

THE EYES OF BLIND FISH. BY CARL H. EIGENMANN. Published in Proc. U. S. Nat. Mus. for 1892, with plates.

[ABSTRACT.]

Whenever the conditions are favorable blind fishes are developed. These are always related to species inhabiting neighboring open waters. Blind fishes are found in caves, in the deep sea, and at San Diego one lives beneath rocks. While such regions usually contain blind fishes not all the fishes inhabiting these regions are blind. Many species found in the deeper parts of the ocean have well developed eyes, while others living in shallower water are blind. The explanation for this fact probably lies in the length of time a given species has inhabited the present locality. In all blind fishes the eyes have undergone a process of degeneration. This is very strikingly seen in the development of the Point Loma blind fish, *Typhlogobius californiensis* Steindachner. The embryo, before it is hatched, has eyes as well developed as the embryo of any other fish. When the individuals have reached the length of an inch they can still see a short distance, but it is evident that the eye has stopped growing long before this age is reached. In the adult condition the eye has become degenerate and covered with a thick skin, and the fish is totally blind.

ON THE PRESENCE OF AN OPERCULUM IN THE ASPREDINIDÆ. BY CARL H. EIGENMANN. Published in American Naturalist, January, 1892, p. 71, plate VI.

[ABSTRACT.]

In our "Revision of the South American Nematognathi," (p. 9) we defined the Bunocephalidæ—Aspredinidæ as having no opercle. In this we followed Cope, who separated the Aspredinidæ from the remaining Nematognathi by their lack of an opercle.

We have lately obtained a specimen of *Aspredo aspredo* Linnaeus from the Museum of Comparative Zoology, and have re-examined this point. The closer inspection has demonstrated the presence of a minute operculum attached to the upper posterior border of the expanded hyomandibular. It is movable in moist preparations but becomes immovably fixed with drying, which may have led to the original statement. The interopercle is about as large as the opercle, and apparently immovably joined to the hyomandibular and preopercle. (The skull of this species, with the suspensorium, was figured.)

A REVIEW OF THE EMBIOTOCIDÆ. BY A. B. UREY. In press, Report of the U. S. fish commission.

## [ABSTRACT.]

On examining specimens of this family and the literature bearing on the subject, I find the following species, with their localities:

1. *Hypsurus caryi* Agassiz. Habitat: Coast of California from San Diego to San Francisco.
2. *Damalichthys argyrosomus* Girard. Habitat: Pacific coast from San Diego to Vancouver Island.
3. *Hyperprosopon analis* A. Agassiz. Habitat: Port Harford to San Francisco. Rare.
4. *Hyperprosopon argenteus* Gibbons. Habitat: Astoria to Encenada.
5. *Hyperprosopon agassizi* Gill. Habitat: Coast of California.
6. *Holconotus rhodoterus* Agassiz. Habitat: Coast of California from San Francisco to San Diego.
7. *Amphistichus argenteus* Agassiz. Habitat: San Diego to Cape Flattery.
8. *Rbacochilus toxotes* Agassiz. Habitat: San Francisco to San Pedro.
9. *Neoditrema ransonneti* Steindachner and Doderlein. Habitat: Japan.
10. *Ditrema temminckii* Bleeker. Habitat: Japan.
11. *Ditrema smittii* Nyström. Habitat: Japan.
12. *Embiotoca jacksoni* Agassiz. Habitat: San Diego to Puget Sound.
13. *Phanerodon lateralis* Agassiz. Habitat: Vancouver Island to San Diego. Rare southward.
14. *Phanerodon furcatus* Girard. Habitat: San Diego to San Francisco.
15. *Phanerodon atripes* Jordan and Gilbert. Habitat: Monterey to Cortes Banks.
16. *Brachyistius frenatus* Gill. Habitat: San Diego to Puget Sound.
17. *Brachyistius rosaceus* Jordan and Gilbert. Habitat: Off San Francisco in deep water.
18. *Cymatogaster aggregatus* Gibbons. Habitat: Pacific coast of the United States.
19. *Abeona minima* Gibbons. Habitat: San Diego to San Francisco.
20. *Abeona aurora* Jordan and Gilbert. Habitat: Monterey Bay.
21. *Hysterochilus traski* Gibbons. Habitat: California (Sacramento river in fresh water).