

# THE ANNALS

AND

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[FIFTH SERIES.]

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"..... per litora spargite muscum,  
Naiades, et circum vitreos considite fontes:  
Pollice virgineo teneros hic carpite flores:  
Floribus et pictum, divæ, replete canistrum.  
At vos, o Nymphæ Craterides, ite sub undas;  
Ite, recurvato variata corallia trunco  
Vellite muscosis e rupibus, et mihi conchas  
Ferte, Deæ pelagi, et pingui conchyliis succo."  
*N. Parthenii Giannettasii* Ecl. 1.

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### I.—*On a living Spinose Rhynchonella from Japan.*

By the late THOMAS DAVIDSON, LL.D., F.R.S.

[INTRODUCTORY.—The material for this paper was found on Dr. Davidson's table after his death, with a wood-block drawn from his own illustrations. In accordance with his wishes I have prepared for press the following short notice of this new and most interesting recent Brachiopod, the last he was destined to figure and describe, for death put an end to his life-long labours on the Brachiopoda on October 14.

Dr. Davidson intended this paper for the 'Annals and Magazine of Natural History,' and it now seems peculiarly fitting that it should be published in the periodical which issued his first important memoir on the group, that "On the Classification of the Brachiopoda" (vol. ix. 2nd series, 1852), just thirty-three years ago.—AGNES CRANE.]

*Rhynchonella Döderleini*, Dav., n. sp.

Shell transversely subpentagonal, wider than long, hinge-line obtusely angular. Dorsal valve deep, posteriorly uniformly convex, anteriorly divided into three lobes, the central one forming a broad, rounded, mesial fold, varying in elevation according to the age of the individual. Ventral valve much less deep than the dorsal one, with a broad mesial sinus of greater or lesser depth commencing at a third of the length of the shell and extending to the front. Beak moderately produced, almost erect, with an oval-shaped foramen situated under its gently incurved angular extremity and margined by narrow deltidial plates. Lateral margins of the valves



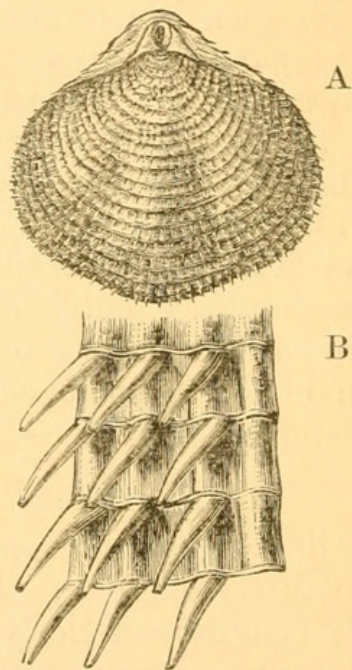
slightly sinuated and forming in front a more or less elevated curve. Surface of valves marked with numerous delicate radiating ribs, with interspaces between them of almost equal width, and increasing in number at variable distances from the beak by the interpolation of shorter riblets. Ribs numbering in full-grown specimens sixty, close to the margin. Valves closely crossed by numerous equidistant concentric raised or foliated lines of growth, giving rise at the margin on each riblet to short, sloping or erect, hollow spinules. Shell-structure fibrous, colour light yellowish grey. In the interior of the dorsal valve are two short curved lamellæ for the support of the labial appendages. Length 12, breadth 13, depth 7 lines \*.

In the young state the shell is much flatter, without a mesial fold, the ribs are fewer in number, and the spines have not yet become developed. Number of ribs about thirty, half of which originate from the interpolation of shorter ones between the others; some are also due to bifurcations.

*Habitat.* Several specimens of this new and interesting species were dredged by Dr. L. Döderlein in the living state in about 160 fathoms in Sagami Bay, Japan. *R. Döderleini* is often found attached to corals.

It was associated with *Hexactinellidæ*, the crab *Lithodes hystrix*, *Laqueus rubellus*, *Ter. Blanfordii*, and *T. caput-serpentis*. I am informed by Dr. Döderlein that it was dredged close by "station 232" of the 'Challenger' Expedition, but a little nearer the coast, in from 100 to 250 fathoms. The sea-bottom was covered with mud, stones, and volcanic débris, and was rich in animal life †.

*Observations.*—In this very remarkable species, by far the most noteworthy of all the living members of the *Rhynchonellidæ*, the spines project from each rib. They are arranged in regular rows, and not irregularly scattered over the surface of the shell, as in *Rh. spinosa*, a some-



A. Adult *Rh. Döderleini*, Dav.

B. Portion of external surface enlarged, to show ribs, interspaces, concentric lines, and spines.

\* [Dr. Davidson's description verbatim.—A. C.]

† No less than thirty-two species of Brachiopoda have now been obtained from Japanese and Chinese waters.



what similar form from the Inferior Oolite of Dundry and elsewhere. That species and its allies, *R. bradfordiensis* and *R. Crossi*, are profusely covered with longer spines, which appear to be a characteristic of age, as they are not so developed in young specimens. *R. Döderleini* therefore exhibits an interesting survival of a form of shell-ornamentation which formerly prevailed among the Palæozoic Productidæ, Orthidæ, &c., and the Oolitic Spiriferidæ and Rhynchonellidæ. No spinose Brachiopoda are known from the Cretaceous or Tertiary period, and the species now described is the first example of the kind among living species of the group.

I have named *Rh. Döderleini* after its discoverer, Dr. L. Döderlein, of the Naturhistorisches Museum of Strassburg, who kindly placed the specimens he dredged in Sagami Bay, Japan, at my disposal for description and illustration.

THOMAS DAVIDSON.

## II.—An Account of the Earth-Snakes of the Peninsula of India and Ceylon. By Colonel R. H. BEDDOME, F.L.S.

### Uropeltidæ.

Body cylindrical, with a small head, not distinct from the neck; eye very small or moderate. Cleft of the mouth of moderate width; teeth small in the maxillary and mandibular bones, none in the palate; only one pair of frontals, four upper labials; a longitudinal fold at the chin only in *Melanophidium*; tail very short, truncated, and terminating in a rough shield, which is rounded, square and more or less bicuspid, or flat with the caudal scales more or less keeled; or somewhat tapering, with a small terminal scute, which is 1-2-pointed, or with a horizontal ridge, with the caudal scales often quite smooth; anal bifid.

The species of this tribe are confined to the peninsula of India and Ceylon and are peculiar to the mountainous districts or to the heavy forests at the immediate foot of the mountains; their headquarters are the western ranges of mountains from Canara to Cape Comorin, only one species having been found on the mountains of the east coast, and only three north of the Kudra Mukh in South Canara, on the west side; some few only are widely distributed, others are exceedingly local and appear to be very rare in their localities.

They burrow into the ground, and are often dug up about coffee- and tea-estates; but they can always be collected by



Davidson, Thomas. 1886. "On a living Spinose Rhynchonella from Japan." *The Annals and magazine of natural history; zoology, botany, and geology* 17, 1-3.

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