

ART. XXX.—*Further Notes on Danais berenice, in a letter from MR. F. W.*

C. STURM to the Honorary Secretary, Hawke Bay Philosophical Institute.

[Read before the Hawke Bay Philosophical Institute, 9th September, 1878.]

“Hawke Bay Nurseries, 17th February, 1878.

“DEAR SIR,—In regard to the butterfly, *Danais berenice*, or a closely-allied species (as per your paper on the same),\* the first time I saw it was at the Reinga, up the Wairoa River, in Hawke Bay, in December, 1840, or January, 1841. In 1848, I captured a number at the Waiau, a tributary to that river, the Wairoa; I cannot recollect how many, but it must have been eight or nine at least, as I sent some small collections of insects to several of my friends and correspondents in Europe, and all, or nearly so, had one or two of the *Danais* included. Again, in 1861, I captured three on the Rangitikei River (near to the Messrs. Birch's sheep-run), one of which I have still in my collection, although in a very imperfect state. About twelve years ago Mr. Brathwaite captured one in his garden at Napier; this he sent to England, and it came into the hands of the Rev. H. Clarke, who mentioned it to me in a letter, as we corresponded. Four years back I saw three or four in my garden here, and two years ago there were a great number in my gardens, always keeping about the Lombardy poplars and *Houheria populnea*. Mr. Duff, of Kereru, also informed me that he had captured one pretty high up on the east side of the Ruahine range, about ten years ago. I certainly believe the butterfly to be indigenous and not introduced; and my observations of it fully coincide with yours, that while, in certain years, it is plentiful, in other years it is not to be seen.—I am, dear sir, yours, etc.,  
F. W. STURM.”

ART. XXXI.—*Notes on some New Zealand Echinodermata, with Descriptions of new Species.* By Prof. F. W. HUTTON.

[Read before the Otago Institute, 8th October, 1878.]

*Amphiura parva*, sp. nov.

Small, disc pentagonal, covered with rather large imbricating scales, and a pair of large, nearly semi-circular, radial shields at each corner. Rays two or three times as long as the disc, tapering; upper plates broader than long with the outer edge convex; under plates laterally constricted, with a blunt tooth on each latero-anterior margin, and with the outer edge slightly emarginate. A single broad tentacle scale. Side plates with a row of three or four nearly equal spines, which are almost as long as the breadth

\* Trans. N. Z. Inst., Vol. X., p. 276.

of the ray. Mouth shields triangular. The whole animal is of a pale brown colour. The distance between the tips of the rays is about three quarters of an inch.

Dunedin Harbour.

*Asteracanthion graniferus*, Lam.

A specimen of what I take to be this species is in the Otago Museum. It was found in Dunedin Harbour.

*Asterias rupicola*, Verrill, Bull. U.S. Nat. Museum, No. 3, 1876, p. 71.

A specimen of this species, found near Dunedin, has been presented to the Museum by Mr. A. Montgomery.

*Echinaster fallax*, Mull. and Troch. = *Othilia luzonica*, Gray.

The *Henricia oculata* of my Catalogue of the Echinodermata of New Zealand (1872) is the same as this species.

*Echinaster* (?) sp.

Rays seven; five and a half times as long as the diameter of the disc. A specimen 18in. in diameter from Waikouaiti, presented by Mr. Orbell. I cannot identify it.

*Chotaster maculatus*, Gray (*Nepanthia*).

I have placed with great doubt under this species a starfish that I have received from Wellington.

*Pentagonaster dilatatus*, Perrier, Arch. Zool. Exper. 1876, v., p. 33.

*Asterina novæ-zealandiæ*, Perrier, l.c., p. 228.

I have not seen any description of either this species or the last.

*Asterina regularis*, Verrill.

I have a variety of this species, from Dunedin, with six rays, which can hardly be distinguished from *A. australis*.

*Goniocidaris canaliculata*, A. Ag.

During a late visit to Sydney I was able to examine specimens of both *G. tubaria* and *G. geranioides*, and found that our species differed from both. It is, however, I think, identical with *G. canaliculata*; but the ocular pores are at the external angle of the plates, and Mr. Agassiz does not mention the trumpet-shaped secondaries surrounding the abactinial system. It has ten primary tubercles in a row.

NOTE.—Since reading this paper, I have seen the figure of *Goniocidaris canaliculata* in Sir Wyville Thomson's "Atlantic," and find that it is not our species. Our species may be called *Goniocidaris umbraculum*.

*Salmacis globator*.

Specimens sent to the Otago Museum, by Mr. C. Traill, from Stewart Island, appear to belong to this species. But there are eight or nine tubercles on a plate of the interambulacral system at the ambitus. The

test is white with pink tubercles; the integument a pale brownish yellow. The spines on the upper portion are reddish purple with white tips; on the lower portion they are white, getting yellow towards the base.

Diameter 2 inches. Height 1.4 inches.

*Echinocardium australe*.

A specimen of this species, presented to the Museum by G. Joachim, Esq., from Northport, Chalky Inlet, measures  $2\frac{1}{2}$  inches in length.

*Molpadia coriacea*, Hutton.

This is evidently not a true *Molpadia*. It is probably a *Caudina* or an *Echinosama*, but as the type is in the Wellington Museum, I cannot re-examine it.

*Cucumaria thomsoni*, sp. nov.

Body fusiform, scarcely subpentagonal. Skin rough, wrinkled. Ambulacra with the tubercles densely crowded in about 5 or 6 rows. No feet on the interambulacral areas. Tentacles—?

Rich brown, the white tips to the feet giving the ambulacral areas a spotted appearance. Length,  $1\frac{3}{4}$  inches.

Stewart Island. Presented to the Museum by G. M. Thomson, Esq., after whom I name it. A single specimen in spirit.

*Echinocucumis alba*, Hutton.

The receipt of another specimen of the *Chirodota* (?) *alba* of my catalogue has enabled me to dissect it, and I find that it has five well-marked ambulacra, and should be placed in the genus *Echinocucumis*.

*Labidodesmus turbinatus*, sp. nov.

Body rounded, suddenly contracted posteriorly into a short-pointed tail, and anteriorly into a rather long cylindrical neck; skin smooth, slightly transversely wrinkled; the two dorsal ambulacra, with two rows each of rather distant feet; the three ventral ambulacra either like the dorsal or with more crowded feet in several rows. Tentacles—. Body white, covered with a brown epidermis, which easily peels off, except round the ambulacral feet. Length,  $2\frac{1}{2}$  or 3 inches.

Stewart Island. Presented to the Museum by G. M. Thomson, Esq. Two specimens in spirits.

PENTADACTYLA, gen. nov.

Feet evenly spread over the greater part of the body. Tentacles five, pedunculated, frondose; dental apparatus very large.

*Pentadactyla longidentis*, Hutton.

In the Catalogue of the Echinodermata of New Zealand (1872), p. 16, I described a Holothurian under the name of *Thyone longidentis*. It is, how-

ever, evident that it is not a *Thyone*, but belongs to the family *Aspidochirota*, and must form the type of a new genus, distinguished by having only five tentacles and scattered foot-papillæ. I therefore propose the name *Pentadactyla* for it.

*Holothuria mollis*, Hutton.

This species in many respects approaches *Stichopus*. I have had no specimens for dissection, and cannot therefore say whether the reproductive organs are in one or two bunches. A knowledge of this will settle to which genus it should be referred.

*Holothuria robsoni*, sp. nov.

Elongated, rather slender. Skin, smooth. Feet, scattered sporadically over the ventral surface, apparently none on the back. Pentacles, 20. Anus, round. Back, pale purplish brown; ventral surface, dirty white, with scattered brown spots. Length,  $4\frac{1}{2}$  inches.

Cape Campbell. Presented to the Museum by Mr. C. H. Robson, to whom I have much pleasure in dedicating it.

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ART. XXXII.—*The Sea Anemones of New Zealand*. By Prof. HUTTON.

[Read before the Otago Institute, 11th June, 1877.]

I SHOULD not have chosen such a pretentious title for this paper, but that I wished to include in it descriptions of the three New Zealand sea anemones that have not been found near Dunedin. The sea anemones are animals that can only be described from living specimens; they must be collected, brought home alive, and placed in water before their structure and colour can be seen, and when they are dead there is no known means of preserving them so as to be of any use. To enable observers, therefore, in any part of the colony away from libraries, to describe these animals, I have included in this paper not only descriptions of all the New Zealand species not described in our Transactions, but also an analysis of all the known genera.

ZOANTHARIA-MALACODERMATA.

Analysis of the Families.

Base adherent at pleasure.

Tentacles all compound	...	...	...	...	<i>Thalassianthidæ</i> .
Tentacles both compound and simple	...	...	...	...	<i>Phyllactidæ</i> .
Tentacles all simple					