

Body rings, 1 + 10. Caudal rings, 37. Tubercles of body and tail elongated, slightly recurved, usually prolonged into slender filaments; those on the 2d, 4th, and 6th body rings much larger than the others; tubercles prominent and filamentose upon the 4th, 6th, 9th, 12th, 16th, and 20th caudal rings. Ventral tubercles upon 6th, 7th, 8th, and 9th body rings. Occipital crest very high, with five prominent tubercles, the anterior two with long filaments. Length of snout equal to distance from posterior margin of orbit to gill-opening. Operculum marked with fine, radiating striæ.

Radial formula.—D. 19 (the first imperfect). P. 18. V. 4.

Color.—Yellowish-brown; the eyes and cheeks covered with radiating, wavy lines of light brown. Snout encircled by a narrow, undulating, white band near its middle.

The Commission has an accurate sketch by Mr. Emerton.

APRIL 30, 1878.

DESCRIPTIONS OF NEW SPECIES OF SHELLS FROM CALIFORNIA
IN THE COLLECTIONS OF THE NATIONAL MUSEUM.

By W. H. DALL.

Haliotis (? var.) *assimilis*, n. s.

Shell solid, strong, not very thick, with a rather light pink, white and greenish naere, usually with five open holes; spire more elevated than that of any other Californian species, consisting of two and a half or three whorls; aperture very oblique in adult specimens, the thickened margin of the columella narrow, somewhat concave, inclined sharply inward and upward, about three-fourths as long as the columellar side, of the aperture. Between the row of openings and the columellar edge, the space is unusually broad, marked midway by an obtuse carina, separated from the row of holes by a shallow channel; surface reddish or dull greenish, with rather rough, crowded, unequal, spiral ribs and rounded, irregular, wavy, radiating undulations crossing the spiral sculpture obliquely. The muscular impression, in most specimens, is but lightly marked, and, except for occasional spot-like impressions, is smoothly nacreous, like the rest of the interior. Lon. 4.5 in. Lat. 3.0 in. Alt. of spire 1.5 to 2.0 in. Aperture 3 inches wide and 3.75 long, in an adult specimen.

Habitat.—Monterey; San Diego, Cal.; in deep water only; thrown up by heavy storms, usually dead and worn when found and everywhere rare. Mus. Cat. 31267.

This species, or variety, has long been known to me and to most Californian collections, but has not hitherto been characterized, owing to the dead condition of most of the specimens found. Mr. Hemphill having forwarded two fresh specimens, it seems well to put it on record.

The form is different from any other Californian species; the spiral

sculpture is that of *H. rufescens*; the radiating sculpture, except that it is not sharp or imbricated, recalls *H. corrugatus*, and the nacre is similar but less bright. These characters suggest the possibility of its being a hybrid between *H. corrugatus* and *rufescens*; but if this be the case, why should it not have a similar habitat? Those two species are littoral, but this is exclusively deep-water. I have received it from Dr. Canfield, Mrs. Capt. Lambert, and others, in past years, and have examined some twenty specimens of all ages.

Acmæa (*scabra* var.?) *Mörchii*, n. s.

Shell conical, much elevated, with a sub-central recurved apex resembling that of *Helcion pectinatus* covered with close-set, rough, imbricated ribs and riblets, the coarse, imbricated, sharp lines of growth forming with the other sculpture a close reticulation in some specimens. Interior with a brown-mottled spectrum and margin, otherwise white; exterior dull grayish or greenish speckled. The imbrications on the principal ribs very strong, in some specimens forming small spines concave beneath. Lat. 16^{mm}. Lon. 20^{mm}. Alt. 10^{mm}.

Tomales Bay, California, Hemphill, 16 specimens. Mus. Cat. 31268.

This very peculiar form has the sculpture of *A. scabra*, but much exaggerated, and very nearly the profile of *Helcion pectinatus*. The recurved apex recalls that of *A. persona*. It would not be referred to any described Californian species if its characters, as they appear, were the only test. But it is almost certain that all the species of Limpets and *Siphonaria*, which have this peculiar elevated shape, acquire it from a particular habitat which they seem to prefer. This may be the stem of a large *Fucus*, a shell, round pebble, or what not, as in the case of those species of *Acmæa* usually (but wrongly) termed *Nacella* by Californian conchologists: *Acmæa asmi*; *Liriola subspiralis*; etc. They all have a flattened or normal variety, though this is often very rare.

Hence I consider the elevated form and pointed apex as probably due to a peculiar habitat, as in the other cases; a view which is borne out by a peculiar arcuation of the margin in most of the specimens, as if the creature had lived on a round shell or pebble.

Eliminating the elevation as a permanent character, the shell, apparently very limited in its distribution, might well be a hybrid between *A. scabra* and *A. persona*. Whether this be the case or not, it is a very remarkable form, and well deserves a name, even if only of varietal value. We owe its discovery to Mr. Hemphill's industry and eminent abilities as a collector.

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