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# A New Genus and Species of Atelecyclid Crab from New Zealand

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***Abstract***

A new genus and species of deep water crab, *Pteropeltarion novaezelandiae* is described from depths ranging from 499 to 903 metres. The new genus, *Pteropeltarion,* differs from *Trichopeltarion* and *Peltarion* in lacking a complex spiny margin to the carapace, tubercles on the carapace surface and a pre-orbital spine bounding the orbit, while possessing a long, simple lateral spine and an elongate rostrum.

## INTRODUCTION

AMONGST some deep water crabs sent to the writer for identification by Dr E. J. Batham was a single specimen of what appeared to be a new genus and species of the family Atelecyclidae. While a preliminary description was being prepared it was discovered that the New Zealand Oceanographic Institute had numbers of this crab in their collections and these were also generously made available to the writer.

## DESCRIPTION

**Pteropeltarion** n.gen.

DESCRIPTION: Similar to *Trichopeltarion* but lacking complex spines along the borders of the carapace, with the lateral spine long and simple, and the surface minutely granular without any of the complex tubercles characteristic of *Trichopeltarion.* Carapace surface lacking any hairy coating. Front drawn out into a rather elongate rostrum. Orbit bounded by a small supra-orbital, a post-orbital and sub-orbital spine and the basal joint of the antenna. No pre-orbital spine.

TYPE SPECIES (original designation): *Pteropeltarion novaezelandiae* n.sp.

The writer has argued (Dell, 1969: 370) that *Trachycarcinus* Faxon should be considered a synonym of *Trichopeltarion* A. Milne Edwards and that *Peltarion* Jacquinot should be kept separate, at least in the meantime, although *Peltarion* differs from *Trichopeltarion* only in matters of degree. The new species described below is anomalous when all the species included in the *Peltarion–Trichopeltarion–Trachycarcinus* complex are considered. The 13 Recent and two fossil species all have tuberculate carapace surfaces (except for *nobile* Milne Edwards which has a dense hairy covering) with a complicated spiny antero-lateral outline. The lateral spine, whenever it is appreciably longer than the other marginal spines, bears subsidiary spines. In addition none of these other species has the front drawn out to form a definite rostrum.

In *Trichopeltarion* the orbit is bounded by four well developed orbital spines. In the new genus the pre-orbital is lacking and the supra-orbital is poorly developed.

On the other hand the structure of the first and second pleopods in the male of the new species are formed on exactly the same plan as those in *fantasticum* Richardson and Dell, and in *glaucus* Alcock and Anderson (the only two species for which figures of the pleopods appear to be available). The carapace outline is not completely smooth and the surface is minutely granular. The form of the chelipeds, walking legs, and abdomen all fit essentially the same pattern as seen in *Trichopeltarion.*

The main features are thus close to the *Trichopeltarion–Trachycarcinus* complex and the new species is obviously not too far removed. It differs, however, in a number of characters which are present in all the other species. At our present stage of knowledge, therefore, it seems best to erect a new genus for this species alone. When more is known of this essentially deep water family, *Pteropeltarion* may prove to rate no more than subgeneric status. To rate it as a subgenus at present would, however, indicate a precision of relationship that the evidence does not yet allow.

**Pteropeltarion novaezelandiae** n.sp. (Figs. 1–11)

DESCRIPTION: Carapace pentagonal with a single long simple lateral spine on each side and a moderately elongate rostrum. Front drawn out into a parallel-sided, flattened rostrum about one-fifth the total length of the carapace. Anterior end of rostrum terminating in three broad spines, the central considerably shorter than the two laterals, which sometimes bear a basal mound on the mesal face (Fig. 9). A group of long, slender, stiff hairs points forward from the end of the rostrum. General surface finely granular especially towards the margins.

Regions not well marked except for the cardiac. Two low rounded tubercles mark the boundaries of the gastric region on each side. Orbit marked above by a relatively poorly developed blunt supra-orbital spine situated well back towards the more strongly developed post-orbital. A single bluntly rounded tubercle on each side interrupts the otherwise almost straight carapace outline between the post-orbital spine and the base of the lateral spine. Lateral spine long, simple, narrowly tapering, sometimes curved, each spine a little more than half the width of the carapace without spines. Behind the lateral spines the carapace outline continues in an almost straight line to meet the rather wide, very gently curving posterior margin.

Ventral surface of orbit bounded largely by a narrow, forwardly pointing sub-orbital spine derived from the carapace and closely pressed against the basal segment of the antenna, which in turn largely fills the anterior hiatus of the orbit. Eyestalk of medium size, narrowly conical, cornea transparent in preserved specimens. Basal joint of antenna large, subsequent joints smaller and slowly tapering (Fig. 9). Antennule relatively small, folding upwards and backwards into its cavity. Antenna long, extending well beyond end of rostrum.

Outer maxillipeds as in Fig. 6. Inner margins of ischium and merus bearing a sheet of stiff hairs. Palp heavily coated with stiff brownish hairs. Outer margin of palp and distal, free edge of merus with a forward pointing sheet of fine, branching, feathery hairs.

Chelipeds in adult females and sub-mature males subequal in size although even in females the right cheliped is more strongly developed. Upper surface of propodus, of dactylus and of carpus and merus with a row of stiffish hairs. Outer face of dactylus nodular, distal upper extremity of carpus drawn out into a strong, pointed ridge. In mature males the right cheliped is enormously developed, the merus smooth and shining. Ambulatory legs long and slender, set with a row of feathery branched hairs along the upper surface, dactylus with two rows of stiff, short, close-set hairs.

Male and female abdomen of seven segments very like those of *Trichopeltarion fantasticum* Richardson and Dell (figs. 2, 3). The male pleopods are very like those figured by Gordon (1953: 51, fig. 6A) for *Trachycarcinus glaucus* Alcock and Anderson and by Richardson and Dell (1964, figs. 5, 10) for *Trichopeltarion fantasticum*. The only major difference seems to be that in *novaezelandiae,* spines are developed towards the base of the central groove in the first pleopod rather than hairs as in *glaucus* and *fantasticum*.

Three females were carrying eggs. One from Station E.111, had twelve eggs still attached beneath the abdomen. One from Station F.105 had 57 eggs, many pushed out beyond the abdomen. The eggs are light brown in preservative, and large (up to 1.5mm in diameter). These specimens were collected in October (E.111) and in January (F.105 and D.207).

MEASUREMENTS OF HOLOTYPE: Length of carapace including rostrum, 16.75mm; width of carapace including lateral spines, 24.5mm; width of carapace without lateral spines, 11.25mm; length of right cheliped, 24.25mm; length of merus of right cheliped, 13.25mm; length of dactylus of right cheliped, 7.0mm; length of fourth ambulatory leg, 20.00mm.

TYPE MATERIAL: Holotype male (113) and seven paratype males and eight paratype females in New Zealand Oceanographic Institute, one paratype male in Portobello Marine Biological Station, one paratype male and one paratype female in Dominion Museum.

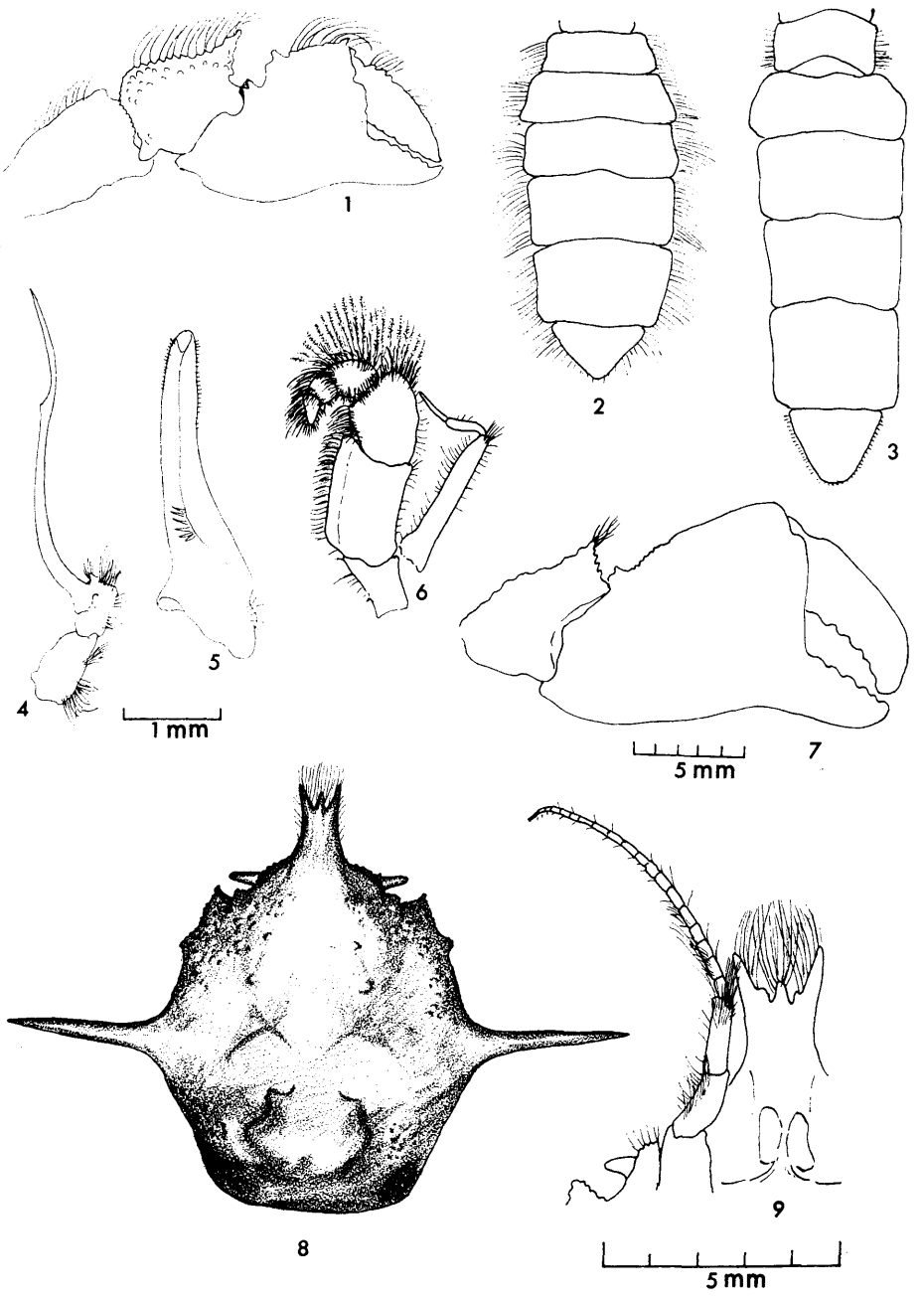
LOCALITIES

New Zealand Oceanographic Institute Stations:—

D.85, 49°50′S, 170°13′E, in 611 metres, 13-v-1963 (one male);

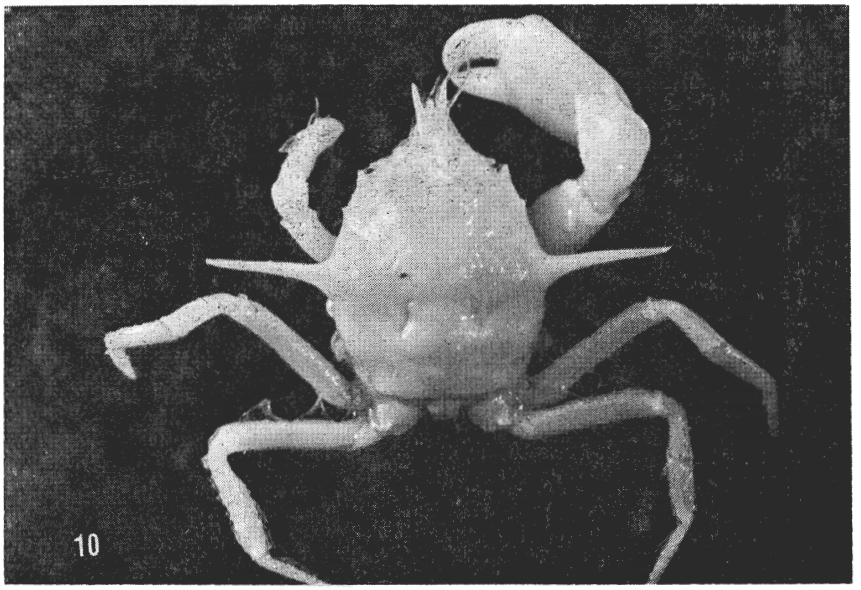
D.204, 50°58′S, 170°16′E, in 565 metres, 24-i-1964 (one female);

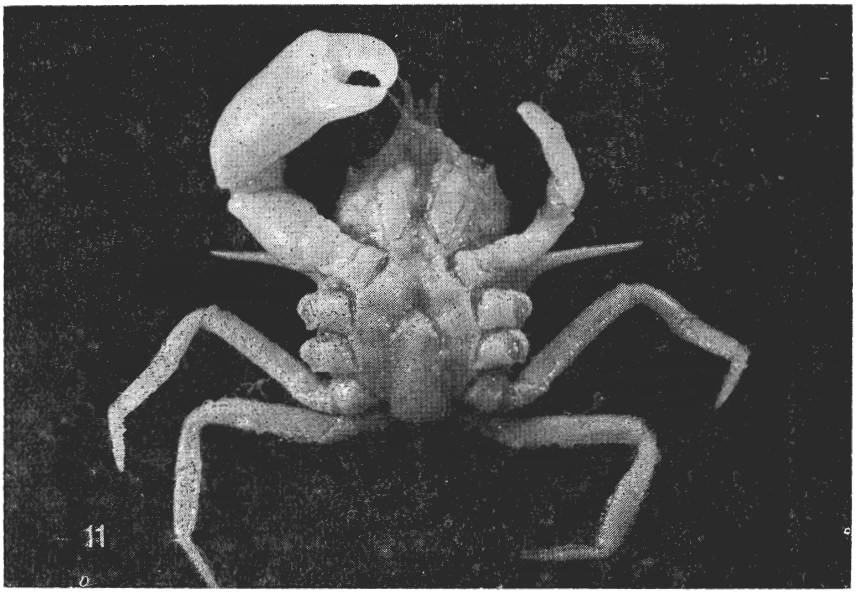
D.206, 50°36′S, 171°23.5′E, in 529 metres, 24-i-1964 (one male);




*Pteropeltarion novaezelandiae*

FIG. 1.—Right cheliped of subadult male from Papanui Canyon. FIG. 2.—Female abdomen. FIG. 3.—Male abdomen. FIG. 4.—Second pleopod, adult male. FIG. 5.—First pleopod, adult male. FIG. 6.—Outer maxilliped, adult male (branching hairs on outer margin not shown). FIG. 7.—Right chela of adult male. FIG. 8.—Carapace of male specimen from Papanui Canyon. FIG. 9.—Underside of right antenna to show general form and relationship of basal joint and sub-orbital spine to orbit, adult male.




FIGS. 10, 11.—*Pteropeltarion novaezelandiae* n.sp. (holotype, male). Fig. 10: dorsal view; Fig. 11: ventral view.

D.207, 50°04′S, 171°23′E, in 510 metres, 25-i-1964
(one female);
D.224, 40°47′S, 169°41′E, in 903 metres, 27-ix-1964
(one female);
D.229, 38°37′S, 170°56′E, in 885 metres, 28-ix-1964
(one male);
E.111, 43°00′S, 176°30′W, in 675 metres, 12-x-1964
(one male);
E.894, 37°20′S, 173°57′E, in 728 to 708 metres, 27-iii-1968
(four females);
E.899, 38°00′S, 173°47′E, in 729 to 715 metres, 25-iii-1968
(three males);
F.105, 49°34.5′S, 170°57′E, in 499 metres, 20-i-1965
(holotype male, three other males, one female);

Portobello Marine Biological Station locality: Papanui Canyon, off Otago, in 686 to 631 metres, 22-v-1967
(one male).

## REMARKS

Specimens have been collected from a number of stations ranging from 37°S to 50°S and from 169°E to 176°W, in depths from 499 to 903 metres.

This is obviously a relatively common member of the deeper water crab fauna of New Zealand and can be added to the crabs known only from depths over 200 metres listed by the writer (Dell, 1968: 238).

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