

RECORD OF THE OCCURRENCE IN AUSTRALIA OF *LIGIA EXOTICA* ROUX (CRUSTACEA, ISOPODA, ONISCOIDEA)

By

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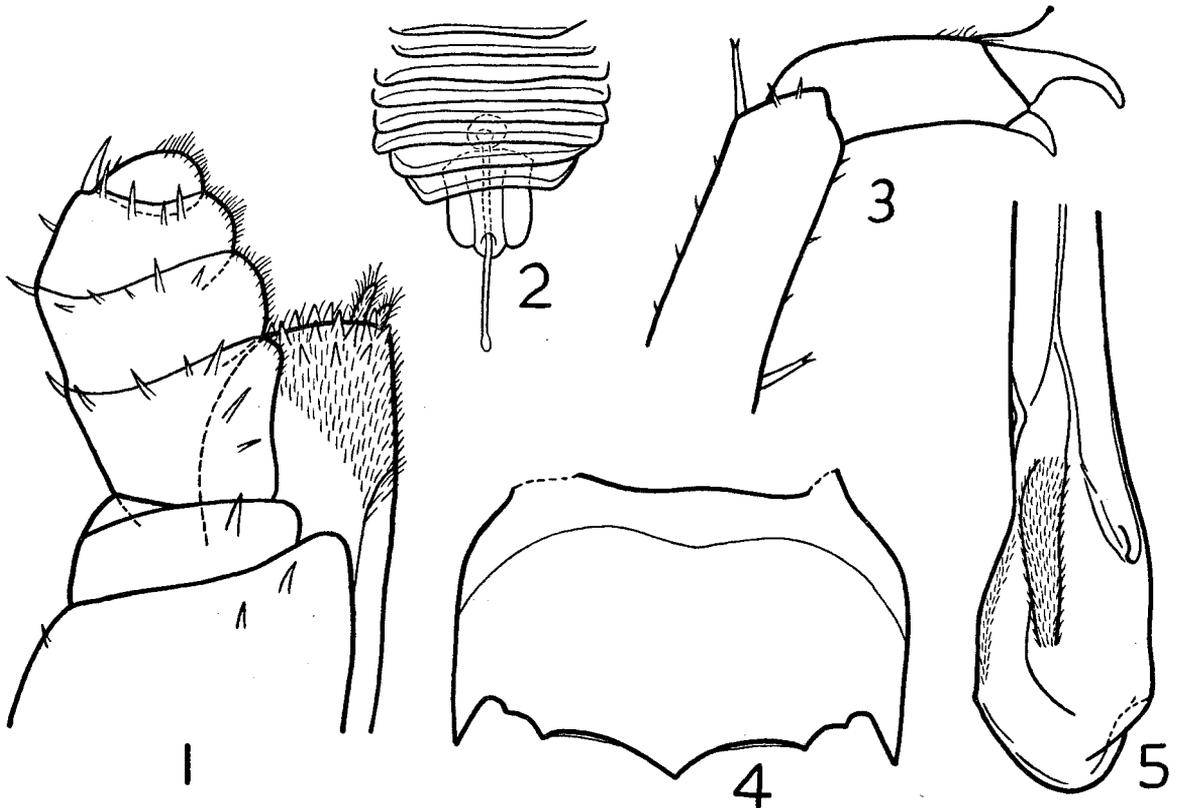
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INTRODUCTION

In all but one instance, examples of genus *Ligia* Fabricius recorded from Australia to date have been assigned to *L. australiensis* Dana, 1853. The one exception is a record by Jackson (1922, p. 697) of *L. novae-zealandiae* Dana, 1853, from Sunday Island, Victoria. Specimens of *Ligia* from Bobbin Head, New South Wales, which were presented to

me by Dr. J. le Gay Brereton, differ from both of these species. A comparison of their characters with the descriptions of *L. exotica* Roux, 1828, given by Chilton (1916, p. 462), Jackson (1922, p. 693) and Verhoeff (1928, p. 116) shows that they should be assigned to *L. exotica*.

The following description serves to confirm the identification and to outline significant characteristics of the specimens.



Explanation of Figures

Ligia exotica Roux.

FIG. 1.—Distal part of right maxilliped, ventral view.

FIG. 2.—Scale-seta on a granule on 2nd tergite of pereon, dorsal view.

FIG. 3.—Distal part of propodos, and dactylos, of left 1st leg of male, anterior view.

FIG. 4.—Terminal segment, dorsal view.

FIG. 5.—Distal part of endopodite of left 2nd pleopod of male, dorsal view.

Ligia exotica Roux.

(Figs. 1-5.)

SYNONYMY.—*Ligia exotica* Roux, 1828, p. 3, pl. 13, fig. 9.
Megaligia exotica Verhoeff, 1926, p. 348.

Further synonymy given by Jackson (1922, p. 693) and Van Name (1936, p. 48).

*Male.**Size.* Length of largest specimen, 20 mm., breadth, 7.5 mm.*Cephalon.* Eyes separated by less than breadth of each eye; distance between inner angles of eyes, 1.3 mm., horizontal breadth of eye, 1.4 mm.*Second antenna.* When attached, antenna extends backwards as far as postero-lateral angle of terminal segment. Length of peduncle, 8.2 mm., length of (right) flagellum, 12.8 mm. In largest male, number of articles in flagellum 39 in left appendage, 37 in right. Variation in number of articles among all six males, 32-39.*Second maxilla.* A definite division of distal part into two lobes. No setose processes.*Maxilliped* (fig. 1). Ischion and dactylos completely distinct; suture lines dividing meros, carpos and propodos complete across ventral surface but incomplete on dorsal surface, where they extend only part way across from inner border. Endite with two conical setose processes on inner side of its apical border, and teeth set at four different levels across its ventral surface near apex; distal part of endite densely setose.*Pereion.* Coxal suture lines evident on 2nd-7th segments. Dorsal surface distinctly granulate. On each granule is a scale-seta (fig. 2) having a trilobed scale portion and a long seta, clubbed at apex. Broad hyaline scales overlap base of scale-seta.*Pereiopods.* No process developed on distal end of propodos of 1st leg (fig. 3). First to third legs not subchelate, i.e., propodos and dactylos not strongly bent back under carpos. On inner side, near lower border, of both meros and carpos of 1st-3rd legs is an area covered by serrated ridges. Dactylar seta of 1st-7th legs clubbed at apex (see fig. 3).*Male organs.* Evenly tapering to an acute apex. When attached, male organs do not extend back as far as posterior border of exopodite of 2nd pleopod; they lie free from endopodite of 2nd pleopod.*Pleon.* Not abruptly narrower than pereion. Terminal segment (fig. 4) triangulate with median process acute, inner and outer accessory processes angular, and postero-lateral processes acute and extending backwards slightly beyond inner accessory processes. Dorsal surface of pleon granulate, scale-setae like those on pereion.*Second pleopod.* Length of articles of endopodite: 1st 1.12 mm., 2nd 3.25 mm. Apical part of 2nd article (fig. 5) expanded, bluntly rounded at the end, and forming two small lobes on inner side. A wide groove extends down ventral surface of article to near apex where it becomes abruptly shallower. On dorsal surface of expanded part, towards outer

side, is a semi-cylindrical protuberance covered with anteriorly-directed setae. A band of similar setae occurs near outer border. Anterior to this is a small chitinous thickening in outer border. Level with anterior half of setose protuberance, and near inner border of article, a hyaline thickening is formed in dorsal surface. Anterior to these structures, dorsal surface exhibits several ridges.

Uropod. Length of articles: prototype 5.1 mm., exopodite 8.6 mm., endopodite 8.3 mm.*Female.**Size.* Length, 15 mm., breadth, 6.5 mm.*Second antenna.* When attached, antenna extends backwards to middle of 5th segment of pleon. Length of peduncle, 6.4 mm., length of flagellum, 8.2 mm. Number of articles in flagellum 32 in each.*Pereiopods.* No areas of serrated ridges on 1st-3rd legs.*Uropod.* Measurements not available as no uropods attached to body.*Habitat.*

Description is based on specimens collected by Dr. J. le Gay Brereton, at dusk on 1. IV. 1956, from a wall and rocks near salt water at Bobbin Head, New South Wales; six males and one female obtained.

VARIATION FROM OTHER DESCRIPTIONS

A characteristic process on the propodos of the 1st leg of the male in *L. exotica* was described and figured by Chilton (1916, pp. 464, 470, fig. 11) and Verhoeff (1928, p. 117, fig. 24), and described by Jackson (1922, p. 694). No such process is developed in any of the six males in my possession. However, Chilton (p. 473), referring to specimens from Honolulu which he assigned to *L. exotica*, mentioned that in some of the younger males the process was small and hardly distinguishable. He suggested that probably it is developed to a full extent only in fully mature males. As the length of the largest specimen from Bobbin Head is 20 mm., as compared with lengths of 22 mm., 27 mm., and "about 30 mm." noted by Chilton, Jackson and Van Name (1936, p. 49) respectively, it may be that the absence of the characteristic process in my specimens is due to comparative immaturity.

REMARKS

Dana (1853, p. 740) gave only a brief description of his species *L. australiensis*, which was based on a specimen collected in New South Wales. However his account is sufficient to exclude the possibility of his having named as *L. australiensis* an example of *L. exotica*. In particular, Dana's figure (pl. 49, fig. 3) shows the terminal segment of *L. australiensis* with postero-lateral processes not extending backwards as far as the inner accessory processes, outer accessory processes not developed, and the posterior border forming a very blunt median angle; none of these features agrees with the form of the terminal segment in *L. exotica*.

Acknowledgments

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