

## NEW RECORDS OF BOPYRIDAE (CRUSTACEA : ISOPODA : EPICARIDEA) FROM QUEENSLAND WATERS

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### ABSTRACT

Two species of bopyrids were recovered from commercially caught prawns in Queensland. *Epipenaeon ingens* Nobili 1906, previously recorded from Darwin, was found in four places in Queensland on its type host *Penaeus semisulcatus*, or on *P. merguensis*. On the basis of a high degree of variability in specimens, *E. ingens latifrons* Bourdon 1979 is considered a junior subjective synonym of *E. ingens*. Other members of the genus *Epipenaeon* are listed for comparison.

*Parapenaeon expansus* was found on *Penaeus plebejus* in Moreton Bay, and on *Penaeus* sp. from Karumba.

These constitute new site and host records, for both species.

### INTRODUCTION

Parasites of prawns have recently attracted interest as they may be useful as biological markers for prawn sub-populations (Owens 1981, 1983). Bopyrid isopods are among the most obvious parasites carried by Australian prawns. Although several bopyrid species occur in Australian waters only two have been found on commercially valuable prawns. These are *Epipenaeon ingens* Nobili 1906, and *Parapenaeon prox. expansus* Bourdon 1979a, both from 'tiger prawns' taken in the vicinity of Darwin, N.T. (Bourdon 1979b). Recently these bopyrid species were recovered from collections of penaeids made in Queensland waters. This note records where and on what species of hosts they have been found.

Prawns trawled from the Gulf of Carpentaria, Rosslyn Bay, and Maryborough were obtained frozen from fish marketing boards. In Moreton Bay prawns were obtained fresh from trawlers. Parasites were removed and preserved in 70% alcohol. Specimens have been lodged at the Queensland Museum (QM).

#### EPIPENAEON Nobili 1906

##### *Epipenaeon ingens* Nobili 1906

*Epipenaeon ingens* Nobili 1906, p. 1099–101 Fig. 1, 1 a–e. Bourdon 1968, p. 327–33, Figs. 145–50.

*Epipenaeon nobili* Nierstrasz and Brender á Brandis 1929, p. 299–302, Figs. 5–9.

*Epipenaeon grande* Nierstrasz and Brender á Brandis 1929, p. 157–58, Fig. 18; 1932, p. 91, Fig. 1.

*Epipenaeon ingens latifrons* Bourdon 1979, p. 429–30, Fig. 4 a–c.

### MATERIAL EXAMINED

QM W10438, ♂ + ♀, ex *Penaeus semisulcatus*, Karumba, Gulf of Carpentaria, NW.Q., S.P. Nearhos, 14.vii.79; QM W10445, 15 ♂ + 19 ♀ ex *P. semisulcatus*, Karumba, S.P. Nearhos, 4.vii.78; QM W10436, ♂ + ♀, ex *P. merguensis*, Karumba, S.P. Nearhos, 14.vii.79; QM W10437, ♂ + ♀, ex *P. merguensis*, Karumba, S.P. Nearhos, 14.vii.79; QM W10439, ♂ + ♀, ex *P. merguensis*, Karumba, S.P. Nearhos, 14.vii.79; QM W10446, 11 ♂ + 22 ♀, ex *P. merguensis*, Karumba, S.P. Nearhos, 17.vii.79; QM W10448, 8 ♀, 2 ♂, ex *P. semisulcatus*, Maryborough, SE.Q., S.P. Nearhos, 10.iv.78; 10 ♂ + 13 ♀, ex *P. merguensis*, Rosslyn Bay ME.Q., S.P. Nearhos 17.vi.78.

### OTHER MATERIAL

*E. nobili* ♂ + ♀, ex *P. semisulcatus*, Red Sea, Nierstrasz and Brender á Brandis.

*E. grande* ♀, ex *P. semisulcatus*, Hong Kong, 23.v.1890, Nierstrasz and Brender á Brandis.

*E. ingens latifrons*, 4 ♂ + 4 ♀, ex *P. semisulcatus*, Darwin, Bourdon.

### DISTRIBUTION

Mediterranean Sea and the Indo-Pacific region — from Hong Kong in the north to southeast Queensland.



## REMARKS

*E. ingens* was originally described from *Penaeus semisulcatus* from the Red Sea (Nobili 1906). It was redescribed from the same host in the Mediterranean by Bourdon (1968). Bourdon (1979b) synonymized *E. nobili* and *E. grande* with *E. ingens* and described a new subspecies *E. ingens latifrons* from a *Penaeus* sp. for its well developed frontal plate and unusually wide lateral plates.

Examination of 24 specimens from *P. semisulcatus* from the Gulf of Carpentaria and from Maryborough showed that development of frontal plates varied between individuals. The mean ratio of frontal plate length to total length was 0.074 (range 0.03 – 0.10). The types of *E. ingens latifrons* fall within the range. Lateral plates showed similar variation. Specimens from *P. merguensis* from both eastern and northern Queensland have less developed frontal and lateral plates, and in this respect more closely resemble *E. ingens* from the Red and Mediterranean Seas than they do *E. ingens latifrons*. The males from both hosts are very similar and correspond closely to the male described from the Mediterranean, the only *E. ingens* male described.

It appears then, that the development of the frontal and lateral plates vary from individual to individual and from host to host. On this basis we propose that *E. ingens latifrons* be considered a junior subjective synonym of *E. ingens*.

Two other species of *Epipenaeon* also occur on *P. semisulcatus* — *E. elegans* Chopra, 1923 and *E. pestae* Nierstrasz and Brender á Brandis, 1932. The published descriptions of these species are inadequate to clearly separate them from *E. ingens*, considering the highly variable nature of *E. ingens* individuals.

*E. ovalis* Pillai 1954, was recorded from *Parapenaeopsis stylifera* and characterized by having a broader frontal plate and greater development of the pleonal lamellae than *E. ingens*. Both of these features were found to have been variable for specimens of *E. ingens* examined in this study. The type material of *E. ovalis* has been lost and is unavailable for comparative study (Pillai, pers. comm.).

*E. oviformis* Nierstrasz and Brender á Brandis, 1931, described from a *Penaeus* sp. is obviously a juvenile specimen which makes comparison with mature adults impossible. Its status is therefore doubtful.

Of the species described in the genus, at this stage only *E. fissurae* Kensley 1974, seems

definitely separable from *E. ingens*. It can be distinguished by the shape of the antennae, the blunt digitations of the posterior margin of the cephalon and first oostegite, and the knobbed nature of the pleopods.

PARAPENAEON Richardson 1904

*Parapenaeon expansus* Bourdon 1979

*Parapenaeon expansus* Bourdon 1979, 495–8, Figs. 15–8.

## MATERIAL EXAMINED

QM W10440, ♀, QM W10441, ♂ + ♀, QM W10442, 2 ♂, QM W10443, ♀ ex *Penaeus plebejus*, Moreton Bay, SE.Q. S.P. Nearhos, 9.ii.79, 9.ii.79, 12.ii.79 and 1.v.78; QM W10444, ♂ + ♀, ex *P. plebejus*, Moreton Bay, R.J.G. Lester, 23.i.78; QM W10447 ♀ ex *P. plebejus*, Moreton Bay, S.P. Nearhos, 24.iv.78; QM W10451, 6 ♀, ex *Penaeus* sp. Karumbu, Gulf of Carpentaria, NW.Q.S.P. Nearhos, 9.ii.79.

## DISTRIBUTION

Indo-Pacific Oceans from Madagascar to northern Australia and south to Moreton Bay in Queensland.

## REMARKS

Present material of *Parapenaeon expansus* (both males and females) correspond closely to those described by Bourdon (1979a) from the type host *Penaeus teraoi* in Madagascar. This constitutes a new host and distribution record for the species.

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