

of inflexibility of the chelipeds engagements could not be effected but presumably the possibilities of sound production are comparable to those in *O. australiensis* as shown in Tables II and III.

III. Fifth leg/carapace engagements

The carpus of the fifth leg engages:

(a) A conspicuous granular ridge on the posterior branchial portion of the carapace. As this engagement involves the structures with the greatest modifications it seems possible that it is the main sound-producing mechanism. It certainly produced a loud rasping sound on the few occasions when the risk of moving type material was accepted.

(b) The granular posterolateral border of the carapace by a vertical movement producing a scratching sound.

The total number of engagements which produce sounds in males of *O. georgei* is probably of the order of 50–60. No females of this species are known.

THE *O. iridescens* SUBGROUP

This subgroup comprises *O. iridescens* and *O. molleri*, and the most obviously modified structures, presumably for stridulation, are the rasps on the striated pterygostomial regions of the carapace. These are engaged by plectra consisting of projections on the distal portions of the ischia of the chelipeds (Fig. 5).

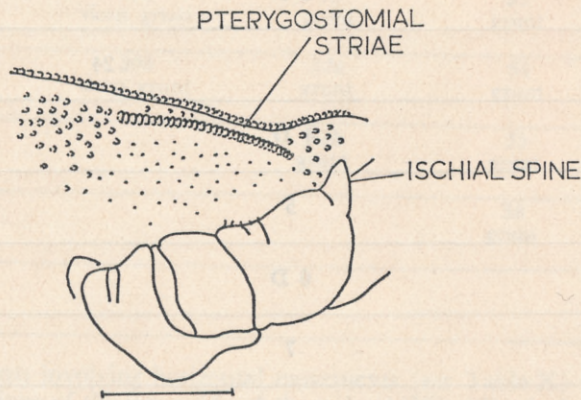


FIG. 5.—*O. iridescens* (Miers). Ventral view of pterygostomial striae and ischium of cheliped. Scale = 5mm.

The dactyls of the second and third walking legs are multiradiate and strongly cornified, particularly in the males. Some additional and some conspicuously loud sounds are produced by engagements involving these structures.

A. Moderate sized males of *O. iridescens*

The main investigations were made upon males with carapace breadths 45.7–49.4mm. Additional comments on larger males, females and juveniles are given later.

I. Cheliped/walking leg engagements

As in *O. georgei*, the under surface of the palm does not bear striae but is granular, the granules continuing to the immovable finger. In Table V, “granules under palm” and “granules under immovable finger” are not separated.