On a New Genus and Species (*Hylæocarcinus Humei*) of Landcrabs from the Nicobar Islands,—*by* Jas. Wood-Mason, *of Queen's College, Oxford.*

(With Plates XV & XVI.)

(Received and read August 6th, 1873.)

Milne-Edwards, in his classical work on the entire class of crustacea published in 1837, divides* the four then recognized genera of the small but remarkable group of *Gecarcinidæ*, or Landcrabs properly so-called, into two divisions accordingly as they have the terminal joints of the external maxillipeds completely exposed, or inserted on the internal face of the third joint near its summit and completely hidden beneath it ; and Dana† in his great work not only adopts these divisions but gives them subfamiliar names :—" The *Gecarcinidæ*," he says, " pertain naturally to two groups or subfamilies, one having the termination of the outer maxillipeds *exposed* as usual, the other having this part concealed beneath the second and third segments. The subfamilies and genera are as follows :—

Subfam. 1. UCAINÆ. Articulus maxillipedis externi 4tus apertus.

1. *Maxillipedes externi non hiantes.*

G. 1. Uca, *Leach.* Articulus maxillipedis externi 4tus angulo externo insitus.

G. 2. Gecarcinucus, *Edwards.* Articulus maxillipedis externi 4tus marginis medio apicalis 3tii insitus.

2. *Maxillipedes externi late hiantes.*

G. 3. Cardisoma, *Latr.* Articulus maxillipedis externi 4tus apice 3tii externo insitus.

G. 4. Gecarcoidea, *Edwards.* Articulus maxillipedis externi 4tus marginis medio excavato apicalis 3tii insitus.

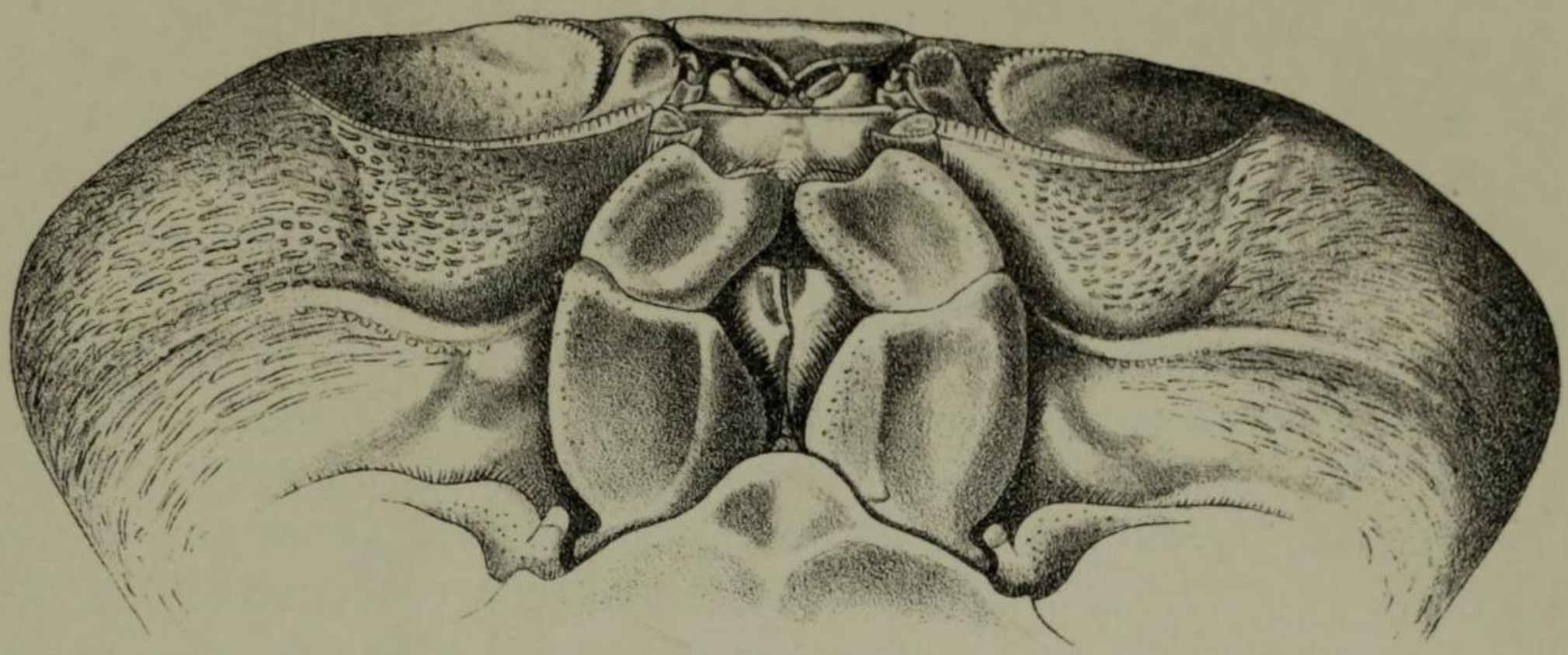
Subfam. 2. GECARCININÆ. Articulus maxillipedis externi 4tus et sequentes 3tio celati.

G. 1. Gecarcinus, *Latr.*

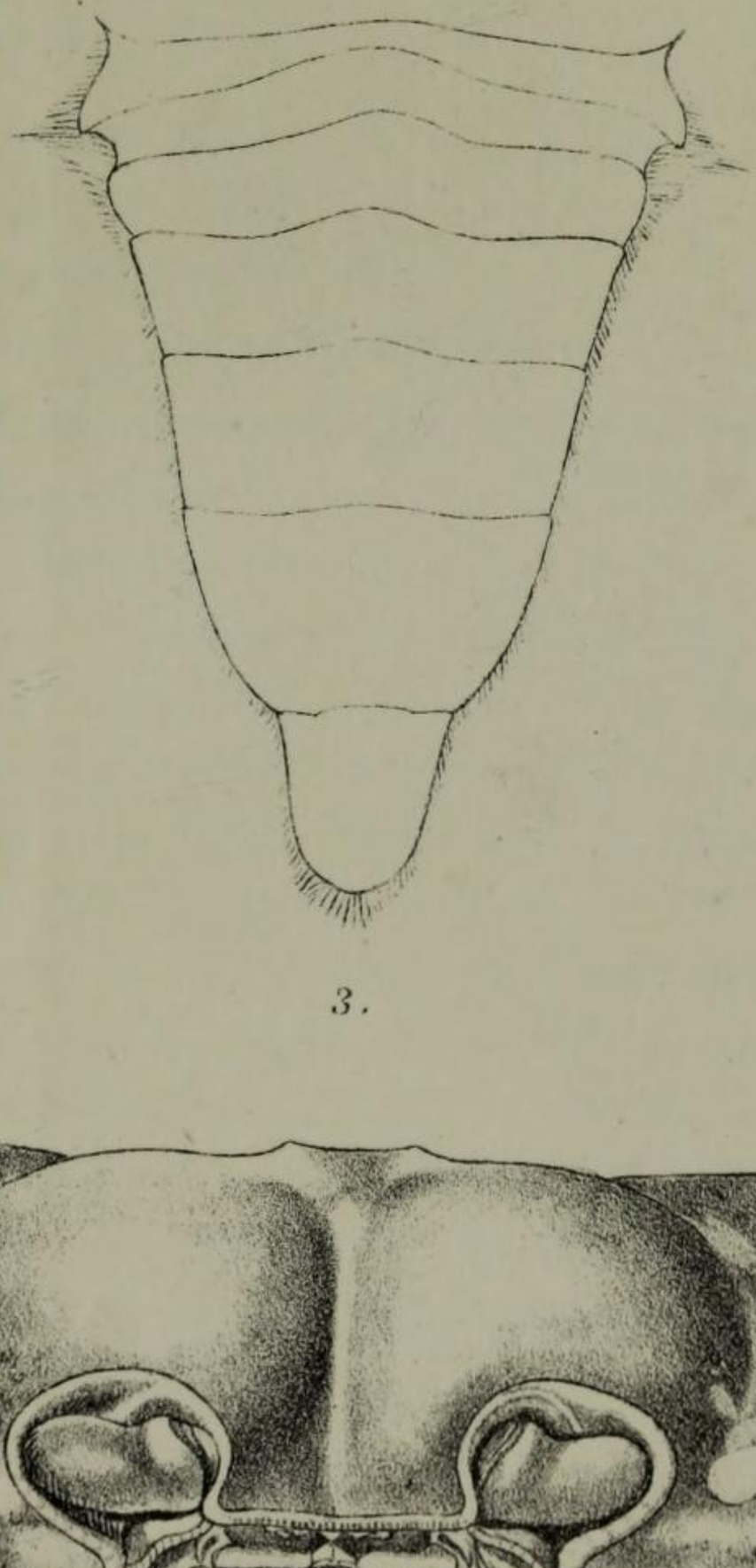
This division is unnatural as separating the genus *Gecarcoidea* (hodie *Pelocarcinus*) from *Gecarcinus* to which it is most closely related, and ranging it with others with which its relations are more general ; and the classificatory value of the character upon which it is based is, moreover, much diminished, if not altogether destroyed, by the discovery of a new form presenting an interesting transition from the former to the latter genus in this very character. A more natural result can, however, be attained, and

* Hist. nat. des Crust., Vol. II, p. 20.

† Unit. States Expl. Exped., Crust., Vol. I, pp. 374-375.



1.



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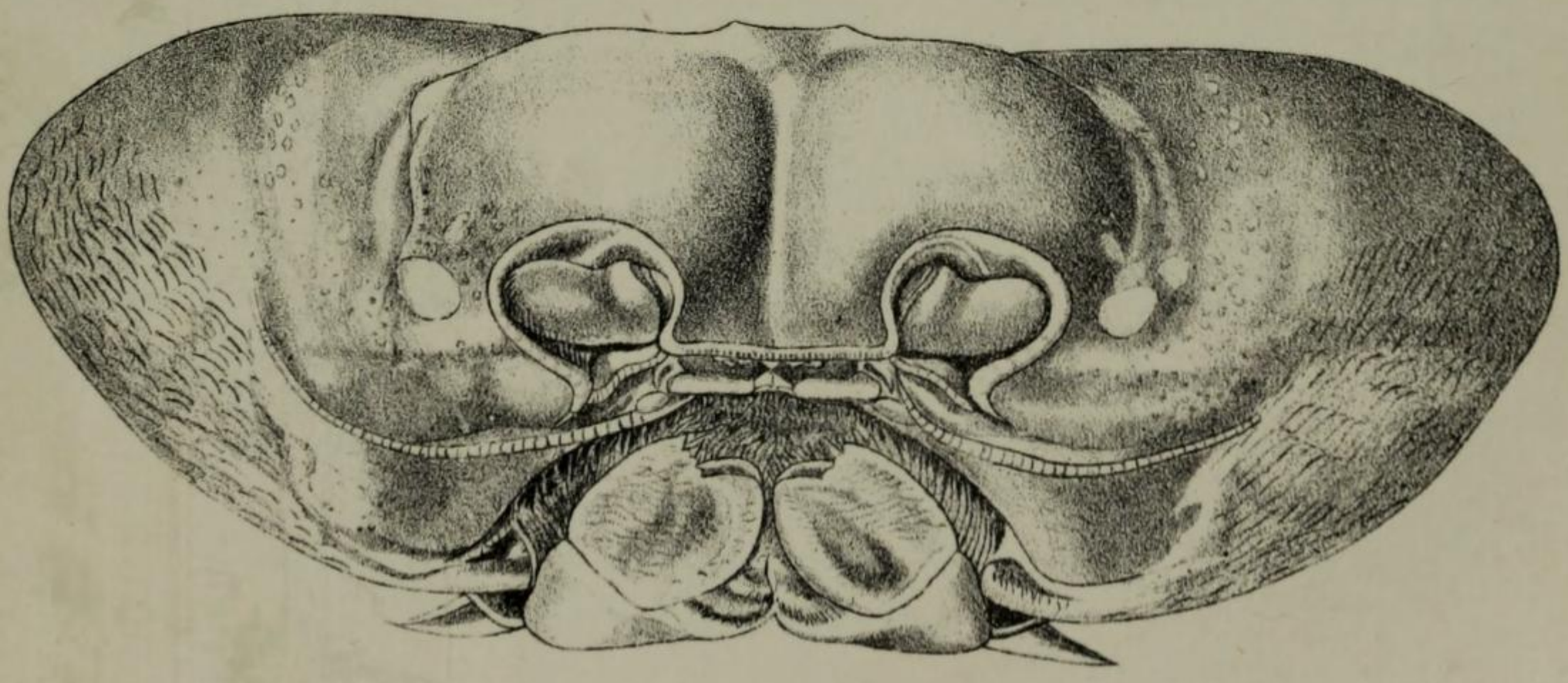

2.

HYLÆOCARCINUS HUMEI.

Dana's family names still retained, by the substitution of another maxillipedary character for the one originally selected and now proposed to be rejected: *Gecarcinus*, *Pelocarcinus*, and *Hylæocarcinus*, in fact, agree with one another and differ from all other genera of the family in that the exopodites of their outer foot-jaws are short, without flagella, and completely concealed from view beneath the second joints. The several genera of *Gecarcinidæ* divided into two groups or subfamilies accordingly as they have the exopodites of their outer foot-jaws provided with a flagellum and applied to the external margin of the second and third joints so as to be externally visible; or have them short and rudimentary without flagella, and concealed beneath the second joint; will then be distributed as follows:

SUBFAM. I. UCAINÆ.

Genus 1. UCA, *Leach.*
„ 2. GECARCINUCUS, *M.-Edw.*
„ 3. CARDISOMA, *Latr.*

SUBFAM. II. GECARCININÆ.

Genus 1. GECARCINUS, *Latr.*
„ 2. PELOCARCINUS, *M.-Edw.*
„ 3. HYLÆOCARCINUS, *Wood-Mas.*

A careful study of all the numerous figures and descriptions of species of GECARCINIDÆ, and, in the cases of the genera *Cardisoma* and *Gecarcinucus*, of actual specimens has convinced me that the GECARCININÆ further agree with one another in the structure of the *epistoma* which in them is of great length from before backwards and nearly horizontal, thus differing remarkably from the UCAINÆ in which it is short and nearly vertical; this part has in *Pelocarcinus* been described by Milne-Edwards* as "grand, complétement à découvert et confondu en arrière avec le palais," and it appeared to me to pass insensibly into the *endostoma* or 'palate' in *Hylæocarcinus* also until I had removed the thick clothing of coarse hairs that obscured the parts when I found no difficulty in distinguishing them. It is also a notable fact that the three most closely-allied species of the former, viz., *Gecarcinus ruricola*, *Pelocarcinus Lalandei*, and *Hylæocarcinus Humei*, have six rows of strong spines to the terminal joints of the walking legs, and I would also draw attention to the shallow yellow scars situated in all three on each side of the eye and on other parts of the carapace—tell-tale marks of their descent from a common ancestor!

HYLÆOCARCINUS,† n. gen., Wood-Mason.

Proc. As. Soc. Bengal, August 1873, p. 161.

* Arch. du Mus., 1855, Vol. vii, Pl. xv, fig. 2a.

† ὑλαῖος, sylvester, et καρκίνος, cancer.

Front not united to the internal suborbital lobes as it is in the genera *Gecarcinus* and *Pelocarcinus*, but separated from them by spaces at least as wide as the deep bold fissures that divide to their bases the internal from the external suborbital lobes; into these interspaces project the flagella of the antennæ, the basal joints of which appendages lie tightly wedged between the internal margins of the internal suborbital lobes and the epistoma. The third joint of the external maxillipeds with an obtuse-angled emargination in its anterior border; the external margins only of the first of the three terminal joints is barely visible externally when the appendages are properly closed, its external surface being flattened for movement upon the inner face of the preceding joint: in *Gecarcinus* these terminal joints are completely hidden from view, the angular process that projects like a pillar in demi-relief from the inner face of the third joint and supports them, ending abruptly so very far short of the anterior margin of the joint: in *Hylæocarcinus* the similar but stouter pillar-like projection that carries these joints at its summit extending much farther towards the extremity of the joint than it does in *Gecarcinus* but certainly failing to reach it, these joints can consequently be only partially visible: in *Pelocarcinus* they are completely visible, being articulated to the apex of the third joint.

Hylæocarcinus Humei, n. sp.

The carapace is at once distinguished from that of *Pelocarcinus Lalandei*, M.-Edw. by its more arched outline in front, and by the two rounded tubercles on the mesogastric lobe which, as in *Gecarcinus ruricola*, is limited off antero-laterally from the rest of the gastric region by very shallow depressions passing off from the hinder end of the profoundly-deep median groove and joining the branchio-gastric groove on each side; the straight line representing its greatest breadth crosses it just in front of these tubercles; in front of this imaginary line its upper surface is very convex and much swollen everywhere, but behind it flat; it is just perceptibly angulated on each side for a short distance beyond the external margin of the orbits, these angulations corresponding to the lines of spiniform tubercles seen in the same position in *Gecarcinus ruricola*. The outer slopes of the branchial regions, both anteriorly and posteriorly, and the floors of the branchial chambers, all the inflected portions of the carapace in fact, covered with squamiform tuberculated lines which, fine and delicate above, become shorter and coarser as they approach the bases of the legs and the buccal frame. The anterior is divided by a shallow transverse impression slightly interrupted in the middle line from the posterior cardiac lobe, which, just as in the rest of the *Gecarcindæ*, is much expanded posteriorly between the bases of the posterior pair of legs.

The interantennulary septem is formed mainly by the subfrontal lobe,

but partly by a short triangular process of the epistoma. The flagella of the antennæ are rudimentary. Both divisions of the suborbital lobes have their margins roughened with small tubercles, but the external one not nearly so distinctly so as it is represented to be in fig. 1 of pl. XVI.

The sternal region is much broader than long, its greatest breadth being between the bases of the second pair of legs.

The male appendages are very stout and long, reaching beyond the fifth postabdominal somite, and are connected at their bases with a remarkably stout and highly indurated semicircular plate which arches over the intestinal canal; a similar plate has been observed in the genus *Cardisoma* by S. I. Smith,* and is, doubtless, present in all *Gecarcinidæ*.

Postabdomen of the female broadly oval, about as broad as long, covering all but the margins of the sternal region, broadest across the posterior third of its fifth somite; last segment, trefoil-shaped, its sides being slightly emarginate, with its antero-lateral angles slightly covered by the produced postero-lateral angles of the preceding somite.

The chelipedes are equal and very powerful in the male; subequal and slenderer in the female; their meropodites, which in the male, as in *Pelocarcinus Lalandei*, extend much beyond the lateral borders of the carapace, but which in the female hardly reach the level of the branchial regions, have a few obtuse tubercles on their anterior, and some coarse tuberculated squamiform ridges on their posterior angles. The chelæ are granulated and ornamented, especially on the fingers, with minute dark-coloured smooth tubercles: their toothed prehensile edges meet, in the male, only at the extremities which are feebly excavated spoonlike; the margin of the spoonlike excavation in the propodite is notched for the reception of the external cutting edge of the dactylopodite, so as to form scissor-like organs.

The ambulatory legs are also remarkably powerful; their meropodites have their edges and sides much roughened by squamiform tuberculation; the upper crest of their carpopodites is armed with a row of minute spinules; their propodites have a row of stronger spines on each of their four angles, and the dactylopodites are provided with six rows of spinelike teeth.

Colours: upper surface of the carapace and the legs red violet, the claws whitey-brown faintly tinged with reddish violet; the scars at the extra-orbital angles, in the middle of the branchio-gastric suture on each side of the mesogastric region, etc., and the margins of the orbits, yellow; the flat posterior portion of the carapace is also much variegated with impure yellow.

Breadth of carapace of the male,.....	108 m m.
Length „ „ „ „	80 m m.

$\therefore$ B : L :: 1.35 : 1;

* Trans. Connecticut Academy, 1870, Vol. II, p. 142.

Breadth of carapace of the female, ...	96 m m.
Length „ „ „ „	73 m m.
∴ B : L : : 1.315, etc. : 1.	
Length of left claw of male, ...	88 m m.
Ditto right ditto, ...	87 m m.
Height left ditto, ...	38 m m.
Ditto right ditto, ...	38 m m.
Length of left claw of female, ...	55 m m.
Ditto right ditto, ...	57 m m.
Height of left ditto, ...	21½ m m.
Ditto right ditto, ...	25 m m.
Length of post-abdomen of female, ...	55 m m.
Breadth ditto ditto, ...	51 m m.

Hab. The dark dense damp forests of the Nicobar Islands. I captured a male and a female on Treis Island. Another specimen with a much distorted carapace was subsequently taken on Narkondam Island by Mr. Allan O. Hume, C. B., after whom I have named it.

Explanation of the plates.

Pl. XV. *Hylæcarcinus Humei*, Wood-Mason, male, nat. size.

Pl. XVI. Fig. 1. Facial region of the same. Fig. 2. Front view. Fig. 3. Post-abdomen of the male. Fig. 4. External maxilliped of the left side viewed from the outside. Fig. 5. Internal view of the same. All the figures of the natural size.