BRADY , G.S. , 1865 a

On undescribed fossil Entomostraca from the Brick-Earth of the Nar.

Ann. Mag. Nat. Hist., ser.,3 , Vol. 16 : 189 - 191 , pl. 9 ., London .

Centropristes or *Arripis salar* of Richardson and Günther's works. They have the belly silvery, back olive, sides rich green with vertical darker bands, and four or five longitudinal rows of round yellow spots, like lacquered brass, on the sides. This style of colouring, so different from that of the adult, is most strongly marked in the young of three or four inches in length; and I have traced in the most gradual and satisfactory way its gradual confusion and obliteration as the size approaches 1 foot, beyond which only traces can be seen of any difference from the nearly uniform dull colouring of the adult. The superior size of the eye, the difference of proportional distance between the orbits, and the shape of the forehead, relied upon by authors amongst the characters separating the *C. Georgianus* from the others, are more and more exaggerated as the size and age of the individuals are less and less.

In small, very young individuals the posterior edge of the præoperculum is not denticulated; and this is the great character relied on by Cuvier and Günther for the specific distinction of the *C. truttaceus* in their works (the fin-rays of the adult varying to the amount I have shown above); but I have clearly demonstrated the gradual appearance and development of the serration with increase of size; so that this is certainly (as might even be seen by observing the relative lengths of the radiating ridges forming the denticles going to the posterior and inferior edges of the præoperculum respectively in an old fish) only a character of immaturity.

Living specimens of the young fish three or four inches long have the caudal fin bright yellow, with a broad posterior margin of rich black; both these colours fade quickly, and totally disappear in spirit or on a dried skin. Now as this particular colouring, noted by Cuvier on a drawing from life of a fish of which he had never seen a specimen, was the foundation of the species *Perca marginata* in his 'Histoire Naturelle des Poissons,' and all the other characters are those found likewise in the young of *Arripis Georgianus*, I have no doubt, from my observation of these fugitive colours in the living fish, that *Perca marginata* should be added to the synonyms of the one Australian species of *Arripis* found here—the *A. Georgianus*. I mean to publish figures from the life, shortly, in the 'Decades of the Prodromus of the Zoology and Palæontology of Victoria,' which I am preparing as part of the "Memoirs of the Melbourne Museum," the establishment of which occupies all my leisure so pleasantly.

Melbourne, June 24, 1865.

XXV.—*On undescribed Fossil Entomostraca from the Brick-earth of the Nar.* By George Stewardson Brady.

[Plate IX.]

For the opportunity of describing the following species of Ostracoda I am indebted to the kindness of Professor T. Rupert Jones, from whom I received the specimens. An account of the deposit in which they occurred was given in the 'Geological Magazine,' vol. ii. p. 8, to which the reader is referred. The carapaces were very few in number, and belonged to the four species here described.

Order OSTRACODA.

Fam. **Cypridæ.**

Genus Cytheridea, Bosquet.

Cytheridea punctillata, n. sp. Pl. IX. figs. 9–11.

Valves oblong, subtriangular, convex. Dorsal margin gently arched, highest at its anterior third; ventral margin straight. Anterior border broad and well rounded; posterior narrower, and sloping steeply to its lower extremity, which forms a rounded angle. Seen *from above*, the carapace is oval in outline, and shows scarcely any appearance of pitting. *End view* suborbicular. *Surface* marked with fine and thickly set puncta. Length $\frac{1}{40}$th of an inch.

This is nearly allied to *Cytheridea pinguis*, Jones, and to *Bairdia punctatella*, Bosquet, but is not strictly referable to either of these species. It differs from the former in surface-ornament, as well as in the absence of angulation of the dorsal border; from the latter, as well as from *B. Hebertiana*, in its more triangular shape and finer surface-ornament.

Genus Cythere, Müller.

Cythere carinata, n. sp.* Pl. IX. figs. 1–4.

Carapace obliquely subtetragonal, convex; margins flexuous. Dorsal margin arched, gibbous in the middle; ventral margin convex, produced anteriorly into a broad, strongly developed keel. Anterior extremity narrow, bordered partially by the ventral keel; posterior extremity broad, somewhat truncate. *Dorsal outline* broadly oval. *End view* ovate, tumid. *Surface*

* This species was noted by Prof. T. R. Jones in the 'Geological Magazine,' vol. ii. p. 306, under the name *Normania carinata*. I have, however, thought it advisable to abandon the MS. genus *Normania*, which was meant to include the "peach-stone" forms, but which I found incapable of accurate definition or separation.

covered with conspicuous concentrically arranged pits, which are well developed towards the margins, but nearly obsolete at the centre of the valves. Length $\frac{1}{45}$th of an inch.

This species is either identical with, or very closely related to, a recent form which is common in deep water on many parts of the British coast, but which appears hitherto to have escaped description.

Cythere arborescens, n. sp. Pl. IX. figs. 5–8.

Carapace broadly oval, well rounded in front, about once and a half as long as broad. The left valve is much larger than the right, overlapping it considerably on the dorsal and posterior margins. The dorsal margin is strongly arched, and slopes somewhat steeply behind towards the ventral margin, the two being produced at their junction into an obtusely angular prominence. Ventral margin nearly straight, somewhat incurved at its anterior third, and sloping gently upwards behind. The *dorsal outline* is oblong oval, compressed. *End view* ovate. *Surface* of the shell finely punctate, marked at the extremities and along the ventral margin with an elevated reticulated pattern, the ramifications of which are gradually lost on the surface of the valves. Length $\frac{1}{75}$th of an inch.

The recent species *Cythere convexa* differs from the present only in the general outline of the valves, which in *C. arborescens* are more decidedly quadrangular, and in the ornamentation of the surface. But though there is much diversity in the sculpturing of *C. convexa*, I have never met with any specimens, either recent or fossil, which show the least trace of the beautiful arborescent ribbing characteristic of the present species. The surface is also more finely punctate than in *C. convexa*; but I should not, on this account alone, have thought it justifiable to propose for it a distinct specific name.

Cythere aspera, n. sp. Pl. IX. figs. 12–19.

Valves oblong, quadrilateral, compressed. Extremities nearly equal, the anterior obliquely rounded, bordered by an elevated nodulated ridge, which terminates in a conspicuous tubercle over the anterior hinge, and is fringed with short blunt spines. Posterior border produced into a broad flattened lamina, which bears at the ventral angle three or four strong squamous spines. Dorsal margin nearly straight; ventral sinuated and squamous behind. *Seen from above*, the carapace is compressed, oblongo-ovate, tuberculated, spinous behind. *End view* quadrilateral. *Surface* of the valves marked by three conspicuous longitudinal ridges, the ventral ridge sharply

defined, the others nodulated and less distinct. The valves are covered, between the ridges, with rounded tubercles. In young specimens the longitudinal ridges are sharper, the surface-tubercles are sharp and spinous, and the elevated anterior border is absent or indistinct. The young state of this species is represented in figs. 12–15. Length (of the adult) $\frac{1}{33}$rd of an inch.

The above description applies to well-marked specimens; and much latitude must be allowed as to the amount of spinous and tubercular development, especially with reference to the squamous spines and lamina of the posterior extremity.

EXPLANATION OF PLATE IX.

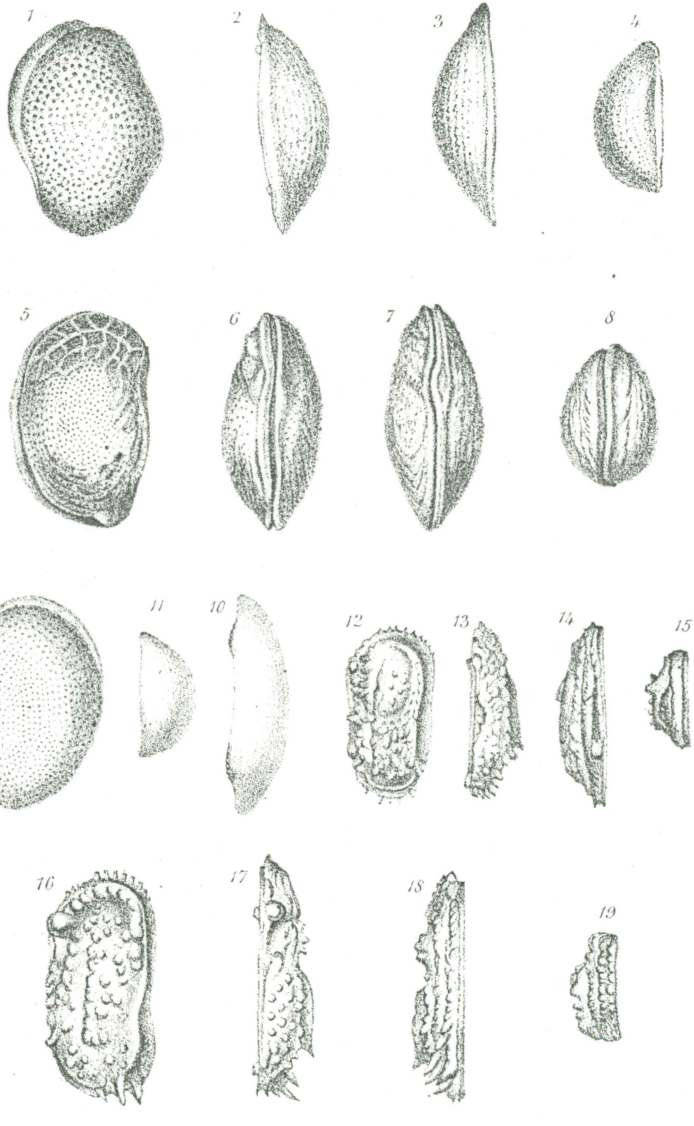
Fig. 1. *Cythere carinata* (Brady), left valve, × 50.
Fig. 2. The same, seen from above, × 50.
Fig. 3. The same, seen from below, × 50.
Fig. 4. The same, end view, × 50.
Fig. 5. *Cythere arborescens* (Brady), perfect carapace, × 40.
Fig. 6. The same, seen from above, × 40.
Fig. 7. The same, seen from below, × 40.
Fig. 8. The same, end view, × 40.
Fig. 9. *Cytheridea punctillata* (Brady), left valve. × 40.
Fig. 10. The same, seen from above, × 40.
Fig. 11. The same, end view, × 40.
Fig. 12. *Cythere aspera* (Brady), right valve (young), × 40.
Fig. 13. The same, seen from above, × 40.
Fig. 14. The same, seen from below, × 40.
Fig. 15. The same, end view, × 40.
Fig. 16. The same, adult right valve, × 40.
Fig. 17. The same, seen from above, × 40.
Fig. 18. The same, seen from below, × 40.
Fig. 19. The same, end view, × 40.

XXVI. *Classification of Polyps.* (*Extract condensed from a Synopsis of the Polypi of the North Pacific Exploring Expedition under Captains* Ringgold *and* Rodgers, *U.S.N.*) By A. E. Verrill*.

The report upon the collection made by Dr. William Stimpson, naturalist to the expedition, having been much delayed, the following tabular view of the classification adopted is here presented, with the hope that, if imperfect like every other, it may nevertheless afford some aid in illustrating the natural affinities of these humble forms.

Although, in a communication read before a zoological club at Cambridge, January 1862, I attempted to demonstrate the

* From the 'Proceedings of the Essex Institute,' U. S., for 1865.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