

setose, without spines. Meropodite about twice the length of carpopodite, as long as propodite, and twice the length of dactylopodite, all segments being slender, only slightly flattened and freely setose. Outer margin of carpopodite and inner margin of propodite each with a prominent spine. Dactylopodite bulbous with tip extended into an inwardly-curved point.

Fifth pereopods (Fig. 5, A; F. Per. 5) much reduced, closely folded against sides of carapace and not used in walking. Gills comprise one arthrobranch. Epipodite very small. Five distal segments freely setose but without spines. Tip of dactylopodite with an incompletely formed chela.

Abdomen: Abdomen comprises six segments and a telson. The sixth abdominal segment which is fused with the telson in the zoea larval stages, is now separate. Segments short, setose, laterally expanded, and dorso-ventrally compressed. First and sixth segments smaller. Pleopods functional, biramous, flattened, arising from ventral side of each of second, third, fourth and fifth segments. Pleopods of second segment (Fig. 5, E) and of the third and fourth segments each with rudimentary endopodite fringed with two or three short plumose setae, and exopodite with 16 marginal plumose setae.

Pleopods of fifth segment (Fig. 5, D) smaller, possessing endopodite without setae and exopodite fringed with 14 plumose setae. Sixth abdominal segment with paired uropods (Fig. 5, A. Urop.), consisting of short protopodite bearing broad flattened endopodite and similar exopodite of equal length. Protopodite with lateral distal spine. Endopodite and exopodite each with about 20 marginal plumose setae.

Telson not divided into plates, but with a shallow cleft in posterior midline. Twelve plumose setae of variable length arise from posterior margin of telson either side of central cleft.

Chromatophore Pattern: Carapace with scattered small red chromatophores concentrated in rostral region. Four distal segments of four anterior pairs of pereopods with scattered red chromatophores. First five abdominal segments and telson each with a pair of red chromatophores medially.

VARIATION IN THE MEGALOPA LARVA

The only significant variation recorded among megalopa larvae is in the spinulation of the carpopodite of the cheliped. In occasional larvae only the two more proximal spines are well developed, and the third more distal spine is rudimentary.

DISCUSSION

Lebour (1943) has summarised the characters of zoea larvae of the genus *Petrolisthes* described up to that time, and has used these characters in the preparation of a key for the separation of the zoea larvae of the genus *Petrolisthes* from those of the genus *Porcellana*, based on the larval telson. Lebour's key has been summarised (Wear, 1964). Since Lebour's publication the larvae of *Petrolisthes rufescens* (Heller) have been described by Gohar and Kholy (1957). These larvae conform with the generic characters of *Petrolisthes* given by Lebour.

However, in the zoea larvae of *Petrolisthes elongatus*, there is no median tooth on the central prominence of the telson in stage one, and in stage two, two short plumose setae occupy this position. These setae may, however, be regarded as a modification of the median tooth found in stage two zoeas of all described *Petrolisthes* species other than *P. novaezelandiae*, but the median tooth as a generic character for *Petrolisthes* larvae (Lebour, 1943) is now of doubtful significance.

With the zoea larvae of *P. novaezelandiae* and *P. elongatus* now fully described, no other features have been found which could be used to distinguish zoea larvae of the genus *Petrolisthes* from those of the genus *Porcellana*.