NOTES AND NEWS

ON THE ASSOCIATION OF THE SHRIMP *RACILIUS COMPRESSUS* PAULSON (DECAPODA, ALPHEIDAE) WITH THE CORAL *GALAXEA CLAVUS* (DANA)

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The highly specialized shrimp *Racilius compressus* was first reported from the Red Sea by Paulson (1875), and subsequently by Balss (1927) and Ramadan (1936). There were no further records of this species, the only one of its genus, until it was re-discovered at Delagoa Bay in Moçambique by Barnard (1958), who provided further information and illustrations (1958a). During this period the shrimp was considered a rarity, due to the paucity of records. Between the years 1959 and 1962 the author found that the shrimp was abundant on the coral reefs around the island of Zanzibar and its occurrence on Madagascar was recorded by Jacquotte (1964), who reported its association with the oculinid coral *Galaxea fascicularis* (L.). More recently Banner & Banner (1966) have reported its occurrence from Thailand and Singapore. The Singapore specimens were also in *G. fascicularis*. Bruce (1971) has recorded the presence of the shrimp on the Great Barrier Reef. It can now also be reported that the species is found on the coral reefs of Tanganyika (Maziwi Island, Pangani); Kenya (Ras Iwatine, Mombasa); the Seychelle Islands (Aldabra and Mahé Islands), but it was not found at Fiji or Tahiti, where only a few colonies of the host were examined (personal observations). In all the other cases the shrimps were found in association with the coral *Galaxea fascicularis*, which must be considered the normal host.

The purpose of this note is to record the fact that *Racilius compressus* may also occasionally occur in association with another species of the genus *Galaxea, G. clavus* (Dana). This coral is generally abundant in the western Indian Ocean, where it often forms extensive banks on the slopes of sheltered reefs. Despite the extensive examination of this coral for shrimps, until recently all searches had proved unsuccessful. However, on March 15, 1971, a single specimen of *Racilius compressus* was found on a small clump of *Galaxea clavus* from the central lagoon of the reef surrounding Maziwi Island, Tanganyika (Stn. 110, 5°30.0′S 39°04.1′E) at a depth of 2 m below LWS level.

Racilius compressus is extremely strongly bilaterally compressed and lives in the deep narrow spaces between the corallites of *G. fascicularis*, where it is able to

circulate freely and in security. The spaces between the corallites in *G. clavus* are much broader and less deep than in *G. fascicularis*. Normally the incidence of specimens of *R. compressus* with autotomized or regenerating first pereiopods is very small, in my experience, almost nil. It is noteworthy therefore, that the single specimen from *G. clavus* had both the first pereiopods in the process of regeneration. This may possibly indicate that *G. clavus* is not generally satisfactory as a host as it is not able to provide adequate protection for the shrimp. In *G. fascicularis, R. compressus* is almost always found in breeding pairs, even in quite small host colonies. The specimen from *G. clavus*, a male, appeared to be without a mate, as no other specimen could be found despite careful search. The presence of breeding pairs is one of the criteria listed by Garth (in press) to indicate that, in associations between marine animals, the bond is of a specific and not accidental nature.

Also obtained from the same colony of *G. clavus* were some specimens of the pontoniinid shrimp *Periclimenes diversipes* Kemp. This species is also a coral associate, but one with a low host-specificity, being found in association with a wide range of coral genera (Bruce, in press, a). The specimen of *Racilius compressus* from *G. clavus*, together with others from *G. fascicularis*, is deposited in the collection of the National Museum, Nairobi, Kenya.

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