

DECAPOD CRUSTACEA FROM NORFOLK ISLAND.

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(Plate i.)

The small collection enumerated herein has reached us from two sources. The first series was collected by Messrs. R. M. and W. Laing, the latter a resident of the island, who placed them in the hands of Prof. Chas. Chilton, of Christchurch, N.Z., and who in turn very kindly forwarded them to us. For the others we are indebted to Mr. A. Liddell, for whom they were collected by Mr. J. Cornish Quintal. Our best thanks are due to both our friends.

BRACHYURA.

Tribe CYCLOMETOPA.

XANTHIAS ATROMANUS (Haswell).

1882. *Xanthodes atromanus* Haswell, Proc. Linn. Soc. N. S. Wales, vi. p.542; and Cat. Aust. Crust. p.49, pl.i. fig 1.

Common (Liddell).

ERIPHIA NORFOLCENSIS, n.sp. (Plate i., figs. 1, 1a, 1b).

Carapace almost $\frac{2}{3}$ as long as broad, gastric and cardiac regions faintly delimited. A well marked groove runs from each lateral angle inwards and forwards in the direction of the orbits. Dorsal surface smooth except on the hepatic regions, which carry a number of subspiniform tubercles, and immediately behind the front where it is granular.

Front emarginate, lobes much deflexed, but their free edge, which is well defined and granular, is visible from above.

The inner orbital angles are separated from the front proper by a shallow sulcus.

Orbits entire, their upper borders granular, the lower minutely spinulose.

Anterior lateral margins short, not lobulate, but carrying five or six small almost equidistant spinulous tubercles.

Chelipeds very unequal, either the right or left the larger. Carpus of larger cheliped smooth proximally, but carrying on its distal margin two rows of rounded tubercles which become spinulous above; some stiff hairs on its anterior margins. The upper margin of the hand is equal to the length of the finger, its inner surface punctate, and the outer with a number of smooth rounded tubercles having a roughly linear arrangement; a patch of short stiff yellow hairs at the base of the wide gape between the fingers. Finger and thumb acuminate, quite smooth; not dentiform, but each showing a tendency to bear a low rounded tubercle.

In the smaller cheliped the tubercles on the outer surface of the palm are markedly spinulous, and the fingers, which are considerably bent inwards, are costate, dentiform, meeting along their whole length when closed, and spoon-excavate at the tips.

Ambulatory legs somewhat flattened and clothed with scattered stiff yellow bristles.

The abdomen of the male is seven-jointed, the third joint being the widest.

Colour in spirits dark chestnut-brown, the chelipeds reddish, fingers black, white at the extreme tips. There is a patch of reddish colour on the palm behind the base of the mobile finger and at the junction of the carpus and propodus.

Dimensions of type (σ):—

Breadth of carapace between lateral angles.....	18 mm.
Length of carapace.....	13 ,,
Length of larger cheliped.....	30 ,,

A number of specimens were collected by Mr. Liddell, who informs us that it is common on the island, where it is known as the "Poison Crab."

The type is in the Australian Museum.

CYMO ANDROSSYI (Audouin).

1852. Dana, U. S. Explor. Exped., Crust. i. p.225, pl.xiii. figs.2a-b.

Common (Liddell).

OZIUS TRUNCATUS M. Edw.

1837. H. Milne Edwards, Hist. Nat. Crust. i. p.406, pl.xvi. fig.11.
Common (Liddell, Laing).

PLAGUSIA DENTIPES De Haan.

1835. De Haan, Faun. Japon., Crust. p.58, pl.viii. fig.1.
1878. Miers, Ann. & Mag. Nat. Hist. (5) i. p.152.

This species differs from *P. capensis* De Haan (= *P. chabrus* Aud.) so common on the Australian coast in the following particulars:—

The lower distal end of the merus of the legs is armed with a spine and not rounded. There is a group of granules on the hepatic regions. There are three or four dentiform processes on the front, the hindermost being the largest, while in *P. capensis* each lobe presents a row of six to seven granules. The teeth on the ambulatory legs are stronger, the hairs on the dorsum of the carapace are shorter and do not in the adult cover the branchial prominences.

In *P. dentipes* rudimentary exopods are also developed on the ambulatory legs.

Common (Liddell, Laing). The species is also common on Lord Howe Island.

PERCNON PLANISSIMUM (Herbst.).

1900. *Leiolophus planissimus* Alcock, Journ. Asiatic Soc. Bengal, lxxix. p.439.

1906. Rathbun, U. S. Fish Commission, Bulletin, 1903, p.842.

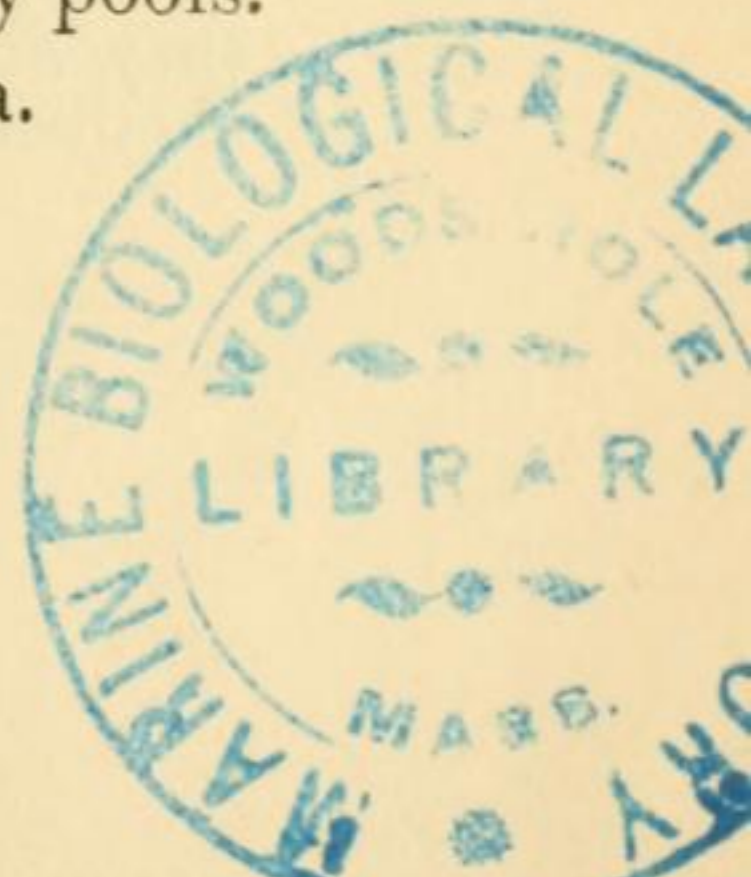
Common (Liddell).

HYMENOSOMA LACUSTRIS Chilton.

1882. *Elamena* (?) *lacustris* Chilton, Trans. N. Z. Inst. xiv. p.172, pl.viii.

1902. Fulton & Grant, Proc. Roy. Soc. Vict. xv.(N.S.) p.59, pl.viii.

Common (Laing). A freshwater species inhabiting rocky pools. It has also been recorded from New Zealand and Victoria.



Tribe CATOMETOPA.

OCYPODE URVILLEI Guérin.*

1836. Guérin, Voy. "Coquille," Crust. p.9, pl.i. fig.1.

1897. Ortmann, Zool. Jahrb. Syst. x. pp.360 and 366.

Common (Liddell, Laing).

LEPTOGRAPSUS VARIEGATUS (Fabr.).

1853. Milne Edwards, Ann. Sci. Nat. (3) xx. p.171.

Common (Liddell, Laing).

PACHYGRAPSUS TRANSVERSUS Gibbes.

1850. Gibbes, Proc. Amer. Assoc. Adv. Sci. iii. p.182.

1900. Rathbun, American Naturalist, xxxiv. p.588, figs.8, 9.

Common (Liddell, Laing).

CYCLOGRAPSUS PUNCTATUS M.Edw.

1837. Milne Edwards, Hist. Nat. Crust. ii. p.78.

1880. Kingsley, Proc. Acad. Nat. Sci. Philad. p.201(ubi syn.).

Common (Liddell).

PLAGUSIA DEPRESSA var. SQUAMOSA (Herbst.).

1900. Alcock, Journ. Asiatic Soc. Bengal, lxix. p.437.

Common (Liddell).

MACRURA.

Tribe ANOMALA.

CALCINUS IMPERIALIS Whitelegge.

1901. Whitelegge, Records Aust. Mus. iv. p.48, pl.ix.

Common (Liddell, Laing). Also occurs in great numbers on Lord Howe Island.

* Mr. Grant was inclined to consider this species as a variety of *O. ceratophthalma* Pallas, to which it is closely allied, but as our specimens present all the characters assigned to it by Ortmann, who monographed the genus, they are perhaps best kept distinct until intermediate stages have been obtained.—A.R.M.

CALCINUS LATENS Randall.

1839. Randall, Journ. Acad. Nat. Sci. Philad. p.135(*fide* Dana).

1906. Grant & McCulloch, Proc. Linn. Soc. N. S. Wales, xxxi. p.34.

One specimen (Laing).

CALCINUS HERBSTII De Man.

1887. De Man, Archiv für Naturgesch. liii., i., p.437.

1905. Alcock, Cat. Indian Decapod Crust. ii. p.53.

One specimen (Laing).

PACHYCHELES LIFUENSIS Borradaile. (Plate i. figs.2, 2a).

1900. Borradaile, Willey's Zool. Results, p.424.

We refer our specimens to the above species, somewhat briefly diagnosed by its author.

Its nearest ally appears to be *P. barbatus* (A.M.Edw.),* but it differs from the figure of that species given in the "Challenger" Reports in (1) the much narrower front, which is slightly produced medianly; (2) the shape of the orbits, whose external angle is produced as a spine; and (3) the structure of the external maxillipeds, which have the antero-external angle of the ischium produced as a long spine, and the merus slenderer, with its internal lobe cristate.

From *P. sculptus* (M.Edw.),† to which it bears a superficial resemblance, it may be separated by the broader proportions of the carapace, by the shape of the external orbital angles, and by the sculpture of the chelipeds, which in *P. sculptus* have larger granules arranged in more definite rows and not clothed with hairs, while in the specimens under consideration they carry a plentiful pubescence.

Two specimens (Liddell).

* 1888. Henderson, Challenger "Anomura," p.114, pl.xi. fig.4.

† 1906. Grant & McCulloch, Proc. Linn. Soc. N. S. Wales, xxxi. p.40, pl.ii. fig.1.

Tribe CARIDEA.

ALPHEUS EDWARDSII Audouin.

1809. Audouin, Savigny's Descript. de l'Egypt, pl.x. fig.1.
Common (Liddell, Laing).

XIPHOCARIS COMPRESSA (De Haan).

1849. *Ephyra compressa* De Haan, Faun. Japon., Crust. p.186,
pl.xlvi. fig.7.
1894. *Xiphocaris compressa* Ortmann, Proc. Acad. Nat. Sci. Philad.
p.400.

A freshwater species. We have a good series taken on both sides of the island by the Messrs. Laing.

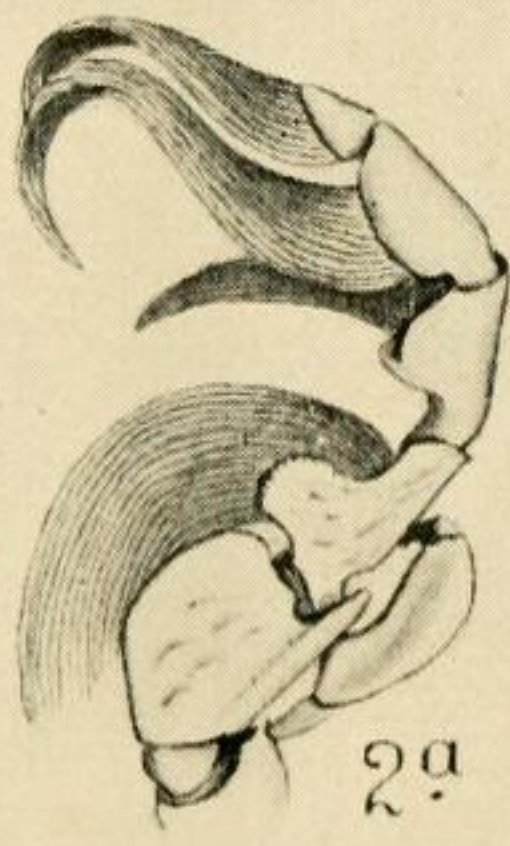
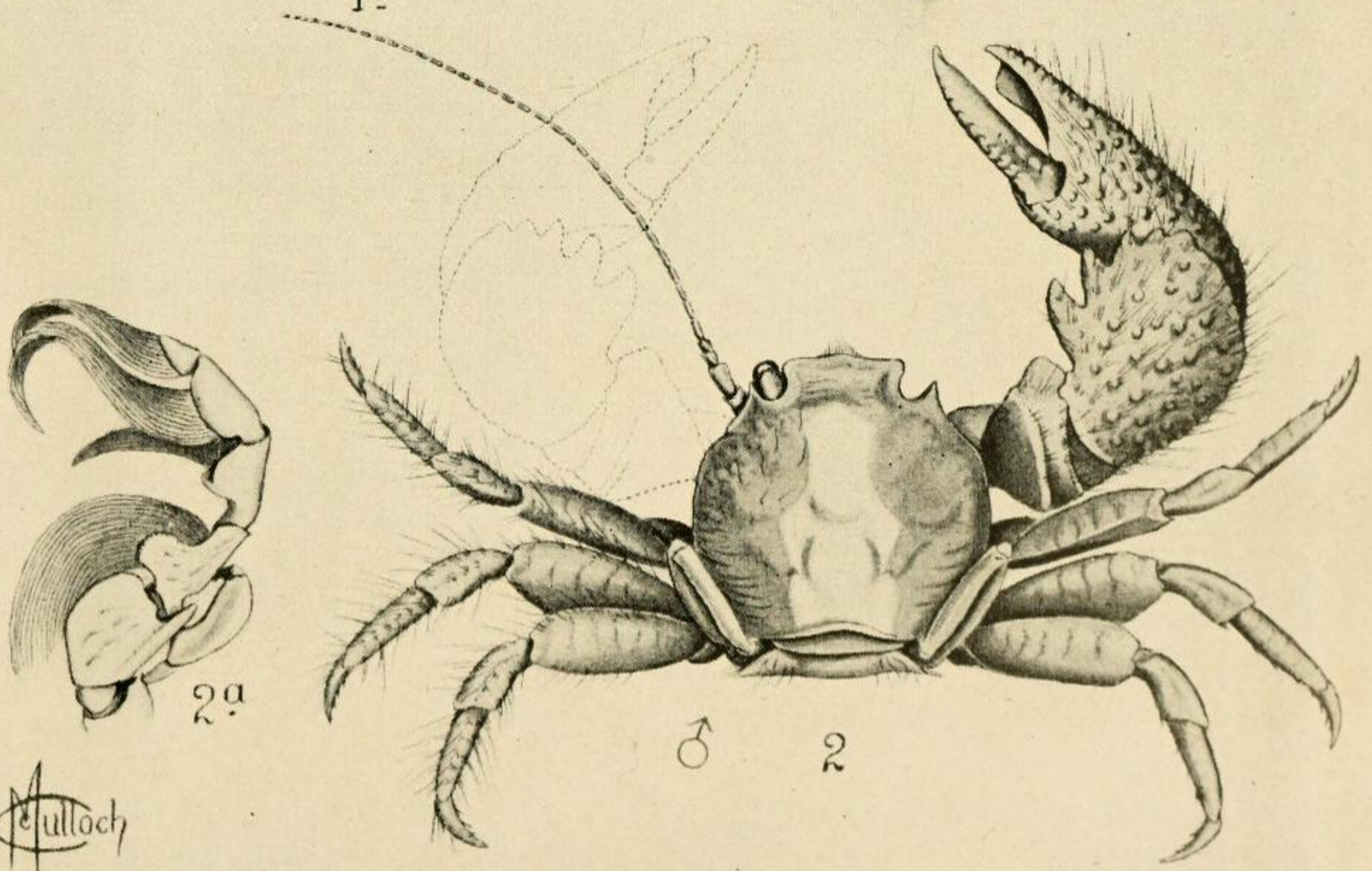
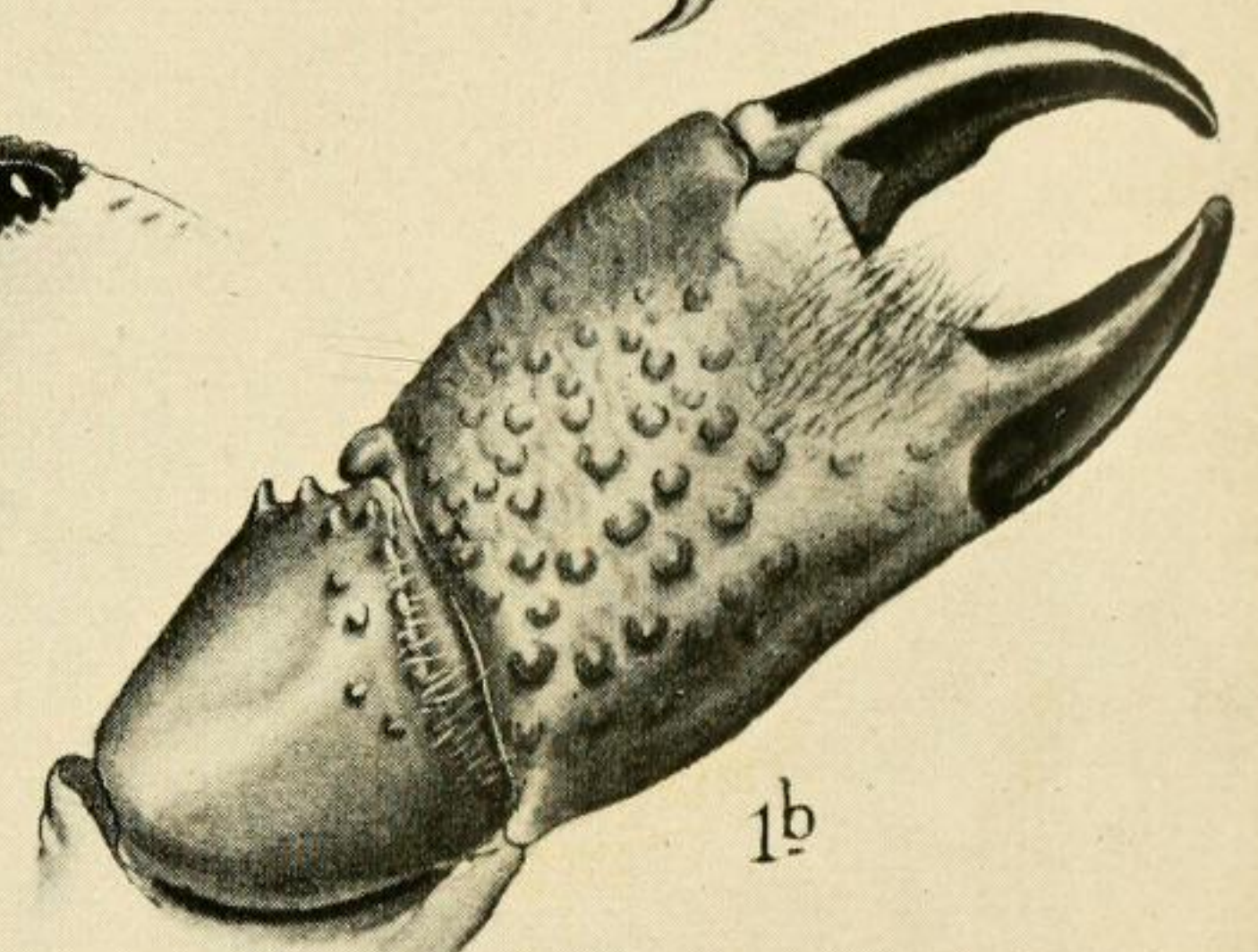
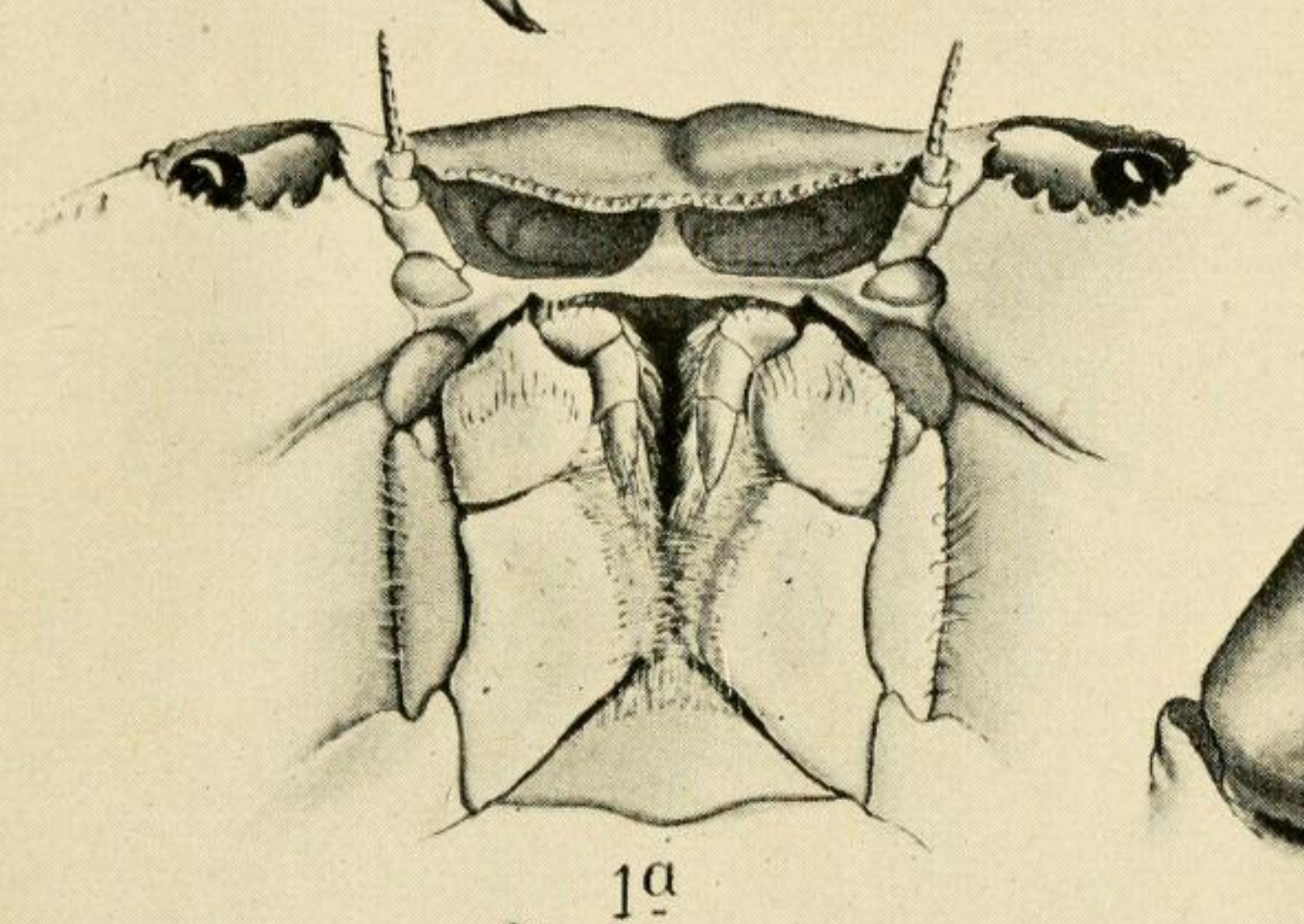
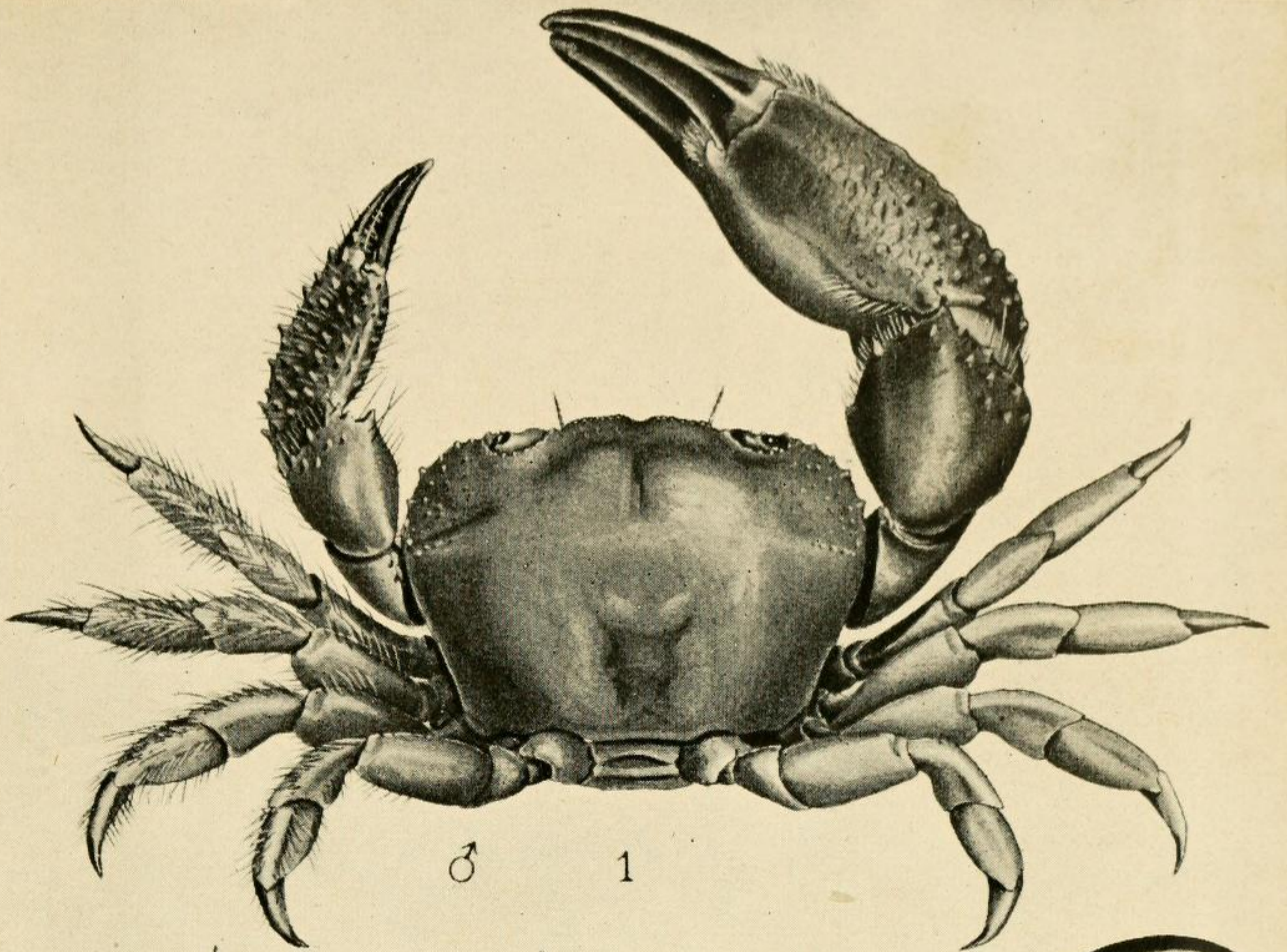
The variability of the dentition of the rostrum of specimens from Norfolk Island has already been drawn attention to by G. M. Thomson,* who also records its occurrence in New South Wales and Victoria. We are indebted to Prof. Chilton for pointing out that those taken from streams on the east side of the divide are smaller in size and with a proportionately shorter rostrum than those on the west.

EXPLANATION OF PLATE.

Plate i.

- Fig.1. — *Eriphia norfolcensis*, sp.nov.
Fig.1a.— *Eriphia norfolcensis*, oral region.
Fig.1b.— *Eriphia norfolcensis*, larger cheliped.
Fig.2. — *Pachycheles lifuensis* Borradaile.
Fig.2a.— *Pachycheles lifuensis*, external maxilliped.

* 1903. Trans. Linn. Soc. London, Vol. viii. p.449



Mulloch

FIGS. 1, 1a, 1b: *ERIPHIA NORFOLCENSIS*, SP. N.

FIGS. 2, 2a, *PACHYCHELES LIFUENSIS* BORR.