About fifty species of the genus *Periclimenaeus* Borradaile, 1915, are known at present, mainly from the Indo-West Pacific region, but also from the Caribbean and Eastern Atlantic region. Of these, thirty eight are known from the Indo-West Pacific region, where they are found principally in association with a wide variety of sponge hosts. A small group are known to associate with colonial ascidians. This includes *P. hecate* (Nobili), *P. tridentatus* (Miers), *P. pachydentatus* Bruce, from the Indo-West Pacific region, and *P. ascidiarum* Holthuis, from the tropical western Atlantic region.

A pair of specimens from a small colonial ascidian have recently been found on the reef flat at Heron Island, Capricorn Group, at the southern end of the Great Barrier Reef. These specimens possess morphological characteristics that distinguish them from all other species of the genus and are now described as new.

I thank Dr. P. Mather for her help in identifying the host.

**Periclimenaeus diplosomatis** sp. nov. (figs. 1-6)

Material examined. — 1 ♂, 1 ovigerous ♀, Heron Island, Capricorn Islands, Queensland, Australia, 23°26.9'S 151°55.0'E, low water, coll. A. J. Bruce, # 2837, 15 December 1978.

Description. — Female. A small, rather stout shrimp with a moderately compressed body form.

The carapace is smooth and not swollen. The rostrum is well developed, equal to about half the post-orbital carapace length, straight and approximately horizontal, extending anteriorly almost to the level of the distal end of the intermediate segment of the antennular peduncle. The lamina is narrow, without distinct lateral carinae, gradually tapering to an acute point, with a feebly convex, toothless, lower border. The dorsal margin bears three slender, acute teeth at about 0.25, 0.5 and 0.75 of the rostral length. There are no supra-orbital spines or tubercles and the hepatic spine is absent. The orbit is obsolescent and the inferior orbital angle is not developed, but a slender acute antennal spine is distinct. The antero-lateral margin is broadly rounded and very slightly produced. The postero-dorsal region of the carapace is without a median depression.
The abdominal segments are smooth. The first segment is without a median anterior dorsal process. The length of the fifth segment is subequal to the sixth, which is about twice as long as deep and twice as wide as deep, with broad acute postero-ventral angles, and smaller acute postero-lateral angles. The pleura of the anterior segments are expanded and broadly rounded.

The telson is about twice the length of the sixth segment, about 2.2 times longer than wide, broadest at one third of its length and with slightly convex lateral borders. The posterior border is half the width of the anterior margin and rounded, without a median process. Two pairs of well developed dorsal spines are present at one third and one sixth of the telson length. The posterior pair is closer to the lateral border of the telson than to the anterior pair, and both pairs are slightly longer and more slender than the lateral pair of posterior spines. These are well developed, robust, about 0.4 of the length of the stout intermediate spines. The intermediate spines are robust, about 0.27 of the telson length. The submedian spines are setulose, slender, half the diameter of the intermediate spines and about 0.85 of their length. The dorsal surface of the telson bears sparse simple setae.

Fig. 1. *Periclimenaeus diplosomatis* sp. nov., female, holotype. Heron Island, Capricorn Group, Queensland, Australia.

The antennules are short and stout and exceed the tip of the rostrum by the distal border of the intermediate segment. The proximal segment is broadly based, tapering distally to about 0.6 of the proximal width. The medial border is straight, without a ventral tooth. The disto-lateral border is feebly concave, without a distinct antero-lateral lobe, but with a small, stout, acute tooth. The styllocerite is short, leaf-like, distally acute, divergent from the segment proper and separated from it by a deep notch: the tip reaches to about 0.45 of the segment length. The