

PROCEEDINGS
OF THE
UNITED STATES NATIONAL MUSEUM.
1878.

DESCRIPTIONS OF NEW FORMS OF MOLLUSKS FROM ALASKA
CONTAINED IN THE COLLECTIONS OF THE NATIONAL
MUSEUM,

By W. H. DALL.

CHITONIDÆ.

Genus AMICULA Gray.

Type *A. vestita* Sowerby.

Subgenus CHLAMYDOCHITON Dall.

Ch. t. '*Amiculæ*' similiter sed branchiæ ambientes.

Type *Chiton amiculatus* Pallas.

Amicula proper has the branchiæ median.

Genus LEPTOCHITON Gray.

Leptochiton Belknâpi Dall, n. s.

L. t. elongatâ, valde elevatâ, dorsualiter angulatâ; albidâ plus minusve cinereo et nigro tinctâ; valvis elevatis, apicibus distinctis; mucrone centrali conspicuo; sculptura ut in *L. alveolo*, sed granulis in areis dorsualis sparsim et quincuncialiter dispositis; valva postica sub apice concava, posticè sinuatâ; zona minimâ spiculis tenuibus versus marginem munitâ. Lon. 10, lat. 3^{mm}. Div. 90°.

Hab.—North Pacific Ocean, in lat. 53° 08' N., and lon. 171° 19' W., at a depth of 1006 fathoms, black sand and shells. Brought up in the sounding-cup, on the sounding expedition of the United States ship *Tuscarora*, Capt. George E. Belknap, U. S. N., in 1874.

This specimen comes from a greater depth than any specimen of the order hitherto collected. It is nearest to *L. alveolus* Sars, from the coast of Norway.

Genus TRACHYDERMON Cpr.

Subgenus TRACHYRADSLIA Cpr. (Ms.).

Trachydermon, valvis centralibus bi- seu pluri-fissatis.

Type *Chiton fulgetrum* Reeve.

Trachyradsia aleutica Dall, n. s.

T. t. parvâ, rufo-cinereâ, oblongâ, fornicatâ; jugo acutissimo; mucrone

submediano, apicibus prominentibus; areis lateralis inconspicuis; totâ superficie quincuncialiter minute reticulatâ; *intus*, valv. ant. 16-, post. 11-, centr. 2-fissatis; dent. parvis, perspongiosis, late separatis; subgrundis spongiosis, curtis; sinu parvo; *zona* squamulis minutis obsitâ. Lon. 6, lat. 3^{mm}.

Hab.—Western Aleutians, near low-water mark; Dall.

This bears no marked resemblance to any of the other Alaskan species.

Genus TONICELLA Cpr.

Type *Chiton marmoreus* Fabr.

Tonicella saccharina Dall, n. s.

T. t. parvâ, oblongâ, totâ superficie saccharina, rufo et albescente pictâ; mucrone submediano, inconspicuo; areis lateralis inconspicue elevatis, albescentis; areis dorsualis sanguinosis, æque quincuncialiter lente reticulatis; v. ant. 10–11-, v. post. 8–10-, v. centr. 1 fissatis; dent. parvis spongiosis, sinu parvo; subgrundis spongiosis, mediocris; zonâ coriaceâ ut in *Tonicellæ* aliis: branchiæ mediæ. Lon. 6.5, lat. 4^{mm}.

Hab.—Aleutian Islands, three to thirteen fathoms; Dall.

This species has the lustre of rock-candy, and is well marked by the contrast of the white lateral with the red dorsal areas.

Genus SCHIZOPLAX Dall.

Testa et *zona Tonicellæ* simulaus; valvæ centrales sulco jugali mediâno, antico argute incisæ; branchiæ subambientes.

Type *Chiton Brandtii* Midd.

For this remarkable Alaskan form, distinguished from all other Chitons by its slit central valves, I propose to adopt a name suggested by Dr. Carpenter, who, on Middendorf's figures, had intended to propose it as a subgenus of *Tonicella*. The specimens obtained by my party seem to be the first found since the original ones were obtained. A careful examination of the soft parts shows that in dentition and some other details sufficient basis for generic separation is found, confirming the testimony of the valve characters. The sulcus is usually filled by a horny or cartilaginous deposit.

It may be added here that investigation of the characters of the radula in numerous species and genera of Chitons in the National Museum shows a very remarkable uniformity of dentition. No larger groups than genera are indicated in the whole order, which, it appears, can hardly comprise more than one family; and it is doubtful if this can be divided into subfamilies by any characters yet elucidated.

The dentition in all species examined has the formula $6 \cdot 2 \cdot 1 \cdot 2 \cdot 6$, or $\frac{1}{8 \times 8}$. Of the teeth, the rhachidian appears always simply cusped;

the two laterals present varied characters; the third uncinus, counting outward, is usually spatulate; while the remainder are mere bosses, or scales. The wide differences found in the few figures of the dentition of Chitons extant appear to be due to erroneous interpretation of the objects represented. The figures of Lovèn are the most satisfactory.

POSTPLIOCENE FOSSILS IN THE COAST RANGE OF CALIFORNIA,

By W. H. DALL.

The National Museum has received from Mr. G. F. Merriam, of San Luis Rey, Cal., specimens of *Donax californicus*, *Chione succincta*, *Olivella buplicata*, and *Cerithidea sacrata*, in a semi-fossilized condition. The first mentioned retained a considerable part of its pinkish interior coloration. These fossils (probably with other species) are stated by Mr. Merriam to be found in great abundance at the head of a cañon in that vicinity, in the heart of the Coast Range, twelve miles from the sea in a direct line, and six hundred feet above tide-water. All the species are found living in abundance on the present sea-coast. This indicates a very recent elevation for this part of the coast, if the facts are correctly interpreted, and further specimens and details will be awaited with interest.

NOTES ON THE AMERICAN SPECIES OF THE GENUS CYBIUM.

By FELIPE POEY.

[Translated by G. BROWN GOODE, from MS. memorandum of Professor FELIPE POEY.]

Cybiium caballa, Cuv. & Val.

Cybiium caballa, CUVIER & VALENCIENNES, Histoire Naturelle des Poissons, viii, 1831, p. 187.—GÜNTHER, Catalogue of the Acanthopterygian Fishes in the Collection of the British Museum, ii, 1860, p. 373.—POEY, Repertorio Fisico-Natural de la Isla de Cuba, i, 1867, p. 322; ii, p. 13; and in Synopsis Piscium Cubensium, *op. cit.*, ii, p. 362.

Cybiium acereum, CUVIER & VALENCIENNES, *loc. cit.*, p. 186 (*nec typus*).

Vulgo:—Sierra.

Differential Characters.—First dorsal with fourteen spines, without a black spot anteriorly. Body immaculate in the adult, spotted with yellowish in the young fish.

The number of teeth increases with the age; in large specimens, it is $\frac{30}{25}$. The larger teeth are placed upon the middle of the jaw, those in the lower jaw being a trifle the longer. The lateral line is very sinuous upon the posterior portion of the body. The eye is larger than in *Cybiium regale*.

Bluish upon the back, whitish under the belly. First dorsal white; second dorsal and caudal dusky-bluish (*bleu-noirâtre*); pectorals bluish, as is also the anal, which, however, becomes white at its extremity; ventrals whitish.