands	—	—	—	—	—	3	7	5	—	—	2	—	—	— —
Colombia	—	—	—	—	—	—	1	—	—	—	—	—	—	— —
Peru	—	—	—	—	—	1	2	1	—	2	—	—	1	— —
clippertonensis														
Clipperton Island	1[1]	3	10	8	18	9	3	2	1	—	—	—	—	— 1[2]

[1] Two on one side and four on the other.
[2] Seven on one side and twenty on the other.

MATERIAL

Mexico.—ANSP 90812 (4:50–121 mm S. L.) northwest shore line of Bahia de Los Muertos, Baja California, Gulf of California; USNM 167171 (4:71–113) Bahia Santa Inez, Baja California; USNM167925 and 167926 (7:50–111) Guaymas, Sonora, Gulf of California; UCLA W52–258 (50:45–141) San Lucas Bay, Cape San Lucas, Baja California; USNM 30887 and 47429 (3:83–103) Mazatlán, Sonora; NMV, no number, (1:51, lectotype of *Ophioblennius steindachneri*) Tres Marias Islands; UCLA W53–49 (60:47–120) Binner's Cove, Socorro Island, Islas Revillagigedo.

Costa Rica (*Pacific*).—VM, no number, (2:63–66, syntypes of *Labroblennius nicholsi*).

Panama (*Pacific*).—ANSP 70211 (1:115, holotype of *Hepatoscartes umbrifasciatus*) Playa Muerto; ANSP 70212–41, 70300–306 (37:37–112, paratypes of *H. umbrifasciatus*) Playa Muerto; ANSP 69997 (1:48, holotype of *Ophioblennius erythraeus*) San Telmo Bay, Rey Island, Perlas Islands; UCLA W53–283 (17:41–116) Isla San Jose, Perlas Islands; USNM 144802 (2:39–60) Taboguilla Island; UCLA W53–137 (51:44–68) Bahia Chatham, Cocos Islands.

Galápagos Islands.—USNM 101930 (3:43–44) Galápagos; UCLA W53–152 (18:39–96) Sullivan Bay, Isla San Salvador; USNM 91819 (1:42, holotype of *Ophioblennius pinchoti*) Charles Island; CAS 5743 (X ray of holotype of *Ophioblennius lanieri;* X ray deposited at USNM) Tagus Cove, Albemarle Island; USNM 94022 (1:50) Gorgona Island.

Peru.—BOC 1286 (7:60–93) Lobos de Afuera Island.

Ophioblennius steindachneri clippertonensis
new subspecies

Fig. 2, Tables 1 and 2

This subspecies is known only from Clipperton Island (10°18′ N, 109°13′W) about 600 miles from the nearest point on the eastern Pacific mainland. It is distinguished from *O. s. steindachneri* in having a higher average number of both dorsal and anal fin ray elements and a lower average number of cirri in both nuchal patches (Tables 1 and 2).

Holotype.—USNM 196030, a male, 82.6 mm S. L., collected about ¾ mile northwest of coconut grove, west end of Clipperton Island by W. J. Baldwin and party, 20 August 1958, (D. XII, 24; A. II, 24; Pec. 15–15; Pel. I,4–I,4; Caud. 13 segmented; Nuchal cirri 4–7; Head Length 19.5 mm; Bony orbital diameter 6.0 mm; Snout length 9.3 mm; Maxillary length 8.8 mm; Depth at anus 20.2 mm; Least depth at caudal peduncle 7.0 mm; Longest caudal ray 23.6 mm; Longest pectoral ray 20.7 mm; Longest pelvic ray 13.1 mm).

Paratypes.—UCLA W58–296 (152:46–98 mm S. L.) taken with the holotype; ANSP 90042 (10:53–120) northeast side of Clipperton Island one mile north of wreck; ANSP 90024 (3:38–45) northeast side of Clipperton Island northwest of wreck; USNM 177795 (17:45–92) east end of Clipperton Island near large rock pinnacle.

Ophioblennius atlanticus atlanticus
(Valenciennes)
Fig. 3, Table 1

Salarias atlanticus Valenciennes, *in* Cuvier and Valenciennes, 1836, Hist. Natur. Poiss. 11:321 (Madeira Islands and Antilles).

Blennophis webbi Valenciennes, *in* Webb and Berthelot, 1843, Hist. Natur. Iles Canaries, 2 (2) :60 (Canary Islands).

Ophioblennius trinitatis Ribeiro 1919, Arch. Mus. Nac. Rio de Janeiro 22:177, fig. 1 Trindade Is., *not* Trinidad).

Salarias atlanticus was described from both the Antilles and Madeira Islands. Valenciennes gave counts of D. 11/21 and A. 24, in his description of *S. atlanticus.* The total dorsal count of 32 is found only in Antilles specimens, but it seems probable that the last dorsal spine, which is much reduced, was missed. A total dorsal count of 33 is uncommon in Antillian specimens, but common in eastern Atlantic specimens. A total anal count of 24 is rare in Antillean specimens, but common in eastern Atlantic specimens.

While this paper was in press I had the opportunity of visiting the Paris Museum and examining the type material of *Salarias atlanticus.* This material consists of three specimens: two from the Madeira Islands (cat. No. A2024, a male, 81 mm S. L., D. XII,23; A. II,23 and a female, 76 mm S. L., D. XII,21; A. II,23) and one from the Antilles (cat. No. A2027, a female, 69 mm S. L., D. XII,20 and A. II,21). The female specimen from the Madeira Islands is here designated lectotype. Counts from these three specimens are not included in Table 1.

I here restrict Valenciennes' name to his Madeira Island specimens even should their counts be as Valenciennes listed them.

Blennophis webbi is the typical larval stage of *O. a. atlanticus.* Valenciennes reported incorrect counts for his specimens. For the four syntypes I find the following: D. XII, 21; A. II, 23 in three, and D. XII, 21, and A. II, 22 in one.

Ophioblennius trinitatis, known only from the holotype, seems to belong here in spite of a discrepancy in the dorsal fin count. S. Y. Pinto informs me that there are 16 unsegmented and 20 segmented rays in the dorsal fin of the holotype which is in very poor condition. I suspect that this count is abnormal. All other known blenniids in this hemisphere normally have 11 or 12 (11 to 13) unsegmented dorsal rays, and very few species in the world normally have over 14. The total fin ray elements in the dorsal, and the anal, fin of *O. trinitatis,* as well as the general description, convince me that this specimen is the larva of *O. a. atlanticus.* J. C. Tyler has also examined the holotype and noted its poor condition. He informed me that the last anal ray is split to the base and that the pectoral fin counts are 14–15. These characters are found in *Ophioblennius.* Should the eastern and western Atlantic populations of *O. a. atlanticus* prove distinct *O. trinitatis* has priority for the western Atlantic population.

It is with some hesitation that I group the Brazilian and eastern Atlantic specimens together. I have seen very few specimens from either region. In the single Brazilian specimen available to me the ocellus behind the eye is similar in size to that found in *O. a. macclurei,* while in the Madeira Islands adults it more nearly approximates the ocellus of *O. s. steindachneri.* Counts of the anal fin taken from Pinto (1955, included in Table 1 of the present paper) probably indicate one ray too many as he stated that none of the fin rays (except some in the caudal) were branched. Under this impression he may have counted the last two anal elements separately, whereas I find the last anal ray is split to the base, and I counted the two branches as one. J. C. Tyler, recently in Brazil, examined one specimen (No. 1903) reported by Pinto as having 26 anal rays. Tyler's count was 25 with the last anal ray split to the base.

This subspecies is differentiated from *O. a. macclurei* by having a greater number of fin rays in both the dorsal and anal fins (Table 1).

MATERIAL

Madeira Islands.—BMNH 1953.11.1.518–525 (8:43–126 mm S. L.) Gorgolho, near Funchal.

Canary Islands.—MNHM A2181 (4:41–44, syntypes of *Blennophis webbi*).

Ascension Island.—BMNH 1879.5.14.256 (1:58). USNM 42317 (1:79) Ascension or St. Helena.

Brazil.—USNM 163800 (1:48).

Ophioblennius atlanticus macclurei Silvester
Fig. 4, Table 1

Blennius truncatus Poey, 1861, Memorias, 2:424 (Cuba; homonym of *Blennius truncatus* Forster, 1844, Descr. Animal.,

= *Salarias edentulus* Bloch and Schneider).

Rupiscartes macclurei Silvester, 1915, Carneg. Inst. Wash. Yr. Bk. 14:217 (Puerto Rico).

Alticus macclurei Silvester, 1918, Carneg. Inst. Wash. Pub. 252:19 (Puerto Rico; the same specimen was designated as holotype for both *A. macclurei* and *R. macclurei*).

Rupiscartes cubensis Mowbray, *in* Breder, 1927, Bull. Bingham Oceanogr. Coll. 1:85 (Cuba).

Ophioblennius ferox Beebe and Tee Van, 1928, Zoologica 10 (1) :242 (Haiti).

Ophioblennius watsoni Reid, 1943, J. Wash. Acad. Sci. 33 (12) :376 (Haiti).

Descriptions of the adults (the first four names in the synonymy) all clearly apply to the same species as already noted by earlier authors (i.e. Longley *in* Longley and Hildebrand, 1941). *Ophioblennius ferox* is the normal larva. *Ophioblennius watsoni* was differentiated from *O. ferox* by a supposed lack of nuchal cirri. I have examined the holotype and find that one pair is missing, but the other is present.

J. Böhlke informs me that Silvester's types which were at Princeton have been discarded.

This subspecies is differentiated from the nominal one in having a lower average total number of fin rays in both the dorsal and anal fins (Table 1).

Material

Bermuda.—USNM 178286 and 178289 (3: 35–42 mm S. L.) Union Island.

Off North Carolina.—BLBG, no number (1:42) 34°38′ N, 74°00′ W to 34°00′ N, 74° 18′ W.

Off Georgia.—BLBG, no number (X 1: damaged larva from *Coryphaena* stomach) Station 42, Gill Cruise 2, 31°57′ N, 79°18′ W.

Florida.—UMML 3012 (1:62) Long Reef, approx. 3.5 miles east of Elliot Key, Dade County; UMML 4684 (1:71) Mashta Island, southwest end of Key Biscayne, Dade County; UMML 2705 (1:55) Alligator Reef, 1,200 feet east of light, Monroe County; UMML 3507 (1:34) approx. ¼ mile southwest of Alligator Reef Light, Monroe County; US NM 88127 and 116804 (22:47–89) Tortugas, Monroe County.

Bahamas.—ANSP 81624 (13:32–52) Hog Island, rocky outcrop on north shore; ANSP 81614 (16:44–66) Reef off Delaporte Point, New Providence.

Gulf of Mexico.—UCC, no number (49: 39–98) Alacran Reef.

Western Carribean Sea.—ANSP 74179 (124:33–44) St. Andrews; ANSP 74168 (10: 35–39) Courtown Key; ANSP 74165 (3:16–40) Old Providence Key; USNM 92726 (1: 46) Old Providence Key.

Cuba.—USNM 82525 (5:37–60); USNM 82524 (14:43–63) Cabanas Bay; USNM 133009 (1:63) Havana.

Jamaica.—FSM, no number (38:40–79) Pedro Cays; FSM, three lots without numbers (21:38–66) Morant Cays. (At the present writing these four lots of specimens collected in 1958 and 1959 are in the possession of D. K. Caldwell.)

Haiti.—USNM 89614 (1:46, holotype of *Ophioblennius watsoni*) Gonave Island; USNM 170901 (1:42, holotype of *Ophioblennius ferox*) Port au Prince Bay; USNM 178280 (1:66) Port au Prince Bay.

Virgin Islands.—UMML 2399 (1:41) Cruz Bay, St. Johns Island; UMML 3746 (24:43–75) east side of Lameshur Bay, St. Johns Island.

Saba Island.—USNM 120028 (8:40–44).

Anguilla Island.—USNM 183527 (6:48–67) Sandy Island.

Barbados.—ANSP 77903 and 88737 (7:38–85) south of the Four Winds Club, St. James; NMV, no number (1:42).

Petit Ueirs (south of Bequia).—ANSP 77901 (3:48–53).

Venezuela, Los Roques Islands.—USNM 195765 (9:48–75) Sarqui; USNM 195763–4 (16:34–72) Yonqui; USNM 195761–62 (24: 33–64) Los Canquises.

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Norman, J. R. 1943. Notes on the blennioid fishes. *Ann. Mag. Nat. Hist. ser 11, 10(72): 793–812.*

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ERRATA

Springer, V. G. A review of the blenniid fishes of the genus Ophioblennius Gill. Copeia 1962 (2): 426-433.

page 432, first column. Omit third paragraph from bottom of page ("I here restrict.....).

page 432, second column. Ophioblennius atlanticus macclurei Silvester should read Ophioblennius atlanticus macclurei (Silvester).

ERRATA

Springer, V. G. and A. J. McErlean. A study of the behavior of some tagged south Florida coral reef fishes. American Midland Naturalist 1962, 67 (2) 386-397.

page 390, third paragraph from the bottom should read:

"Nine G. funebris were tagged (ca. 800-1200 mm. t.l.), four with darts, five with discs. Three were recaptured. One, dart tagged May 13, 1960, on Reef 3, was recaptured on its home reef May 15, 1960. A second, disc tagged on Reef 2, November 13, 1960, was represented by only the tag in a trap on Reef 1, February 12, 1961. The third individual....."