

structo ; labro margine in medio obtusim angulato ; colore fulvicante.

Hab. Satanosaki, south coast of Kiusu ; 55 fathoms.

Genus ZEIDORA, A. Adams.

On comparing my examples of this curious little genus, I observed that I had confounded two species under the name *calceolina*. The second of the two I beg leave now to describe under the name of

Zeidora reticulata, A. Adams.

Z. testa oblonga, dorso convexa, lineis elevatis longitudinalibus radiantibus et lirulis concentricis pulcherrime decussata ; apertura margine crenulato, fissura profunda angusta.

Hab. Mino-Sima ; 63 fathoms.

This species differs from *Z. calceolina* in being much more convex, less obtuse anteriorly, and in the fissure being narrow and deeply incised. The sculpture, moreover, is very different, the surface being finely reticulate instead of widely cancellate.

Yokuhama, August 11, 1861.

XXXIII.—*Note on the Molluscan Fauna of Japan.*

By ARTHUR ADAMS, F.L.S. &c.

WITH regard at least to the Molluscan fauna, the Manchurian province, indicated with doubt by Professor Edward Forbes in his 'Map of the Distribution of Marine Life,' does not exist.

The Japonian province is bounded on the north by the Okhotskian and on the south by the Indo-Pacific province, and it receives contributions from both. *Littorina grandis* and *subtenebrosa*, *Cryptochiton Stelleri* and *Amicula amiculata*, for example, have travelled south from the Sea of Okhotsk ; while *Littorina sinensis* and *Acanthochites scutiger* have come northward from the Yellow Sea. The great northern species of *Neptunea* and *Buccinum* and the *Velutina* family abound and flourish towards its northern boundary, while to the south linger vestiges of the great tropical families of Cowries, Olives, and Cones. The neutral ground, or place of meeting of north and south, seems to be near the Strait of Tsuka, or the south end of Yesso and the north of Nippon.

Some genera and species have only been met with hitherto in the Sea of Japan, and are possibly peculiar to the Japonian province ; at least we must consider them indigenous to this sea until they shall have been detected elsewhere. Examples of this occur in the genera *Zeidora*, *Cranopsis*, *Morchia*, *Cyrilla*, and

Enida, which I have recently discovered, and in the species *Eburna japonica* and *Haliotis japonica*.

The remainder, or possibly the greater part, of the Molluscan inhabitants have been introduced by foreign immigrations from the north, south, and west.

1. *Boreal or Northern Forms.*

These have travelled from the Sea of Okhotsk, passing through the Strait of La Pérouse, and, following the prevailing cold current, according to our observations, have distributed themselves along the coast of Manchuria and the shores of Yesso. Some of these, for example *Cryptochiton Stelleri* and *Littorina grandis*, may have been derived from the Shantar Sea, having passed through the Gulf of Amur into the Gulf of Tartary.

2. *Indo-Chinese or Southern Forms.*

These, issuing from the China, Eastern, and Yellow Seas, have entered by the Korea Strait, and, following the prevailing warm current along the shores of Nippon, have spread themselves over the Sea of Japan, mingling with species from the north and west.

3. *Pacific or Western Forms.*

These mollusks have crossed the North Pacific Ocean, and passed into the Sea of Japan by the Straits of Tsuka and La Pérouse. Among them may be instanced *Saxidomus Nuttalli* and *Gemma gemma*. Saghaleen has derived some species from Sitka, the Manchurian coast from Oregon, and the islands of Yesso and Nippon from California.

I can say nothing from personal observation concerning the influence of the gulf stream of the North Pacific, but possibly during the summer of the present year I may have an opportunity of visiting the western coast of Nippon.

Shanghai, China, May 15, 1861.

XXXIV.—On a Species of *Rüppellia*, *Milne-Edwards*, and the Limits of the *Brachyura*. By Dr. STRAHL*.

DANA, in his work on the Crustacea, describes a *Rüppellia* which he identifies, with doubt, with *R. annulipes*, M.-E. The figure given by him facilitates a comparison with the statements of Milne-Edwards. Dana's *Rüppellia* is evidently a new species, and not to be identified with any one of Milne-Edwards's three species. The species described as *Rüppellia annulipes* by Dana

* Translated from the Monatsbericht der Königl. Akad. der Wiss. zu Berlin, November 1861, p. 1004.



Adams, Arthur. 1862. "XXXIII.—Note on the Molluscan fauna of Japan." *The Annals and magazine of natural history; zoology, botany, and geology* 9, 298–299.

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