ZOOLOGICAL NOTES FROM PORT DICKSON, III

CRUSTACEA ANOMURA AND BRACHYURA

by

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From his stay at Port Dickson on the Malay Peninsula at the beginning of 1946 Major Dr. L. D. Brongersma of the N I C A Detachment brought home several species of crabs. A list of this material which is now incorporated in the collections of the Museum of Natural History at Leiden is given below, while on some of the more interesting species some remarks are made.

Coenobita cavipes Stimps. — 26 specimens.
Clibanarius padavensis De Man. — 1 specimen.
Clibanarius infraspinatus Hilg. — 1 specimen.
Petrolisthes speciosus (Dana). — 1 ♀.
Camposcia retusa Latr. — 2 ♂♂, 1 ♀.
Schizophrys aspera (H. M. Edw.). — 1 ♂.
Neptunus pelagicus L. — 12 specimens, including 4 ♂♂, 2 ♀♀.
Charybdis (Charybdis) helleri (A. M. Edw.). — 1 ♂.
Charybdis (Charybdis) anisodon (De Haan). — 1 ♂.
Thalamita crenata Latr. — 2 ♂♂, 1 ovigerous ♀.
Thalamita stimpsoni A. M. Edw. — 1 ♂, 1 ♀, both young specimens.
Chlorodopsis pilumnoides (White). — 1 juv. and a young Xanthid probably belonging here.
Ozius guttatus H. M. Edw. — 1 ♀.
Pilumnus vespertilio (Fabr.). — 2 ♂♂, 3 ♀♀.
Pilumnus scabriusculus Ad. & White. — 2 ♂♂.
Pinnotheres borradailei Nob. — 1 ♀.
Ocypoda ceratophthalma (Pall.) — Many specimens.
Uca annulipes Latr. — 2 ♂♂.
Uca lactea (De Haan). — 2 ♂♂.
Uca marionis (Desm.). — 4 ♂♂, 1 ♀.

Dotilla myctiroides H. M. Edw. — 50 ♂♂, 1 ♀.
Macrophthalmus malaccensis Tweedie. — 1 much damaged ♂.
Metopograpsus messor (Forskål). — 1 ♀.

Charybdis (Charybdis) helleri (A. M. Edw., 1867)

In this ♂ no trace is found of the three red spots on the cephalothorax, which were described and figured by Monod (1930, p. 137, fig. 7). His so called "Querlinie" is represented, as is also stated by Leene (1937, p. 166 and 1938, p. 49) for her specimens, by a smooth non-hairy line on the anterior part of the cephalothorax beginning on each side at the base of the first antero-lateral tooth and reaching nearly to the middle of the carapace, where the two halves do not unite but remain separated by a narrow hairy strip.

Charybdis (Charybdis) anisodon (De Haan, 1835)

The type specimens of this species (2 ♂♂ and 1 ♀ from the Moluccas) are preserved in the dry collection of the Museum of Natural History at Leiden. Now those types as well as the ♂ from Port Dickson differ in some points from the extensive description given by Leene (1938, p. 64). The ridge which crosses the cephalothorax between the epibranchial spines is practically interrupted over the whole gastric region, only a few granules which are slightly larger than the surrounding ones and rather difficult to observe represent this ridge on the said region.

The impression is formed by the second antero-lateral tooth that it is smaller than the first antero-lateral one which is at the same time the outer orbital angle; Leene states: "The first two [antero-lateral teeth] are the smallest and nearly of the same size", but in the figure given the second antero-lateral tooth on the left side is distinctly smaller than the first one and this is in agreement with De Haan's statement "secundis minoribus" (De Haan, 1835, p. 42). Leene figures the teeth on the distal half of the anterior border of the meri of the chelipeds very blunt; in our specimens, however, these teeth are far sharper.

On page 67 Leene enumerates the localities cited by divers authors for this species. Our collections contain moreover the three type specimens from the Moluccas, 3 ♂♂ and 1 ♀ form Padang, 1 ♂ from Timor and some specimens from Java.

Ocypoda ceratophthalma (Pallas, 1772)

Of this very common species 8 ♂♂ and 12 ♀♀ were collected at Port

Dickson. In all these specimens the epibranchial angle never reaches beyond the outer orbital angle, but remains slightly or more distinctly behind that level.

On comparing a ♂ pleopod with the figure given by Chopra and Das (1937, p. 419, textfig. 17) I found on the concave side a small lobe which seems to have been altogether absent in the material examined by the said authors (fig. 1).

Fig. 1. *Ocypoda ceratophthalma* (Pallas), male pleopod. × 24.

Macrophthalmus malaccensis Tweedie, 1937

In 1913 Tweedie described two new species of *Macrophthalmus, M. malayensis* (Tweedie, 1913, p. 165, fig. 8a & 8b) and *M. malaccensis* (Tweedie, 1913, p. 167, fig. 9a & 9b); the locality of both being Morib, Selangor, on the west coast of the Malay Peninsula.

Macrophthalmus malayensis is easiest recognised by the granular outer surface of the palm, which is granular over the whole outer surface, while in *dilatatus* as well as in *malaccensis* the lower part of the said surface is smooth. I have examined side by side De Haan's types of *dilatatus,* in which

species I was first inclined to place our badly damaged ♂, and this ♂ as a representative of *malaccensis,* and I enumerate here the differences between the two, differences partly stated by Tweedie too.

In *dilatatus* the outer orbital angle is directed outwards and reaches beyond the tip of the first antero-lateral tooth, while in *malaccensis* the said angle is sharper and more slender, and less long, not by far reaching the tip of the first antero-lateral tooth. In our specimens the gap between the outer orbital angle and the first antero-lateral tooth is about equal in breadth in both species. The second antero-lateral tooth in both species is very small.

In *malaccensis* the eyestalk with the eye extends slightly beyond the tip of the outer orbital angle, but not beyond the sides of the carapace; in *dilatatus* the outer orbital angle as well as the first antero-lateral tooth overlap the eye.

In *malaccensis* large and small teeth alternate on the ventral border of the orbit; while in *dilatatus* the small teeth are missing on the middle part of the border.

One cheliped is preserved in our specimen, enabling us to observe the differences between this leg and that of *dilatatus.* In both species the anterior border of the merus is hairy, the hairs being longer and denser in *malaccensis,* but in both species the 1 or 2 spinules on this border are obscured by the hairs; the posterior border of this joint in *dilatatus* bears three sharp spines, in *malaccensis* there is only one small tooth present, but the border is slightly damaged, so it is just possible that the teeth are missing for this reason. The palm of the cheliped shows some differences too; there is a spine on the inner border in both species, but the outer border in *dilatatus* is granular, while in *malaccensis* it bears larger and sharper spines. In *dilatatus* the border between the spine and the articulation with the palm is distinctly though bluntly granular, while in *malaccensis* the granules are far smaller, more or less indistinct. In *dilatatus* the outer surface of the wrist bears some large granules in the neighbourhood of the spine, while in *malaccensis* these granules are more numerous but smaller.

The coat of hairs on the inner surface of the palm is much denser in *malaccensis* than in *dilatatus,* absolutely obscuring in the first species the spine on its proximal part. In both species the upper outer border of the palm bears a row of coarse granules, but in *malaccensis* some of these granules of the more proximal part are replaced by spines. The upper part of the palm is granular in both species, the lower part smooth, but while in *dilatatus* a row of some larger granules separates both parts, such a row is missing in *malaccensis.* In both species the submarginal rim on the

palm is granular and becomes obsolete on the immovable finger; the surface ventrally of this ridge is granular in both species.

In *dilatatus* the fingers of the cheliped are far more slender than in *malaccensis*.

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