

Enumeration of the species of marine Fishes, collected at San Francisco, California, by Dr. C. B. R. Kennerly, naturalist attached to the survey of the Pacific R. R. Route, under Lieut. A. W. Whipple.

By CHARLES GIRARD.

1. *CHIRUS CONSTELLATUS*, G.—This species comes nearest to *C. guttatus*, of which it has the general physiognomy and structure of the fins; but the head above is less convex, and the scales very differently imbricated. Thus, whilst in *C. constellatus* they constitute oblique series which may be traced in any direction, the same is not the case in *C. guttatus*.

D XX. I. 25. A 24. C 5. 1. 8. 7. 1. 4. V I. 5. P 19.

The ground color is greenish grey; the body at large exhibiting indistinct, cloudy spots, and on the anterior and upper region, groups of black dots varying in number. Similar dots are scattered over the upper part and sides of head, and the pectoral fins are literally covered with them, so as to divide equally the space with the ground color which make these fins appear maculated with black and yellow.

2. *ATHERINOPSIS CALIFORNIENSIS*, Grd. Proc. Acad. Nat. Sc. Philad. vii. 1854, p. 134.

Genus PORICHTHYS, Girard.

General form and external aspect similar to *Batrachus*, but more elongated; its generic features will consist in the series of pores extending to the whole length of body from divers regions of the head. There are neither scales on the body nor membranous appendages on the margin of the jaws. Two short tentacles in advance of the nostrils. The teeth are slender and acute; those on the vomer most conspicuous. The head is smooth; the opercle provided with one spine only.

Obs.—To this genus belong: 1st. *P. POROSISSIMUS* (*Batrachus porosissimus*, Cuv. and Val.) from the coast of Brazil; and 2d. *P. POROSUS* (*Batrachus porosus*, Cuv. and Val.) from Valparaiso.

3. *PORICHTHYS NOTATUS*, G.—Total length about nine inches and a half, the head forming the fourth of it in excluding the caudal fin. The mouth is broadly cleft; the posterior extremity of upper maxillary extending beyond the posterior rim of the orbit. The teeth upon the symphysis of the lower jaw are more slender and smaller than on the sides of that bone. The smallest teeth are those of the intermaxillaries extending almost to the whole length of these bones. The palatine teeth are a little larger posteriorly than anteriorly. The most conspicuous ones are observed on the vomer. Two minute and inconspicuous spines constitute the anterior dorsal fin. The second dorsal is somewhat higher than the anal, and the tips of the posterior rays of both of these fins reach the base of the caudal, there being but a narrow space left separating these fins from each other. The caudal is posteriorly rounded. The pectorals are spear-shaped; the central rays being the longest.

D II. 37. A 34. C 3. 1. 5. 5. 1. 2. V 3. P 20.

Upper regions purplish blue; sides and belly silvery grey. A subcrescent shaped vitta beneath the eye.

4. *EMBIOTOCA LINEATA*, Grd. Proc. Acad. Nat. Sc. Philad. vii. 1854, p. 134.

5. *AMPHISTICHUS ARGENTEUS*, Agass. Amer. Jour. Sc. second series, xvii. 1854, p. 367.

6. *HOLCONOTUS RHODOTERUS*, Agass. Amer. Jour. Sc. second series, xvii. 1854, p.

7. *MELETTA CERULEA*, Grd. Proc. Acad. Nat. Sc., Philad. vii. 1854, p. 138.

8. *GADUS PROXIMUS*, G.—This appears to be a rather small species, for, amongst numerous specimens brought home by several parties, and now before us, the largest measures less than six inches in total length. The body is slender,

elongated and compressed, rather graceful in appearance. The head is contained four times and a half in the total length. The snout is pointed, the upper jaw overlapping considerably the lower one. The mouth is proportionally large, the posterior extremity of the upper maxillary extending to a vertical line which would fall in advance of the eye. The eye itself is above the medium size, sub-circular in form, and contained about four times and a half in the length of the side of head. There exists a space between each dorsal, more considerable between the second and third, than between the first and second. The anals are likewise separated by a space nearly equal to that which is observed between the second and third dorsals. The ventrals are exiguous, their second ray being prolonged into a filament. The pectorals are small.

D 12. 19. 20. A 25. 22. C 5. 1. 16. 16. 1. 5. V 6. P 17.

Upper region yellowish ash; sides and belly silvery white. Minute crowded blackish dots upon the dorsals, caudal and posterior anal. Anterior anal, ventrals and pectorals yellowish, unicolor.

9. *PAROPHRYS VETULUS*, Grd. Proc. Acad. Nat. Sc. Philad. vii. 1854, p. 140.

10. *PSETTICHTHYS SORDIDUS*, G.—General form subellipsoid; greatest length about five inches in which dimension the greatest depth enters twice and a third of a time. The head constitutes about the fourth of the total length. The mouth is oblique, and when shut the jaws are even. The eyes are large, subelliptical, approximated, and situated on the left side; their longitudinal diameter is comprised four times in the length of the side of head.

D 82. A 72. C 1. 1. 6. 5. 1. 1. V 6. P 1. 10.

The scales are of medium size, equally conspicuous upon the head and opercular apparatus. The lateral line is nearly straight, raising but slightly as it reaches the head.

Ground color of a soiled yellow; the scales are margined with blackish. The fins appear as if covered with a coating of dust.

Observations upon a collection of Fishes made on the Pacific coast of the United States, by Lieut. W. P. Trowbridge, U. S. A., for the Museum of the Smithsonian Institution.

By CHARLES GIRARD.

It is praiseworthy for officers of the government, whether military or civil, when detailed upon special duties, to devote their moments of leisure in serving the cause of science. Lieut. Trowbridge, while engaged under instructions from the U. S. Coast Survey, in making tidal observations for the use of that office, availed himself of such opportunities at his command to secure the fishes enumerated below, and we leave it to Naturalists to decide whether his labors were at all rewarded.

There are three main points whence specimens were obtained. 1st, PRESIDIO, on the Bay of San Francisco, where Lieut. Trowbridge himself is stationed; 2d, MONTEREY, on the Bay of the same name, where the same gentleman made several excursions; and, 3d, SAN DIEGO, where observations are conducted by Corporal A. Cassidy, U. S. A.

PERCIDÆ.

1. *LABRAX NEBULIFER*, G.—The head which is contained about three times in the length, the caudal fin excepted, presents a subconical appearance, from the fact of its being rounded upon its upper region, and gradually sloping towards the snout. The anterior part of the body, from the origin of the dorsal to the occiput is continuous with the profile of the head, the middle region slightly convex. The body gradually tapers backwards; the greatest depth taken between the insertion of ventrals and origin of first dorsal, is a little less than the fourth of the entire length, including the caudal fin; the greatest thickness measures in the same region as the depth, is a little more than the half of the latter. The body, therefore, is compressed, as usual in this genus, and the



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