

Confirmation of *Parma polylepis*, a pomacentrid teleost, in New Zealand waters (Note)

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Abstract Juvenile and subadult specimens of *Parma polylepis* (Pomacentridae) were photographed at North Cape and the Poor Knights Islands respectively, confirming the presence of the species in New Zealand waters. Previous reports of the species from the Kermadec Islands were misidentifications of *P. kermadecensis*.

Keywords *Parma polylepis*; *P. kermadecensis*; Pomacentridae; distribution

INTRODUCTION

In their taxonomic review of the Southwest Pacific fish genus *Parma* (Family Pomacentridae), Allen & Hoese (1975) recognised eight species. Since then, two more species, *P. bicolor* Allen & Larson, 1979 and *P. kermadecensis* Allen, 1987, have been described.

Three species of *Parma* have been reported from New Zealand waters. *Parma alboscapularis* Allen & Hoese, 1975 is locally common around the offshore islands and coastal headlands of north-eastern North Island (Doak 1972; Ayling 1982; Ward & Roberts 1986), and is occasional to abundant at the Kermadec Islands (Francis et al. 1987). *Parma kermadecensis* is endemic to the Kermadec Islands, where it is common to abundant (Allen 1987; Francis et al. 1987). *Parma polylepis* Günther, 1862 was reported from the Kermadec Islands by Paulin & Stewart (1985) and Schiel et al. (1986), but their reports were based on misidentified *P. kermadecensis* (Francis et al. 1987). Therefore there are currently no valid reports of *P. polylepis* from New Zealand waters. In this note, I report juvenile and subadult *P. polylepis* from near North Cape and at the Poor Knights Islands respectively, thus confirming the species' presence in New Zealand.

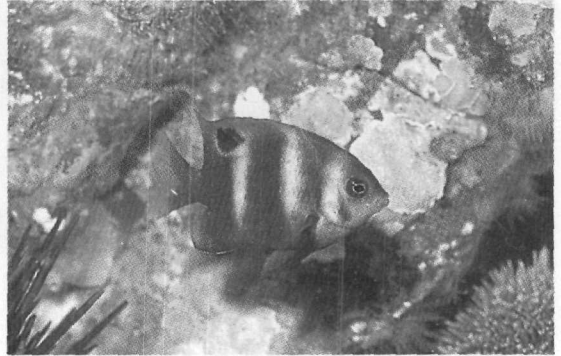


Fig. 1 Juvenile *Parma polylepis*, about 8 cm standard length, Murimotu Island, North Cape.

OBSERVATIONS

On 28 December 1986, while diving on the southwest side of Murimotu Island, near North Cape (34° 25.0' S, 173° 02.9' E), I found a juvenile *Parma*, about 8 cm standard length (SL), in a vertical rock cleft at about 3 m depth. The fish was relocated and photographed in the same place the following day (Fig. 1). It was dark brown to black with three vertical yellow bands on the body, the anteriormost crossing the operculum. The edges of the preoperculum and operculum were black, and there was a large, blue-rimmed, black ocellus on the back at the junction of the spiny and soft parts of the dorsal fin. All fins were tan-coloured distally, and the anterior edge of the anal fin was bright blue. There were two blue stripes running from the upper lip along the snout to just above the eye, and several bright blue dots below the eye and on the caudal peduncle.

A juvenile *Parma* about 10 cm SL fitting the same description was seen by R. V. Grace (biological consultant, pers. comm.) on 25 April 1984 in South Harbour, Poor Knights Islands (35° 29.4' S, 174° 44.4' E). It was at 3 m depth at the bottom of a 1 m wide vertical rocky channel. This fish was photographed in the same place on 29 June 1986, at which time it was charcoal grey speckled with pale grey on the flanks, and had yellow-brown facial markings, and a bright blue line on the anterior edge of the anal fin (R. V. Grace, pers. comm.). On 21 April 1987 I relocated and photographed the

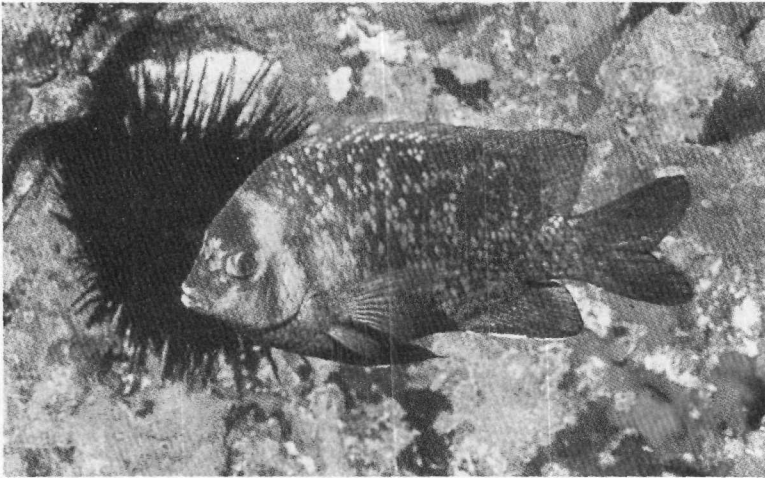


Fig. 2 Subadult *Parma polylepis*, about 15 cm standard length, South Harbour, Poor Knights Islands.

fish in the same place (Fig. 2). It was about 15 cm SL, and had a dark brown to black body with numerous, scattered, light grey scales. The face was dark brown with two white patches between the eyes, and there was a yellow band behind the eyes, running from the nape to the bottom of the operculum. The posterior edges of operculum and preoperculum were dark brown. The body above the pectoral fin was yellow-brown. Dorsal, anal, and caudal fins were dark brown with tan streaks, and the anterior edges of pelvic and anal fins were edged with bright blue. There was one bright blue spot on the top of the caudal peduncle, but there was no sign of a dorsal ocellus.

DISCUSSION

Allen & Hoese (1975) and Allen (1987) provided colour descriptions of juvenile and adult *Parma*. Only two species, *P. polylepis* and *P. kermadecensis*, have pale vertical bars as juveniles. *Parma kermadecensis* has four pale bars, including one across the caudal peduncle, and lacks a dorsal ocellus. *P. polylepis* has three pale bars and a prominent ocellus. I therefore identify both fishes as *P. polylepis*.

Parma polylepis has previously been reported from the Kermadec Islands by Paulin & Stewart (1985) and Schiel et al. (1986). Francis et al. (1987) have shown that those reports were based on mis-identifications of the recently described and morphologically similar *P. kermadecensis* (though Allen (1987) was apparently unaware of the reports and did not include them in the synonymy of *P. kermadecensis*). The discovery of two specimens of *P. polylepis* in north-eastern New Zealand therefore provides the first valid New Zealand record of the species.

Adult *P. polylepis* reach 18 cm SL, are a uniform dark brown to black, apart from a yellowish colour on the face, and have bony supraorbital knobs (Allen & Hoese 1975; Coleman 1980). The Poor Knights Islands fish was probably subadult when seen in April 1987 because it lacked supraorbital knobs and had a yellow opercular band which is absent in adults.

Juvenile *P. polylepis* cannot be confused with juvenile *P. alboscapularis*, because the latter lack vertical bars, and are golden yellow with about six horizontal rows of brilliant blue spots on the head and body (Doak 1972; pers. obs.). *Parma polylepis* adults are similar in colour to *P. alboscapularis*, but the latter has a white patch above the upper corner of the operculum, averages 24–28 cm SL, and lacks the yellow face and supraorbital knobs of adult *P. polylepis* (Ayling 1982; pers. obs.).

Parma polylepis occurs in eastern Australia, New Caledonia, Lord Howe Island, and Norfolk Island (Allen & Hoese 1975). It is one of the most abundant reef fishes at Lord Howe Island (Allen et al. 1976) and is very common at Norfolk Island (Hermes 1986). The New Zealand specimens may have drifted to New Zealand as larvae from either of those islands; such a recruitment mechanism was proposed by Russell & Ayling (1976) to explain the sporadic appearance in north-eastern New Zealand waters of a number of subtropical and tropical fish species.

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