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ADVERTISEMENT.

This work is the third of a series of papers intended to illustrate the collections of Natural History and Ethnology belonging to the United States and constituting the National Museum, of which the Smithsonian Institution was placed in charge by the act of Congress of August 10, 1846.

It has been prepared at the request of the Institution, and printed by authority of the honorable Secretary of the Interior.

JOSEPH HENRY,

Secretary Smithsonian Institution.

SMITHSONIAN INSTITUTION,

Washington, February, 1876.

CONTRIBUTIONS

TO THE

NATURAL HISTORY

OF

KERGUELEN ISLAND,

MADE IN CONNECTION WITH THE UNITED STATES TRANSIT-OF-VENUS
EXPEDITION, 1874-75.

BY

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II.

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mens, one of which proves to be *Notothenia purpuriceps*, and the other (probably) *Notothenia tessellata*, Rich., hitherto reported from the Falkland Islands. Some of the dorsal rays having been injured in transportation, the diagnosis is not positive.*

The sealers reported that at times they had caught a fish of considerable size, "like a tom cod", at the outer edges of the kelp-beds; but state that fish are never very plentiful. None were found in the fresh-water streams.

A single specimen each of a species of *Gobiesox* and *Clinus* was brought from Table Bay, South Africa, having been captured on the shore.

MOLLUSKS.

BY W. H. DALE, SMITHSONIAN INSTITUTION.

CEPHALOPODA:

Octopus?

Beaks of a cephalopod, perhaps an *Octopus*, were discovered by Dr. Kidder in the stomachs of sea-birds. Also an *Octopus*, dead on the beach, after a storm, in too imperfect a condition for identification.

GASTEROPODA.

RISSOIDÆ.

GENUS EATONIELLA, Dall.

Eatonia, E. A. Smith, Ann. Mag. N. Hist. xvi, ser. iv, July, 1875, 70; (*not Eatonia*, Jas. Hall, 10th Rep. N. Y. State Univ. 90, 1857; Pal. N. Y. iii, 432, 1858.)

The name *Eatonia* being pre-occupied, as above, by Hall for a genus of brachiopods, I have substituted a modified form of it which does not appear to have been used. This genus is practically a thin, smooth *Rissoina*, as far as the shell goes, apparently bearing much the same relation to *Rissoina* that *Cingula* does to *Rissoa*.

EATONIELLA KERGUELENENSIS.

Eatonia kerguelensis, E. A. Smith, l. c. 70.

Mus. No. 11898.

The specimens, five in number, collected by Dr. Kidder at low-water

* Gill, Synops. Notothenioids, Proc. Phil. Acad. Nat. Sci. 1861, 591.—Richardson, Ichthyology of the Erebus and Terror, 5.—Günther, Cat. Acanth. Fishes, ii, 260.

mark on fuci, show such great variations in form of aperture, acuteness of the spire, and general proportions, that I am unwilling to describe them as new, though the diagnosis of Mr. Smith does not seem in all respects applicable to them. None of them exceed four and a half whorls in extent, the aperture being nearly one-half as long as the shell. A faint umbilical chink is perceptible in a greatly enlarged camera-drawing. The largest specimen is 4.5^{mm}. in length and 2.3^{mm}. in width. If, on comparison, the specimens should be found to differ from the form described by Mr. Smith, they may be called *Eatoniella inflata*.

The operculum of this species, besides being subspiral instead of concentric, differs from that of *Rissoella* Gray (= *Jeffreysia*, Alder) in having the process extended at a much more obtuse angle, but on the same side of the operculum.

EATONIELLA CALIGINOSA.

Eatonia caliginosa, E. A. Smith, l. c. 71.

Mus. No. 11899.

Two specimens, apparently of this species, were obtained by Dr. Kidder.

MURICIDÆ.

PURPURA STRIATA.

Buccinum striatum, Martyn, Un. Conch.

Mus. No. 11900.

New Zealand, Martyn; Kerguelen, Dr. Kidder, two specimens, one living; probably this species, which is common in New Zealand.

PATELLIDÆ.

PATINELLA MAGELLANICA.

Patinella magellanica, Dall, Am. Jour. Conch. vi, 273, 1871.

Patella magellanica, Gmelin.

Patella deaurata, Auct.

Patella ferruginea, Wood, Index Test. No. 22.

Patella fusca, Dillwyn, Cat. ii, 1047, No. 70.

Mus. No. 11901.

Straits of Magellan, United States Exploring Expedition; Kerguelen, dead on beach, seven specimens, much worn, Dr. Kidder.

PATELLA? DELESSERTII, Philippi.

Mus. No. 11902.

Straits of Magellan, authors; Kerguelen, one dead specimen probably of this species, Dr. Kidder.

CHITONIDÆ.

GENUS HEMIARTHURUM, Cpr., MS.

Valvæ terminales laminatæ, haud articulatæ, laminæ laterales obsoletæ; zona lanuginosa, porifera; branchiæ posticæ.

HEMIARTHURUM SETULOSUM, Cpr., n. s.

Mus. No. 11903.

H. t. latiore, curvata, olivaceo-fusca; jugo plauato; mucrone sub-centrali? areis haud definitis; totâ superficie sensim quincunxiter granulosâ, granis satis extantibus.

Intus; valva anticâ et posticâ conspicue laminata; laminis acutis, haud incisus, haud regularibus, valde extantibus; subgrundis spongiosis, minimis; valvis centralibus et posticâ laminis suturalibus, triangularibus, maxime distantibus, extantibus, decliviter lateraliter, continuis; sinu maximo, valde spongioso.

Zona modicâ, haud expansâ, solida, leve; sparsim minutissime lanuginatâ; poris minutissimis, setuliferis ad suturas, et circ. iv, circum valvas terminales sitis, instructâ, setulis minimis, curtissimis.

Animal, pede capiteque normalibus; branchiis majoribus posticis, utroque latere circiter vi, medio pede tenuis. *Lon.* 13^{mm}. *Lat.* 7^{mm}. *Div.* variante ad 130°.

Kerguelen Island, on stones at low water, Dr. Kidder, two specimens.

This shell, externally, resembles some of the coarse, ill-defined acanthochitons. The girdle, however, is narrower and smoother than in that genus, and the pores so extremely minute that in a dry specimen they would escape attention. Within, however, the features are entirely new, though not unexpected. It forms a transition between *Hanleia* (*mendicaria*) and the articulate chitons. A single unsplit lamina surrounds both the terminal valves, projecting far beyond the external layer. In the posterior plate this is continued forward to form part of the sutural laminæ. These, in all the valves, slope off, both toward the middle and toward the sides, so as to take the place of the ordinary side-laminæ, which here do not exist.

The specimen examined—hardened by preservation in alcohol and

softened in water only—had the plates so much affected by the decortication of the whole jugular portion that I was unable to extract them in a perfect condition. However, all the characters could be made out except the *muco*, which, judging by the remaining striæ of growth, must have been central, or nearly so. (Carpenter MS.)

HELICIDÆ.

HELIX (HYALINA) HOOKERI.

Helix hookeri, Pfr. Mon. Hel. iii, 88, No. 531.

Helix hookeri, Reeve, Conch. Icon. 208, n. 1474.

Mus. No. 11904.

Kerguelen Island, Hooker, Dr. Kidder. Gregarious about and under stones. Occasionally the shell of this species appears to be partly membranous, and in drying, from this cause, the spire is frequently abnormally flattened.

SIPHONARIIDÆ.

SIPHONARIA TRISTENSIS.

Siphonaria tristensis, Sby. Gen. Sh. f. 3.; Dall. Am. Journ. Conch. vi, 1870.

Siphonaria lessoni, Blainv. teste Rve. Ic. v., fig. 23, a, 6.

Mus. No. 11905.

Tristan d'Acunha, Rve. Orange Harbor, Patagonia, United States Exploring Expedition; Kerguelen, Dr. Kidder; abundant between tide-marks.

ACEPHALA.

LASEIDÆ.

LASEA RUBRA, Mont.

Mus. No. 11906.

Kerguelen Island, Dr. Kidder, four specimens; with mussels. Distribution world-wide. These individuals are rather larger than most northern specimens.

LEPTONIDÆ.

LEPTON PARASITICUM, n. s.

Mus. No. 11907.

Shell small, elongate ovate, inflated, thin; beaks nearly central, not prominent, surface shining, but not polished, with the texture of a *Pandora*. Shell white, hardly sculptured, but under a high magnifying

power showing delicate concentric lines and fine radiating, apparently pubescent, lines extending from the umbones. Margins of the shell covered by an extension of the mantle, provided on each side with seven or eight stout cirri or tentacular processes. A single larger cirrus above the foot at the anterior end. Siphon short, foot small, very close to the anterior end of the shell.

Length, 2^{mm}; height, 1.6^{mm}.

Habitat, in the channels leading to the oral aperture of a species of echinoid (*Tripylus*), where it appears to lead a parasitic or at least a commensal existence. These echini were dredged by Dr. Kidder at Royal Sound, Kerguelen Island, near the station of the United States observers, in five and twelve fathoms. These tiny mollusks were quite abundant on the particular portion of the echinus mentioned, but none were found on any other part. It would seem as if the soft parts, before becoming contracted by the alcohol, must have almost entirely enveloped the shell. The latter was of such extreme tenuity that all efforts to remove it entire from the specimens resulted in its destruction. The teeth appeared, however, to resemble those of the other species of the genus; none of which, so far as I can recall, have been reported as commensal animals.

MODIOLARCIDÆ.

KIDDERIA, n. g.

Shell minute, byssiferous, concentrically sculptured, with two minute cardinal teeth in each valve, and a partially internal ligament attached to a more or less prominent process on the inner hinge-margin of each valve. Pallial line simple.

KIDDERIA MINUTA, n. s.

Mus. No. 11908.

Shell minute, thin, inflated; shaped not unlike a short *Lithodomus*; the upper posterior surface dark rose-color, the basal and umbonal portions of the valves whitish, with an excessively thin epidermis; the interior more or less suffused with rose-color, smooth, but not polished. Muscular scars indistinct, anterior scar rounded, posterior ovate. Umbones rounded, inflated, nearly terminal; anterior end of shell subtruncate, posterior end rounded. Surface smooth, under a high power showing minute rounded incremental concentric ridges. Cardinal teeth very minute, anterior largest, hinge-margin not thickened except at the ligamentary processes. Ligament strong and thick, attached almost exclu-

sively to the inner side of the hinge-margin, but partly visible from the outside between the edges of the valves.

Length of largest specimen, 4^{mm}; height, 3^{mm}; diameter, 2.5^{mm}.

This minute shell was found attached to the byssus of *Mytilus canaliculus*, and at first sight might be readily taken for the fry of that species. An examination of the hinge and muscular scars, however, is sufficient to dispel this impression.

It differs from *Modiolarca*, in its single anterior muscular scar, the presence of strong *nymphæ* for the subinternal ligament, and in the full development of the cardinal teeth; which, though minute, stand sharply out from under the cardinal border, instead of being subobsolete upon its internal face. The ligament falls little short of being entirely internal. So strong, and so strongly attached is it, that all attempts to clear it from the hinge-processes were ineffectual, and their exact shape (which appears to differ slightly in different individuals) could not be made out. In fact, in opening the shell, the valves would usually give way before the ligament. Its attachments appear to be entirely internal, though the edges of the valves do not quite close over its outer surface. The margin of the shell appears perfectly plain, and most of the specimens possess a slender byssus.

Modiolarca pusilla, Gould, appears (from the type specimens) to belong to this group, but it differs from *K. minuta* in form, color, and larger proportional size of the teeth. Gould's figure does not well represent his typical specimens. They were from Tierra del Fuego, and among some *minutiæ* from Orange Harbor, collected by the United States Exploring Expedition, I found several specimens of *K. minuta*. In some respects this shell recalls *Ceropsis* of the *Carditidæ*.

I am pleased to be able to connect with this interesting little form the name of Dr. Kidder, who has, with very limited opportunities and the disadvantage of a comparatively short stay on the island, succeeded in accumulating a most interesting fund of specimens and biographical notes.

MYTILIDÆ.

MYTILUS MAGELLANICUS, Ohemn.

Mus. No. 11909.

New Zealand, Straits of Magellan, authors; Kerguelen Island, Dr. Kidder; four living specimens, much eroded, and numerous dead valves.

MYTILUS CANALICULUS, Hanley.

Mytilus latus, auct. non. Lam.

Mytilus unguatus, Rve. Conch. Ic. ii, 4.

Mus. No. 11910.

Chili, Reeve; New Zealand, Hanley; Kerguelen Island, Dr. Kidder, living; abundant. The shell of this species closely resembles some varieties of *Mytilus edulis*, but the soft parts are quite different. The foot is large and quite flat beneath. The viscera and branchiæ are white; the foot and mantle edge streaked with dark brown.

The following species, not obtained by Dr. Kidder, but described as new, by Mr. Smith, in the paper referred to; and other previously-described species, which are not enumerated in the paper in the Annals, were found by the Rev. A. E. Eaton, of the English party at Kerguelen.

Struthiolaria mirabilis, Smith.

Buccinopsis (?) *eatoni*, Smith.

Trophon albolabratum, Smith.

Littorina setosa, Smith.

Rissoa Kergueleni, Smith.

Eatoniella subrufescens, Smith, sp.

Skenca subcanaliculata, Smith.

Scissurella supraplicata, Smith.

Solenella gigantea, Smith.

Yoldia subæquilateralis, Smith.

[In addition to the foregoing, the collection contains individuals of an undetermined *Doris*, found in tide-pools, at low-water.—J. H. K.]

MOLLUSCOIDA.

The class TUNICATA is numerously represented, both solitary and compound ascidians being abundant upon rocky beaches and attached to the great masses of kelp (*Macrocystis*) which fringe the shores of the island. A large solitary ascidian, of dark mahogany color, with tough, leathery envelope, was especially common just below low-water mark. Specimens were found as long as 5 inches.

Flustra and numerous other forms of POLYZOA grow luxuriantly upon the stems and leaves of sea-weed, presenting often remarkably

delicate and beautifully branching forms. No brachiopods were collected, owing, I suppose, to the want of facilities for dredging, since better-known regions in the same latitude have been found to be particularly rich in animals of this class. None of the *Molluscoïda* have yet been identified specifically.

INSECTS.

COLEOPTERA.

Several species of curculio, and a very few specimens of a small black beetle, were found at different times and in very diverse localities. The little black beetles were caught on rocks near the sea and about the roots of wet tufts of moss. They belong to the genus *Oethebius*, Leach, a member of the aquatic family *Helophoridae*, McLeay, and are vegetable feeders in the perfect state. The British species are described as slow in their movements, creeping along the stems of aquatic plants, and often crawling out of the water upon the margins of fresh-water pools. There was no body of fresh water near the habitat of these Kerguelen specimens, but the herbage in which they were found is constantly drenched with rain and snow water. Westwood states (Guide to the Classification of Insects, London, 1839) that "this family appears to be confined to temperate climates, no species having been hitherto found as inhabitants of tropical countries, or, indeed, as belonging to the southern hemisphere."

A small black species of curculio was captured near the top of Mount Crozier, above the snow-line, early in the summer (November). It had just crawled out of a tuft of moss upon the surface of a rock. Other similar specimens had been found still earlier in the season under stones in gravelly soil, apparently torpid. Later, many different forms, some of moderate size, were found on the sunny faces of rocks near the sea. Many of these were colored green, blue, or brown, but the colors were generally dull. Most of the species were incapable of flight, their wing-cases being soldered together. Some of the largest forms were good fliers, however, the largest and most brilliantly colored specimen taken having flown into my hut one night, attracted by the light. These curculios were not observed to counterfeit death when approached, as is the habit of the family elsewhere. All of these various forms are pronounced by Professor Gerstaecker (to whom both these and the preceding were sent for identification) to belong to the genus *Phillobius*,