

- (iii) Dactylus III, as with second leg, except the tip does not act as plectrum. Plectra are: (b) upper carina and (c) lower carina.
- (iv) Propodus I, outer edge is carinate (Fig. 2a) and acts as a plectrum.
- (v) Propodus II, similarly.
- (vi) Carpus I, upper surface is granular (Fig. 2b) and acts as plectrum.
- (vii) Carpus II, similar.
- (viii) Carpus III, similar.
- (ix) Merus I bears a conspicuous collar consisting of two swollen areas, each bearing a cornified boss, each of which can act as a separate plectrum, although normally both would engage simultaneously. The outer boss (a) is the larger (Fig. 1B-f) and extends beneath to form an incomplete annulus; the inner boss (b) on the upper surface (Fig. 1B-e) is smaller than the outer boss and is strongly cornified.
- (x) Merus II bears a collar in which only the inner area is swollen to form a pair of rounded bosses (Fig. 1C-g), which act as a plectrum. Merus III has only a feebly developed collar which does not appear to act as a plectrum.

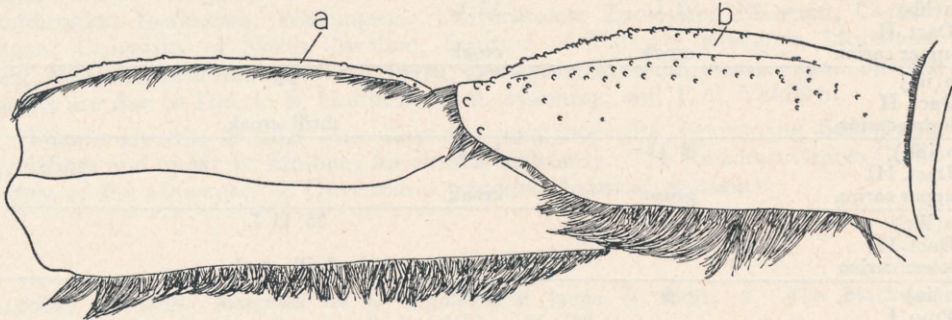


FIG. 2.—*O. australiensis*. Dorsomedian view of (a) propodus, and (b) carpus of first right walking leg. Scale = 10mm.

(c) *Engagements of rasps with plectra*

(i) *Individual engagements*

Table I shows that there are 29 anatomically possible methods of sound production. Six involve "unnatural" movements leaving 23 apparently functional ones, and it was difficult to determine which of these 23 were the most "natural". It was also difficult to decide which produced the loudest sounds, although attempts were made.

Sonagraph records were made from tape-recordings, but did not facilitate distinctions between many of the sounds described as a "croak" or a "rasp".

(ii) *Combined engagements*

These include the following, with numbering from Table I:— (9) + (10) + (19) + (20); (1) + (12); (2) + (13); (22) + (28) (by oblique movement).

(iii) *Individual variations*

Only variations of palm striae were examined. Numbers vary from 17 to 24, and there is considerable variation in the widths of individual striae, and the extent of fusion with the lateral granules. The overall pattern, reminiscent of a human fingerprint, has about the same potentiality for variation in structure, and presumably in details of sound production.