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# THE STOMATOPOD *ALACHOSQUILLA FLORIDENSIS* (MANNING, 1962) (CRUSTACEA, STOMATOPODA, NANNOSQUILLIDAE) REPORTED FROM GUANA ISLAND, BRITISH VIRGIN ISLANDS, WITH OBSERVATIONS ON COLOR

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## INTRODUCTION

Although color pattern can vary among and within species of the Crustacea, it can also be a conservative feature that can be very helpful in field identifications. This is often the case in the Crustacea Decapoda, where sibling species can be detected by subtle differences in color (e.g., Williams and Felder 1989, Zimmerman and Felder 1991, Knowlton and Mills 1992). Stomatopods are among the most colorful crustaceans when living. Many species show a great deal of variability (Manning 1969, Camp 1973), and knowledge of this coloration is often key to their identification in the field and in the lab (Schotte and Manning 1993).

As part of an ongoing survey of the marine invertebrate fauna of Guana Island, British Virgin Islands, we collected 2 large (45 mm and 48 mm TL) females, and one male specimen (30 mm TL) of the rarely reported stomatopod species *Alachosquilla floridensis* (Manning 1962). To our knowledge, the species has been reported previously in the literature only 4 times (see Schotte and Manning 1993). These reports are based on a total of 8 specimens. Previous distribution records for the species include Lake Worth Inlet, Florida; Virgin Gorda, US Virgin Islands; Isla Marguerita, Venezuela; Bahia, Brazil; and Saint Giles Island and London Bridge Rock, Tobago, West Indies (Manning 1969, Schotte and Manning 1993).

*Alachosquilla floridensis* was first described as *Lysiosquilla floridensis* by Manning (1962). The species was transferred to the genus *Acanthosquilla* by Manning (1963), along with *L. digueti* (Coutière 1905) from the eastern Pacific. Later, Manning (1974) synonymized *A. floridensis* with *A. digueti*. Subsequently Schotte and Manning (1993) recognized the differences between the 2 species, and also placed the 2 into a newly created genus, *Alachosquilla*.

## MATERIALS AND METHODS

Two female and one male specimens of the stomatopod *Alachosquilla floridensis* (LACM CR1999020.1,

48 mm TL female; LACM CR1999020.2, 45 mm TL female, and 30 mm TL male), cataloged in the Crustacea collections of the Natural History Museum of Los Angeles County, were collected from shallow subtidal waters (1–1.5 m) along White Beach, a protected calcareous sand beach on Guana Island, British Virgin Islands, on 6 August 1999. They were collected using a stainless steel “yabby pump” suction device (see Manning 1975) while collecting callianassid shrimp (*Neocalichirus* spp.). It is not known if the stomatopods were sharing the callianassid burrows or had formed their own. Although 3 species of *Neocalichirus* were collected at this time, no specimens were brought up with the stomatopods, and no balanoglossids were seen.

Specimens were taken directly to the lab and chilled on ice until dead, at which time the larger female (LACM CR1999020.2) was photographed. Digital images were cleaned (backgrounds were replaced with solid black, and the images were adjusted for brightness and filtered using “unsharp mask”) using Adobe Photoshop 5.5 software.

## RESULTS

The dorsal and lateral integument is bright white. More-or-less transparent regions across the middle of each abdominal somite and between somites allow the orange-tan colored ovary to show through (Figure 1a, b) in the females. In our preserved specimens, dark chromatophores are present, forming very thin lines along the posterior margin of each abdominal somite. Two widely spaced spots of chromatophores occur at the posterior margin of the 5th abdominal somite. On the dorsal surface of the telson, a short longitudinal band of chromatophores lies on either side of the median dorsal tooth (Figure 1a, 2a). Manning (1969, Figure 16b) showed these bands as surrounding the bases of the 2 flanking teeth, and Schotte and Manning (1993, Figure 3b) omitted them from their figure altogether, but mentioned them in the text. This is the pigmentation pattern used to separate *A. floridensis* from its only eastern Pacific congener, *A. digueti*, which has but one central coalesced

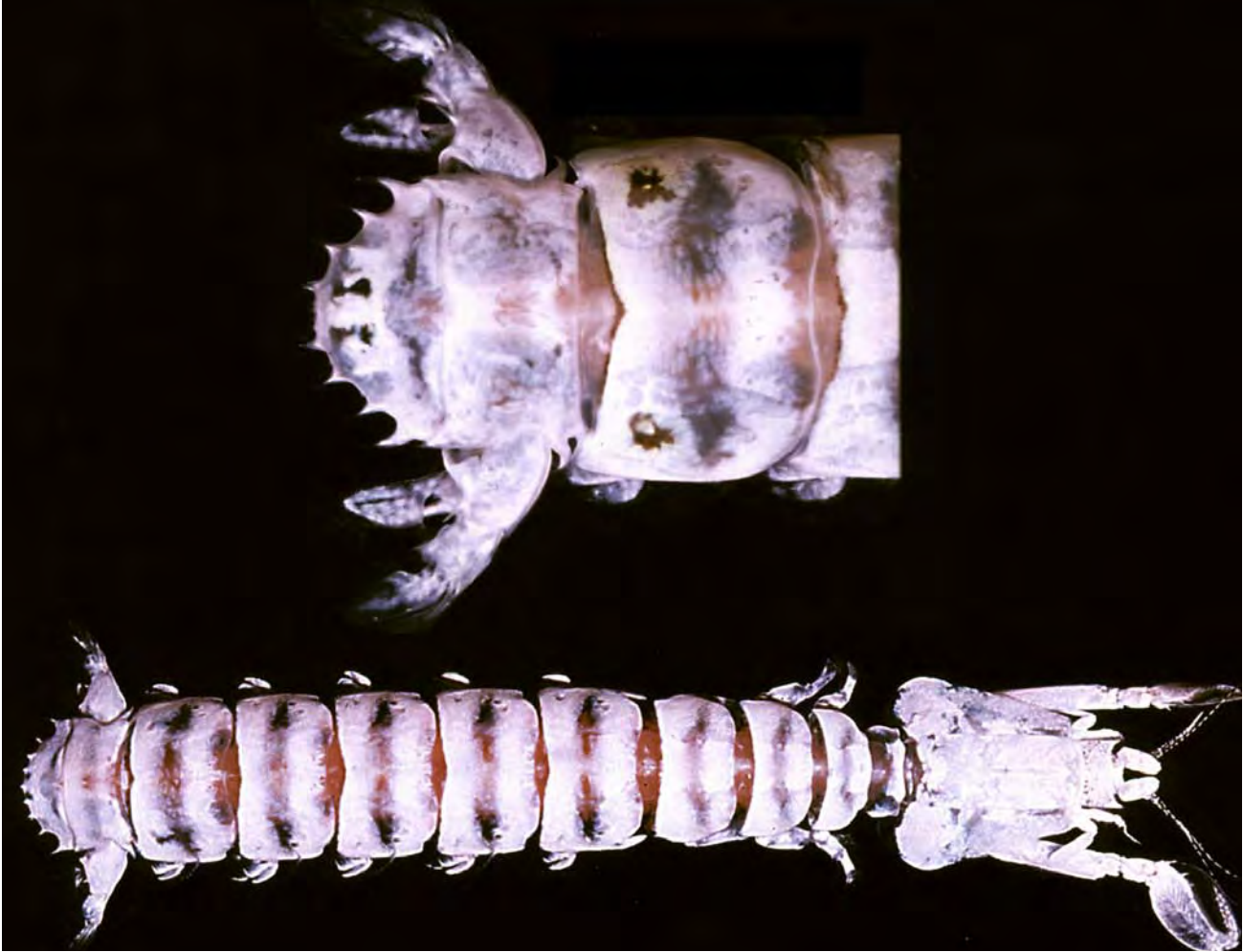


Figure 1. Color pattern of a fresh specimen of *Alachosquilla floridensis* (Manning, 1962) LACM CR1999020.2; a = close up of telson and posterior somites in dorsal view; b = whole animal in dorsal view.

spot. On the ventral surface of the telson, a small field of chromatophores can be seen posterior to the anus on one specimen. A dark crescent of chromatophores occurs at each posterolateral corner of the carapace. Scattered chromatophores also occur on the carapace, rostral plate, and eyestalks.

In all of our specimens (one preserved using only 75% EtOH = LACM CR1999020.1, and 2 fixed first in 10% formalin = LACM CR1999020.2) the teeth of the rostral plate extend only to the bases of the ocular peduncle, and the bases of the eyestalks are plainly visible. The expanded, fused ocular scales are clearly visible, protruding laterally from under the proximal half of the median rostral spine (Figure 2b).

## DISCUSSION

Description of the animal's habitat is scattered. The type specimen came from "Shoreline" along Cape Florida, Key Biscayne, Florida (Manning 1962). Brazilian specimens (from Praia do Araçá) came from a very sheltered beach between normal low and extremely low tide level (Rodrigues 1971) with sediments consisting of layers of fine sand (predominantly 0.1–0.07 mm) overlying strata of gravel (Burdon-Jones 1969, p. 256, Appendix 1). Habitat notes for Tobago specimens include: "Sublittoral, in 6–11 and 13–28 m; from rock, rubble, with live and dead coral, 6–11 m; and vertical rock wall to ledge, 13–28 m. This species, which burrows in level bottom substrates, certainly was taken from sand on the ledge rather than on the wall itself" (Schotte and Manning 1993: 573). Rodrigues (1971) mentioned taking *A. floridensis* with balanoglossids in Brazil in his original account of *Callianassa* (=Sergio) *gaussitinga*.

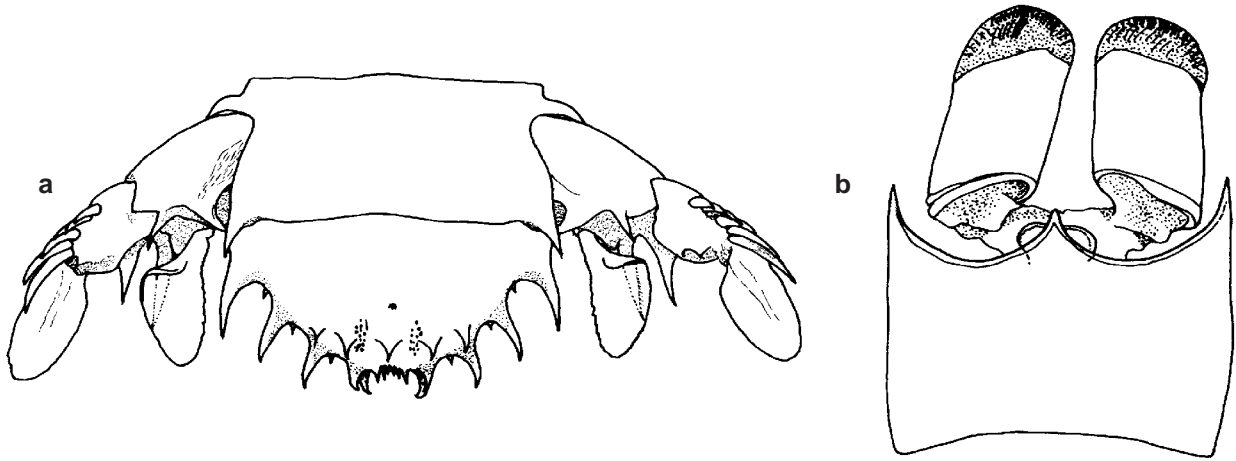


Figure 2. Diagnostic characters of *Alachosquilla floridensis* (Manning, 1962) from LACM CR1999020.1; a = telson and 6th abdominal somite, dorsal view (setae omitted); b = head in dorsal view.

Morphologically, and especially in regard to the very distinctive rostrum, our specimens agree with the figures and descriptions provided by Manning (1962, 1969) and Schotte and Manning (1993). One subtle difference is in the amount of head covered by the rostral plate, but this may be due to the relaxed death of the animals (D. Camp, personal communication, P.O. Box 4430, Seminole, FL 33775-4430).

#### ACKNOWLEDGMENTS

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