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PART III.

ON A MARINE SPECIES OF PHILOUGRIA.

PLATE XI.

BY CHARLES CHILTON, M.A.

The Isopod described in this Paper was obtained at Coogee Bay near Sydney, on December 30th, 1883. I took it in considerable numbers creeping on the under surface of stones, which were completely covered by sea-water in rock-pools near high water mark.

The only *Oniscinæ* mentioned in Mr. Haswell's "Catalogue of the Australian Crustacea" are *Porcellio graniger* and *P. obtusifrons* so that my Isopod which belongs to the genus *Philougria*, is evidently new to the Australian fauna, and as it differs from the species of that genus which I can find descriptions of, I have ventured to think it is new to science. On account of its extraordinary habitat, I propose to call it *Philougria marina*. I have not been able to find any record of other marine species of the *Oniscinæ*, but it must be remembered, that the works of reference at my disposal are very few in number.

There can be little doubt that all the terrestrial Isopoda are descended from marine forms, hence the question naturally arises —is this *Philougria* a direct descendant of a form that has always kept to its marine habitat; or is it a terrestrial form that has found it convenient to return to the original habitat in the sea?

To this question I can give no satisfactory answer, but it resembles the terrestrial *Philougria* so closely that I am inclined to think it is a terrestrial form that has in the struggle for existence been forced to return to a life in the sea.

I append a detailed description :—

Philougria marina, sp. nov. Plate, XI., fig. 1 to 6. Length of body rather more than twice the greatest breadth ; lateral lobes of the cephalon projecting about as far as the central portion which is rather pointed ; eyes rather large and prominent, considerably raised above the lateral portions of the cephalon. External antennæ slightly longer than the cephalon and first three segments of the pereion, first three joints short, fourth as long as the two preceding, fifth slightly longer than the third and fourth together, narrow at base and slightly sinuous, flagellum a little longer than the fourth joint, composed of four joints, first three of about equal length, but narrowing distally, fourth slender, merging almost imperceptibly at the end into a pencil of very short setæ. Internal antennæ very small, of three joints, the first much larger than either of the others, as long as the second and third together, the second and third joints each bearing a small stout seta at their distal ends. Thoracic legs rather spinous, the largest spine, which splits up into three or four branches, being situated on the inferior margin of the carpus near its distal end. From the dactylos of each leg arises a seta longer than the dactylos, divided into two branches, the one remote from the dactylos being the longer and clubbed at the end, the other branch simple. Terminal segment of pleon triangular, sides concave, end rounded and supplied with two or three very small short setæ, not reaching quite as far as the end of the peduncle of the terminal pleopoda. Terminal pleopoda moderately long, basal joint large, as long as broad, inner

ramus as long as the peduncle, articulated to its inner margin at some distance from its extremity, slender, ending in a few setæ, the longest of which is about three-fourths the length of the joint; outer ramus twice as long as the inner and much stouter, narrowing distally, ending in a few very short setæ. The whole body, the outer antennæ and the terminal pleopoda supplied with short stout scattered spines. Colour, light yellow, thickly covered with black or dark-brown stellated markings.

Length of largest specimen, 6 mm.

Habitat. In rock-pools at Coogee Bay, N. S. Wales.

The mandible is shewn in fig. 3 and 3*a*. I have been unable to find a molar tubercle in it. The cutting edge of the mandible itself consists of four teeth, three of about equal size, the fourth much smaller; the cutting edge of the accessory appendage ends in two large teeth and one or two smaller ones. In one specimen examined the teeth were much blunter than those drawn, probably it was an older specimen. Near the base of the accessory appendage is a thin membranous plate fringed with setæ, the two innermost ones being the largest and fringed on one side. Further along the inner edge of the mandible is another stout curved seta with one edge fringed, and beyond this again are four setæ arising from a common projection, the first is the shortest, the second and third increasing in length, all three having one side fringed, the fourth is much longer and is simple, Probably all these fringed setæ of the one mandible meet those of the other mandible in the median line and form a straining apparatus, or, since the setæ are somewhat stout, they may also be of some use in triturating the food of the animal and thus to a certain extent take the place of the molar tubercle.

I attach some importance to the peculiar seta arising from the dactylos of each thoracie leg, it appears to be very constant, and will, I think, aid in recognising the species; a seta similar, but quite distinct in form, is found in the species common in Canterbury, New Zealand, which I have identified with *Philougria rosea.*

The pleopoda, except the terminal pair, are very delicate; they consist of a basal portion much broader than long, which bears two broad plates, the inner one the smaller and without setæ, the outer one supplied with several rather long very delicately plumose setæ, and between these several very small delicate simple setæ.

Description of Plate XI.

Fig.—1. *Philougria marina*, x19.

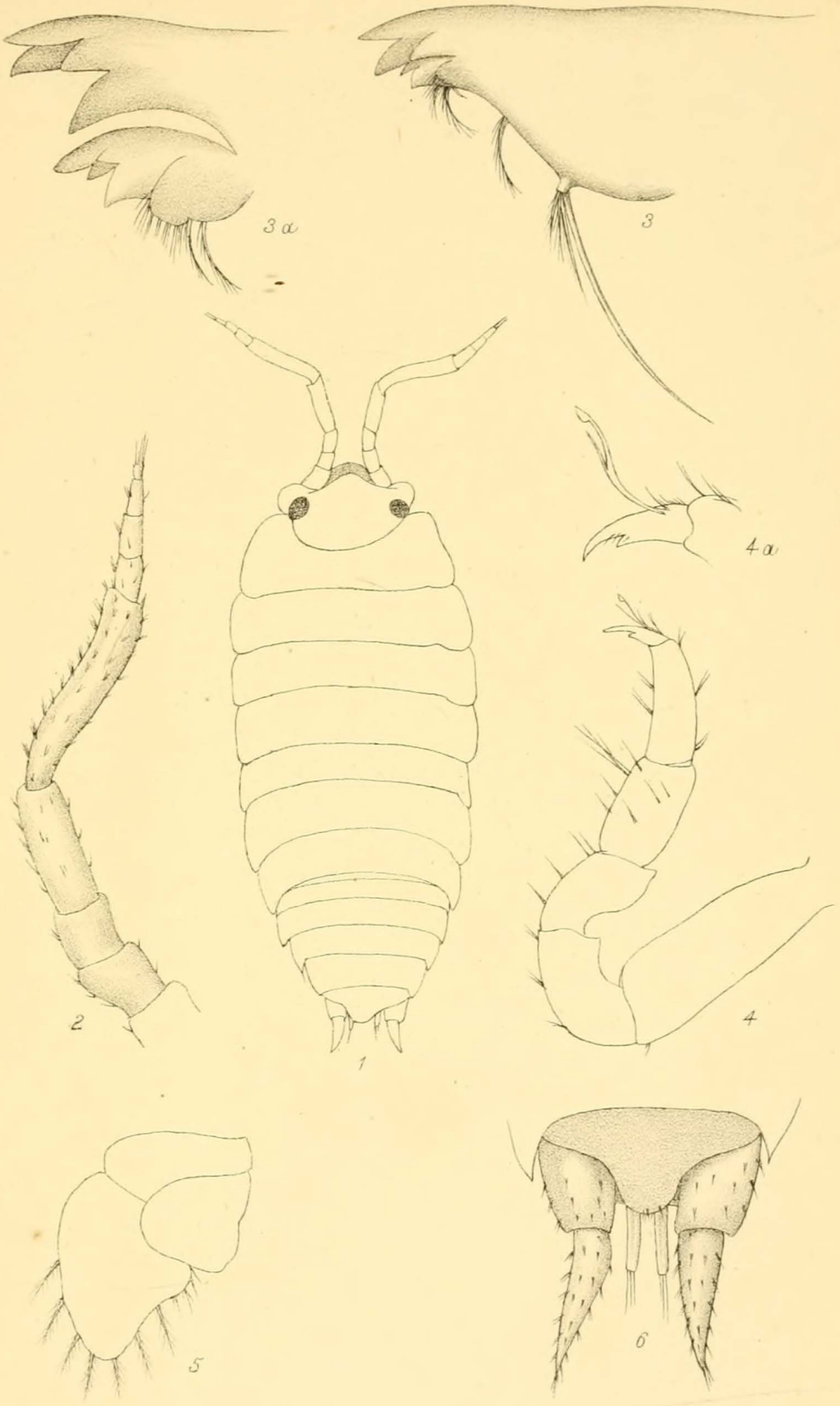
Fig.—2. Outer antennæ of same, x45.

Fig.—3. Mandible of same, x180. *a*. End of same (compressed) x350.

Fig.—4. Thoracie leg of same, x83. *a*, dactylos of same more highly magnified.

Fig.—5. Pleopod of same, x72.

Fig.—6. Extremity of abdomen of same, x45.



C. Chilton del. S. Sedgfield lith.