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Pachygrapsus marinus (Rathbun), a New Crab for New Zealand Waters

By R. K. DELL,
Wellington, New Zealand

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Abstract

SPECIMENS of an oceanic crab, *Pachygrapsus marinus* (Rathbun) are recorded from Eastern Bay of Plenty. This is the first record of this species from the New Zealand area or from any locality west of Hawaii. Figures of a New Zealand specimen are given and the distinguishing features noted.

INTRODUCTION

IN March, 1962, the writer collected a series of small crabs from amongst a thick layer of goose barnacles (*Lepas* sp.) attached to a Japanese glass fishing float cast ashore at Omaio Bay, Eastern Bay of Plenty. On superficial examination they were thought to be *Planes*. On careful examination and comparison with the figures and descriptions given for *Planes minutus* (Linnaeus), *Planes cyaneus* Dana and *Pachygrapsus marinus* (Rathbun) by Chace (1951) they proved to be the latter species. Chace has shown that the Atlantic and Pacific forms of *Planes* can be separated and shown that *minutus* and *cyaneus* are the correct names for these two forms. *Planes* is not well represented in New Zealand collections, and a survey of the specimens known is being carried out. A preliminary examination of four specimens shows that these would fall within the range of *Planes cyaneus* Dana as defined by Chace.

Pachygrapsus marinus (Rathbun), figs. 1, 2, 3

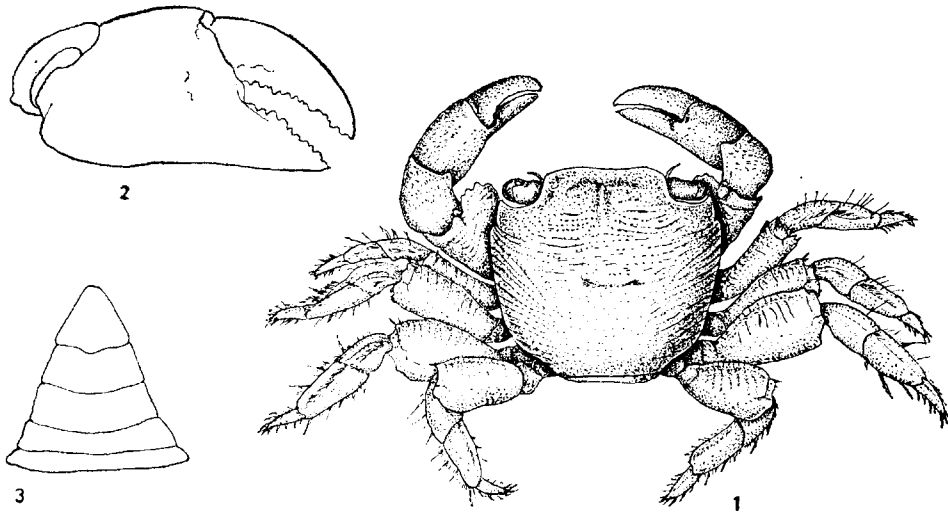
1915. *Planes marinus* Rathbun, Proc. U.S. Nat. Mus., 47, p. 120, Pl. 3.

1918. *Planes marinus* Rathbun, Bull. U.S. Nat. Mus., 97, p. 258, Pl. 64.

1951. *Pachygrapsus marinus* Chace, Proc. U.S. Nat. Mus., 101, pp. 65-103, figs. 1c, 2c, 2f, 2i, 2q, 2p, 2r, 3.

Chace shows that the major feature distinguishing *marinus* from the two species of *Planes* are the wider, subquadrate and distinctly striate carapace, the form of the chela which is not noticeably bent downwards, and the absence of a natatory fringe of hairs on the propodi of the first three pairs of walking legs. In addition the abdomen in the male is broadly triangular, as is the terminal segment. In all respects the New Zealand specimens agree with *Pachygrapsus marinus* rather than with *Planes* spp. except that there seems a tendency for the

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Pachygrapsus marinus (Rathbun), male from Omaio Bay.

FIG. 1.—Dorsal surface. FIG. 2.—Outline of right chela. FIG. 3.—Outline of abdomen.

fringe of hairs on the first three pairs of walking legs to form a definite natatory fringe. *Pachygrapsus marinus* (Rathbun) therefore deserves a place in the New Zealand crab fauna, and any specimens suspected to be *Planes* should be re-examined in this light.

OCCURRENCE: Omaio Bay, Eastern Bay of Plenty, living amongst dense growth of *Lepas* on glass Japanese fishing float cast ashore, R. K. Dell, March 7, 1962. The specimens were still alive when collected and the total population numbered 18 males and 8 females, of which 2 were ovigerous.

Length of carapace, 12.6mm; width of carapace, 13.8mm (average male specimen).

These New Zealand examples of *Pachygrapsus marinus* extend the known range of this species considerably to the west. The type locality is the open sea west of Lower California, 23° 49' N., 127° 50' W. Four specimens were subsequently collected from the fouling on a Japanese mine which drifted ashore on the coast of Oregon in 1947. Chace reported numerous specimens collected from drift in the Hawaiian Islands, occurrences which have been substantiated by Edmondson (1959, p. 169). These appear to be the only previously recorded occurrences for this species. This latest record indicates that *Pachygrapsus marinus* undoubtedly has a much wider range in the tropical and subtropical Pacific than previous records would indicate. There is little indication that oceanic crabs have been collected at all intensively in this area.

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DR R. K. DELL,
 Dominion Museum,
 Private Bag, Wellington.