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# Description of Some Queensland Palaeozoic and Mesozoic Fossils.

## 1. QUEENSLAND LOWER CRETACEOUS CRUSTACEA.

In 1892 Dr. Henry Woodward, late Keeper of the Department of Geology at the British Museum (Natural History) described a Brachyurus Decopod from the Lower Cretaceous of Queensland as *Prosopon etheridgei*,<sup>1</sup> and to his description I added a short appendix giving an account of what I then knew of Crustacea from the geographical area and geological formation in question.<sup>2</sup> Since then the only other occurrence within my recollection is that of a Macruran carapace described as *Enoploclytia terra-reginæ*.<sup>3</sup> The type of the first of these Crustacea is in the Queensland Museum, and although without precise locality, it is manifestly from some spot within the Central Queensland Cretaceous area.

This occurrence is abundantly confirmed by a series of specimens lately received for description from Mr. B. Dunstan, Chief Government Geologist, obtained at Beaconsfield, near Longreach, and by an additional example in the Australian Museum.

With the *Prosopon* forwarded by Mr. Dunstan are two examples of a *Hoploparia*, and possibly a *Glyphea* from the Maryborough Marine Series of the Cretaceous at the Kolan River, Wide Bay District.

I am further indebted to Mr. A. B. Walkom, of the Department of Geology, University of Queensland, for several examples of a Macruran from the Cretaceous beds on Woody Island, which will be referred to in the sequel.

### BEACONSFIELD BRACHYURA.

Genus PROSOPON, *Von Meyer*, 1835.

(Jahrb. für Min., 1835, p. 329.)

PROSOPON ETHERIDGEI, *H. Woodward*.

(Pl. 1, figs. 1-4.)

*P. Etheridgei*, *H. Woodw.*, Proc. Linn. Soc. N.S. Wales, vii. (2), pt. ii., 1892, p. 301, pl. IV.

*Obs.*—Here are eight examples of this “man-faced” Crab, two of these being specimens with their matrix cast cavities. In the already figured specimen the anterior portion of the abdominal

<sup>1</sup> Woodward—Proc. Linn. Soc. N.S. Wales, vii. (2), pt. i., p. 301, pl. iv.

<sup>2</sup> Etheridge—*Ibid.*, p. 305.

<sup>3</sup> Etheridge—Rec. Austr. Mus., x., No. 9, 1914, p. 271, pls. xxiii. and xxiv.

somites was revealed, but in those supplied by Mr. Dunstan portions of the ambulatory limbs are exposed. So far, however, as completeness is concerned, the single specimen in the Australian Museum is the more so in itself. Dr. Woodward's description is so ample and precise that little is left for me to refer to but the presence of the ambulatory limbs, which are displayed, more or less, in three of the Beaconsfield examples as well as in our Museum specimen.

In the specimen in question and on one of the Survey examples there are portions of the usual four pairs of limbs, more or less, the chelæ and three pairs of ambulatory limbs or endopodites. In the Museum example (Pl. I., fig. 1), on the right side, and on the left side of the survey specimen (Pl. I., fig. 2), I believe the first, second, and third endopodites are preserved, but on the left side of the former there are the first, second, and fourth, the third missing just as the fourth is on the right-hand side.

Of the first and second endopodites on the right side of the Museum fossil (Pl. I, fig. 1) there can be no doubt. If the positions of these limbs be compared with those of *Dorippe*, the recent ally of *Prosopon*, it will be seen that the third appendage (Pl. I, fig. 1) in passing below for its abdominal attachment occupies the correct position of the third endopodite. On turning attention to the left side of the same fossil, we find the third leg wanting and the fourth present, occupying precisely the same position as the corresponding limb does in *Dorippe*, i.e., perched on the upper anterior surface of the abdomen (Pl. I, figs. 1 and 2), immediately behind the posterior margin of the carapace.

In the genus *Dorippe* the last two pairs of legs are "raised on the upper surface of the body behind the carapace"; they are thus "adapted for carrying foreign bodies to serve as a protection."

The podomeres of the endopodites (Pl. I, fig. 1) are crenulated and granuled along their respective edges. On one specimen the six abdominal somites and telson are partially preserved (Pl. I, fig. 4).

The rostrum was not greatly produced, and is obtusely rounded at the apex. Portions of the eye-stalks are visible in three specimens (Pl. I, figs. 1 and 2).

Dr. Woodward entered very fully into a comparison of this Queensland Crab, with other previously known forms of *Prosopon*,

particularly those described by Prof. A. Reuss from the Neocomian, and by Dr. H. von Meyer from the White Jura, &c. The nearest ally it appears to me is *P. verrucosum*, Reuss,<sup>4</sup> Neocomian in age.

BEACONSFIELD MACRURA.

Genus HOPLOPARIA, McCoy, 1849.

(Ann. Mag. Nat. Hist., iv. (2), 1849, p. 175.)

*Obs.*—Accompanying the examples of *Prosopon* are portion of a carapace, and six abdominal somites of another specimen, which from their association in the same deposit, and at the same locality, I assume to be of like identity. At first I took these to be *Enoploclytia*, but on further examination the carapace revealed features allying it very closely with *Hoploparia*, McCoy, more particularly in the presence of what McCoy termed a “ deep λ-shaped sulcus.”

HOPLOPARIA MESEMBRIA,<sup>5</sup> *sp. nov.*

(Pl. 1, fig. 5 ; ? Pl. 2, fig. 1.)

*Obs.*—About one-half a carapace is preserved ; the anterior rostral portion and extreme posterior are missing. The nuchal furrow is deep and broad dorsally, and, as described by McCoy, not reaching the ventral margins. The Greek λ-shaped sulcus, in advance of the nuchal furrow, is exceedingly well-marked, and its ventral bifurcation semi-encloses a well defined tubercle. The anterior branch of this characteristic sulcus runs as far forward, almost horizontally, as the carapace is preserved ; the posterior branch is soon lost on the carapaceal surface. On the gastro-hepatic region are two depressed prominences or tubercles. The entire carapace is densely granuled.

There is a strong resemblance between this *Hoploparia* and *H. biserialis*, Fritsch,<sup>6</sup> from the Chalk of Bohemia.

The specimen (Pl. 2, fig. 1) associated with this carapace consists of five abdominal somites and portion of the sixth, each well rounded above, so presenting a strong and rather broad back. The pleuræ appear to be all pointed, with entire margins ; they may be described as broadly triangular, not acutely so, as in *Enoploclytia*. Assuming this to be the abdomen of the associated carapace, *H. mesebria* must have attained a length of at least eight inches.

<sup>4</sup> Reuss—Denksch. K. Akad. Wiss. Wien, xvii. 1 abth., p. 70, pl. xxiv., fig. 1.

<sup>5</sup> μεσημβρια. South.

<sup>6</sup> Fritsch and Kafka—Crustaceen Böhm. Kreidef., 1887, p. 36, fig. 56.

## WOODY ISLAND MACRURAN.

Genus GLYPHEA, von Meyer, 1835.

(Jahrb. für Min., 1835, p. 328.)

*Obs.*—On the fractured surfaces of a series of blue-black calcareous nodules are fragmentary portions of a Macruran. Of these, only two and their counterparts and a third impression are sufficiently decipherable for description—one is the larger portion of a carapace, the other a similar but smaller specimen with the remains of abdominal somites, and traces of appendages. I am indebted for an introduction to these to Mr. Walkom, as already explained, who has also supplied some valuable geological notes.

I refer this carapace, &c., to Von Meyer's genus *Glyphea* from the presence of a deeply impressed V-shaped nuchal furrow, and the characteristic oblique branchial furrows, meeting one another on the back from opposite sides at an acute angle, without reaching the posterior margin, a character which McCoy says distinguishes *Glyphea* from *Mejeria*, McCoy.<sup>7</sup>

GLYPHEA ARBORINSULARIS, *sp. nov.*

(Pl. 1, fig. 6; Pl. 2, figs. 2 and 3.)

*Obs.*—The carapace is much compressed laterally, generally oval in outline, the anterior rostral portion subtriangular and bearing two, perhaps three, strong longitudinal carinæ. The nuchal furrow is deep, strong, and slightly curved sigmoidally. The cervical groove branches cut the dorsal line, or back, at about one-third from the carapace posterior margin passing obliquely (as usual) across to within about one-fourth from the nuchal groove, when they are suddenly reflected to the ventral margins with a slight posterior inclination. The surface of the carapace halves between the nuchal and branchial furrows is divided into three, or perhaps four, sub-areas, as follows:—The nuchal furrow is succeeded posteriorly by an area, best described as “leg of mutton-shaped,” the lower part of which rises into an obtuse granulated tubercle; behind this area and above the branchial groove is the largest sub-area, irregularly triangular in outline; below the sub-area first mentioned is the smallest, transversely elongate, and extending to immediately under the postero-ventral points of the rostrum. The whole carapace is densely granulated, including the rostral carinæ; the granules are largest and sparsest on the two dorsal sub-areas, smaller and densely packed on the large general areas below and behind the branchial grooves.

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<sup>7</sup> McCoy—Ann. Mag. Nat. Hist., iv. (2), 1849, p. 334.

The second specimen (Pl. 2, fig. 3), as already explained, consists of a small portion of another carapace, the six abdominal somites ill-preserved, certainly one of the exopodites of the last pair of pleopoda, and fragments of the larger limbs showing very faint traces of granulation. The abdominal segments attain a length of about three inches; beyond these facts little more can be made of these remains.

The third example is an impression of a carapace posterior to the nuchal furrow (Pl. 1, fig. 6.)

Mr. Walkom has afforded me the following geological notes:—The horizon of these Crustacea on Woody Island is 600 to 650 feet below the freshwater measures of the Burrum Series. The succession as given by Mr. Dunstan is as follows:—

1,700 ft. Freshwater beds = Burrum Series.

500 ft. Marine beds.

50 ft. Freshwater beds.

200 ft. Marine beds.

The 50 ft. "freshwater" beds are in all probability marine. The grey calcareous nodules containing these prawn remains occur in the bottom 200 ft. Marine beds. A number of other fossils are said to be also abundant in this stratum, the chief being *Fissilunula clarkei*, *Crioceris australe*<sup>8</sup>, *Belemnites canhami*, and a large *Maccoyella*.

*Locality*:—Woody Island, Great Sandy Strait, midway between Fraser Island and Urangan.

Amongst the specimens from the Geological Survey is a hand example of blue-grey non-calcareous mudstone with the remains of a large Prawn-like Crustacean from the Maryborough Series of the Kolan River.

There are preserved—(a) Apparently certain of the thoracic structures within the cephalic-thoracic flap, or gill cover, which has disappeared; (b) possibly three abdominal somites; (c) one of the chelæ, with its terminal very finely toothed podomere displaced; (d) portions of two of the ambulatory endopodites, and perhaps an indication of a third behind them; (e) protruding forwards in advance of all is probably the remains of one of the antennæ.

The endopodites of the chela are freely granulated, but the granules do not appear to ornament longitudinal carinæ; on the contrary they are scattered, except the presence of a definite marginal row along the anterior edges of the podomeres, and cross rows at the podomere sutures.

<sup>8</sup> Now an abandoned name.



In the absence of the carapace it is impossible to generically name this Crustacean, but there is every possibility of it proving to be *Glyphea arborinsularis*.

*Locality* :—Bucca Crossing, Kolan River, Wide Bay District.

*Horizon* :—Maryborough Marine Cretaceous Series.

*Collection* :—Queensland Geological Survey (Spec. F. 907).

Genus CALLIANASSA, *Leach*, 1813.

(Brewster's Edinb. Encycl., vii., 1813.)<sup>9</sup>

CALLIANASSA (?), sp.

(Pl. 2., fig. 4.)

*Obs.*—In the "Note on Queensland Crustacea," already referred to, I spoke of a chela of a Macruran from the Queensland Museum Collection, possibly one of the Astacomorpha or Thalassinidæ.

It consists of either the fourth and third podomeres, or even perhaps the second (in part), and third and fourth of one of the chelipids.

*Locality* :—Walsh River or Mitchell River? In blue argillaceous limestone.

*Horizon* :—Rolling Downs Series, Lower Cretaceous.

*Collection* :—Queensland Museum, Brisbane (Spec. F. 17, 1280).

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<sup>9</sup> *Fide* L. Agassiz.--Nomenclator Zoologicus.

**EXPLANATION OF PLATES.**

## PLATE 1.

PROSOPON ETHERIDGEI, *H. Woodward.*

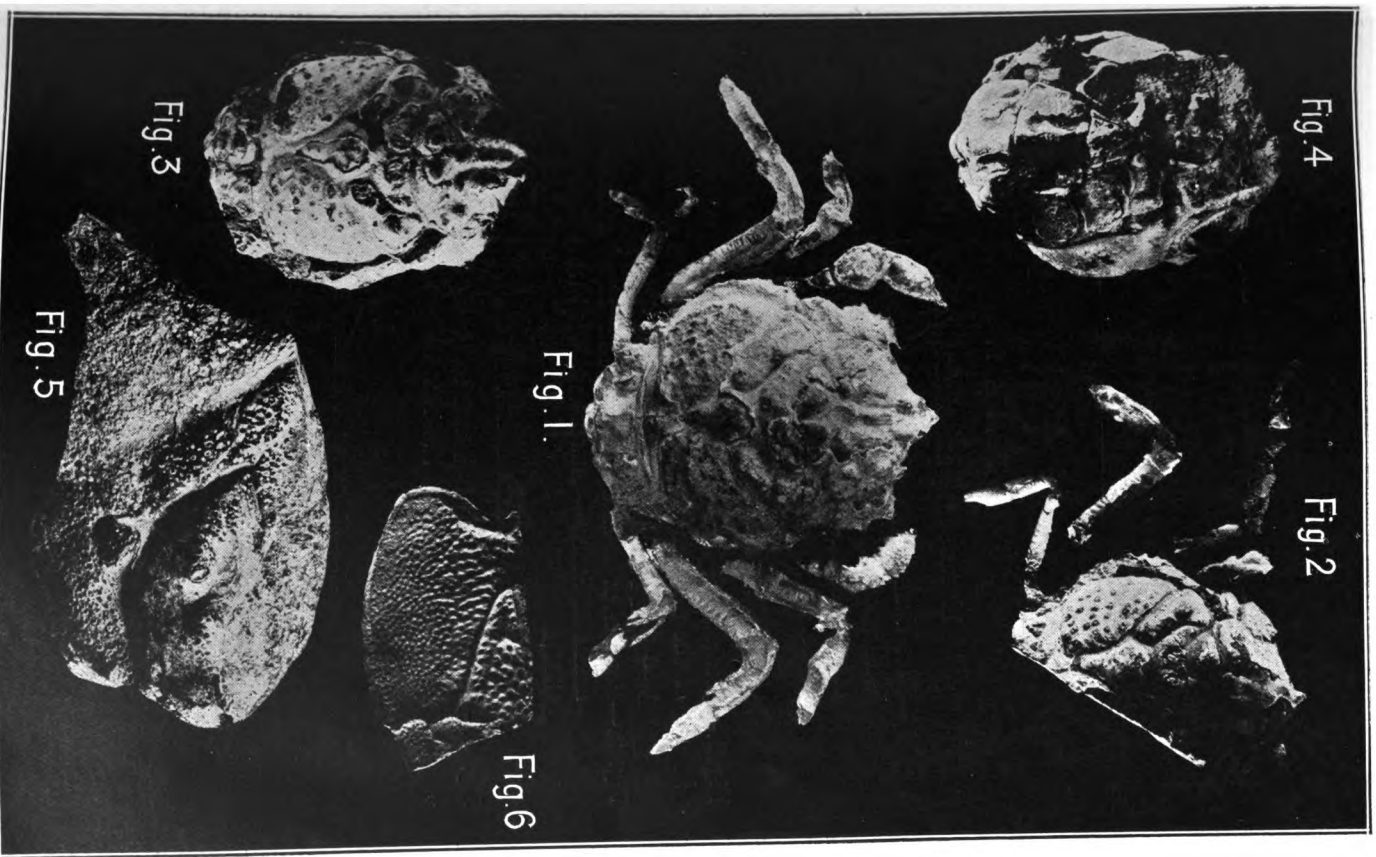
- Fig. 1.—Dorsal view of an almost complete individual, exhibiting the ambulatory limbs, the fourth of which on the left-hand side occupies the same position as the corresponding appendage does in the recent genus *Dorippe*.—Australian Museum Collection.
- Fig. 2.—Matrix cast exhibiting practically the same characters as in Fig. 1.—Queensland Geological Survey Collection. (Spec. F. 910).
- Fig. 3.—Dorsal surface of the crab of which Fig. 2 is the impression.—Queensland Geological Survey Collection. (Spec. F. 910a).
- Fig. 4.—Ventral aspect of Fig. 3 showing abdominal somites and portion of telson.—Queensland Geological Survey Collection (Spec. F. 910a).

HOPLOPARIA MESEMBRIA, *Eth. fil.*

- Fig. 5.—Portion of a carapace, right side displaying its furrows to advantage, particularly the  $\lambda$ -shaped sulcus in advance of the nuchal furrow.—Queensland Geological Survey Collection (Spec. 913).

GLYPHEA ARBORINSULARIS, *Eth. fil.*

- Fig. 6.—Portion of a carapace, right side, exhibiting the cervical and nuchal grooves and subdivisional areas between them.—Queensland University Collection (Spec. 1315).



## PLATE 2.

HOPLOPARIA MESEMBRIA, *Eth. fil.* (?)

Fig. 1.—Five abdominal somites and portion of a sixth, occurring with the subject of Plate I., fig. 5, I assumed to be of the same species.—Queensland Geological Survey Collection (Spec. 914).

GLYPHEA ARBORINSULARIS, *Eth. fil.*

Fig. 2.—Carapace, right side, similar to Plate 1, fig. 6, with a portion of the rostrum preserved.—Queensland University Collection (Spec. 1309).

Fig. 3.—Portion of a carapace, six abdominal somites and fragments of limbs.—Queensland University Collection (Spec. 1304).

## CALLIANASSA (?), sp.

Fig. 4.—Portion of chela, believed to be that of a species of this genus.—Queensland Museum Collection (Spec. F. 17, 1280).



Fig. 1



Fig. 3



Fig. 2



Fig. 4