NOTES ON THE SEMELIDÆ OF THE WEST COAST OF AMERICA, INCLUDING SOME NEW SPECIES.

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In revising the Pacific Coast species in the National Collection, considerable confusion was found, due in part to the habit of Dr. Carpenter (who originally named the collection) of trusting to the specimens in the collection of Professor C. B. Adams rather than to the diagnoses of that careful author. The specimens in that collection, due to several causes (especially the fact that they were kept loose in trays and not numbered), have in some cases since Professor Adams' death become transposed or mixed, so that, without careful reference to the text, errors of identification were likely to occur.

Furthermore, the collection of the National Museum since Carpenter's time has been greatly enlarged, and the better and more numerous specimens from a much wider geographical range afford an opportunity for study not available to Dr. Carpenter.

Semele decisa Conrad, 1837.

San Pedro to San Diego, California. (Coll. U. S. N. Mus.)

This species is also reported from Mazatlan and Tagus Cove, Galapagos Islands, but I am not able to confirm these localities.

Semele solida Grav. 1828.

Peru and Chile. (Coll. U. S. N. Mus.)

This is also doubtfully reported from the Galapagos Islands. It is the *crocea* of Gould, 1850, and the *orbicularis* of Hupé, 1854.

Semele corrugata Sowerby, 1832.

Not of C. B. Adams, 1852; and probably the *californica* of A. Adams, 1853.

Magdalena Bay, Lower California, to Iquique, Peru. (Coll. U. S. N. Mus.)

It is possibly only a variety of the preceding or the following species. Semele flavescens Gould, 1851.

Cape St. Lucas to Callao, Peru. (Coll. U. S. N. Mus.)

This is the *proxima* of C. B. Adams, 1852, and the *flavicans* of Carpenter (1857, lapsus) as of Gould.

Semele striosa C. B. Adams, 1852.

Not of Carpenter, 1857.

Catalina Island, California, to Panama. (Coll. U. S. N. Mus.)

This is one of the species which was confused with the following shell by Dr. Carpenter.

Semele sparsilineata n. sp.

Panama, 18 fathoms. (Coll. U. S. N. Mus., No. 96,269.) Chile, Hupé.

This was confused by Hupé with *S. variegata* Lam., 1818, which it much resembles, but is easily discriminated from the Atlantic species by the much sparser oblique grooving. The best specimen in the National Collection is 15 by 10 mm., with the vertical from the beaks 6.5 mm. behind the anterior end; but the shell grows much larger.

Semele bicolor C. B. Adams, 1852.

Gulf of California to Panama. (Coll. U. S. N. Mus.)

A thin orbicular species with distinctive purple suffusion on a white ground.

Semele rupicola n. sp.

This is Semele rupium of California authors following Carpenter; not of Sowerby, 1832.

Santa Cruz, California, to the Gulf of California. (Coll. U. S. N. Mus.)

The Galapagos species, for which this has been mistaken, when not distorted by its nestling habit, has a conspicuous furrow radiating from the beak and rostrating the posterior end, and the form of the pallial sinus is different from that of the North American form. The former character is absent in the latter shell, but they are otherwise much alike.

Semele rubropicta Dall, 1871.

Forrester Island, Alaska (Willetts); British Columbia to Tia Juana, Lower California. (Coll. U. S. N. Mus.)

Semele elliptica Sowerby, 1832.

Not of Carpenter, 1864.

Central America to Ecuador. (Coll. U. S. N. Mus.)

Semele junonia Verrill, 1870.

Carmen Island, Gulf of California. (Coll. U. S. N. Mus.)

Semele jovis A. Adams, 1853.

Carmen Island, Gulf of California. (Coll. U. S. N. Mus.)

The preceding species and this one appear to be perfectly distinct.

Semele formosa Sowerby, 1832.

Gulf of California to Ecuador. (Coll. U. S. N. Mus.)

Semele regularis n. sp.

Gulf of California, off La Paz, in 10 to 30 fathoms. (Coll. U. S. N. Mus., No. 76,433.)

This is a thin, delicate, usually pure white species of elliptical outline, sculptured with low, obtuse, concentric lamellæ, regularly disposed, with fine concentric lineation between them and no trace of radial striation. The beaks are nearly central and the pallial sinus is high, short, subcircular, and hardly extends behind the vertical of the beaks. Some specimens have a faint orange flush internally. The most perfect specimen measures 22 mm. long, 17 mm. high, and 6 mm. in diameter. The umbo is about 12 mm. behind the anterior end. Fragments show that the shell grows at least one half larger.

Semele pacifica n. sp.

Catalina Island, California, to Acapulco, Mexico, in 9 to 21 fathoms. (Coll. U. S. N. Mus., No. 211,728.)

This is the shell usually referred to S. cancellata Sowerby, 1830 (S. bellastriata Conrad, 1837), but which differs from that Atlantic species in its smaller lunule, shorter and weaker right lateral tooth, and sharper and more delicate concentric sculpture. It is a rare form and doubtless the two descend from the same Oligocene ancestors.

Semele incongrua Carpenter, 1863.

Monterey, California, to the Coronado Islands, Lower California. (Coll. U. S. N. Mus.)

This is a well-defined species, and the Pliocene shell named S. pulchra var. montereyi by Arnold, 1903, should be referred to it rather than to pulchra as a variety.

Semele pulchra Sowerby, 1832.

Monterey, California, to Ecuador. (Coll. U. S. N. Mus.)

Semele venusta A. Adams, 1853.

Acapulco, Mexico, to West Colombia, South America. (Coll. U. S. N. Mus.)

The S. rubrolineata Conrad, 1837, San Diego, California, has not been definitely recognized since it was originally described, and the type is said to be lost.

It has been, by a lapsus, referred to by Dr. Carpenter as S. rubrotincta, and was surmised by him to be a variety of S. pulchra, but the two have no resemblance to each other, judging by Conrad's figure. There does not seem to be any good ground for doubting the Chinese origin of S. simplex Adams and Reeve, 1848, to which S. rubrolineata has also been tentatively referred.

Abra pacifica n. sp.

Guaymas, Mexico. (Coll. U. S. N. Mus., No. 23,700.)

Shell small, thin, white, finely concentrically sculptured, giving the surface a silky look; the concentric lines slightly prominent on the dorsal part of the posterior end; beaks not prominent, slightly anterior, outline elongate, attenuated and pointed behind, rounded in front; with only faint traces of microscopic radial striæ or none; hinge normal, right cardinal tooth bifid, anterior right lateral stout, very short, posterior feeble, longer; left valve with a bifid cardinal and no laterals; pallial sinus obscure. Length 9, height 5.5, diameter 3.0 mm.

This is the first species of the genus reported from the Pacific Coast. It was collected by Dr. Edward Palmer.

Abra tepocana n. sp.

Off Cape Tepoca, Lower California, in 14 fathoms. (U.S. N. Mus., No. 108,552.)

Shell small, white, equivalve, anterior end longer; surface with a dull silky lustre due to extremely minute concentric striation; beaks rather prominent; dorsal margins descending, anterior end rounded evenly into a gently arcuate base, posterior end narrower, blunt, hardly truncate, slightly bent to the right as in a *Macoma*; right valve with a conspicuous resilifer, a very small cardinal tooth and the laterals obsolete; left valve with the cardinal hardly perceptible and no lateral laminæ; pallial sinus large, 5.6 mm. deep, rounded in front. Length 8, height 6, diameter 3.5 mm., the beaks behind the anterior end 5 mm.

Abra palmeri n. sp.

Ballenas Lagoon on the west coast of Lower California; the Gulf of California (Dr. E. Palmer); and Panama Bay in 26 fathoms (U. S. N. Mus.). Type locality, Panama Bay. (U. S. N. Mus., No. 96,301.)

Shell short, high, inflated, white, with a silky surface, and a very thin, polished, pale yellow periostracum; anterior end and base rounded; beaks subcentral, dorsal margins descending, posterior end attenuated and with the extremity rounded; right valve with a deeply bifid (or double) cardinal tooth, the laterals obsolete; left valve with a single cardinal and no laterals. Length 10, height 8, diameter 5.5 mm. The pallial sinus rounded, 6 mm. deep.

This species is nearest to A. lioica Dall, of the Atlantic Coast of the United States.