

ADDITIONAL RECORDS FOR
CALLIANASSA RATHBUNAE SCHMITT, 1935,
FROM FLORIDA AND THE BAHAMAS
(CRUSTACEA: DECAPODA: CALLIANASSIDAE)

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Abstract.—*Callianassa rathbunae* Schmitt is far more abundant in shallow water habitats than suggested by records in the literature. More than 40 specimens are recorded from localities in the Bahamas and the Indian River, Florida.

The mud shrimp *Callianassa rathbunae* was described by W. L. Schmitt (1935:15) from two male specimens, 59 mm and 61 mm long, that had washed ashore at Bluefields, Jamaica [18°10'N, 78°03'W], in 1899. Biffar (1971:699) redescribed the species from two other specimens, one male, 95 mm long, and one female, 82 mm long, dredged in an undisclosed depth off the east coast of Key Biscayne, Miami, Florida, in 1969. Suchanek (1985) reported the results of investigations of the biology of *C. rathbunae* and three other species of *Callianassa* at three localities on St. Croix, U.S. Virgin Islands: Tague Bay, 17°46'N, 64°36'W; Great Pond Bay, 17°43'N, 64°39'W, in depths to 5 m; and Salt River Canyon, 17°47'N, 64°45'W, in depths to 40 m. So far as we are aware, there are no other records in the literature for this species.

Independent collections by each of us has uncovered much additional material of this species. On 2 October 1980, one of us (RWH) found this species on a silt and coralline sand bottom in 10 to 15 feet of water north of the seaplane ramp on the west side of the channel at Bimini, Bahamas [25°44'N, 79°15'W]. A total of 19 specimens was taken with a suction pump: 10 ♂, carapace lengths (cl) 11.0–17.8 mm (total lengths (tl) 37–68 mm); 5 non-ovigerous ♀, cl 11.5 to 15.4 mm (tl 42–57 mm); and 4 ovigerous ♀, cl 11.7 to 19.0 mm (tl 42–57 mm) [1 ♂, 1 ovigerous

♀, GCRL I80:1107; 2 ♂, 2 ♀ (1 ovigerous), USNM]. One specimen of *Callianassa branneri* (Rathbun), one of the commonest shallow water species in the tropical western Atlantic, and two specimens of an undescribed species, closely related to *Callianassa quadracuta* Biffar, were taken at the same time.

Twenty-four other specimens have been collected by one of us (RBM) at two localities in the southern Indian River, Florida, one just inside the St. Lucie Inlet, Martin County, the other just inside the Fort Pierce Inlet, St. Lucie County. All of these collecting sites were on sand flats exposed at low tide; that on the south side of the Fort Pierce Inlet was on a sand bar with scattered seagrass, most abundant on the edges of the bar where the bottom became muddier, whereas the site on the north side of the Fort Pierce Inlet and the St. Lucie site lacked vegetation. The following specimens were taken in the Indian River (unless otherwise indicated, all specimens are in the collection of the Smithsonian Institution, USNM):

Florida, Martin County, flat just inside St. Lucie Inlet, 27°10.3'N, 80°10.4'W, clean sand: Sta RBM FP-82-8, R. B. Manning, M. E. Rice, J. Piraino, H. Reichardt, 16 Jul 1982: 1 ♂, cl 16.3 mm (tl ca. 64 mm).—Sta RBM FP-83-2, R. B. Manning, W. D. Lee, H. Schiff, 11 Feb 1983: 1 ♂, cl 10.1 mm (tl 33 mm), 1 ♀, cl 8.9 mm (tl 30 mm).

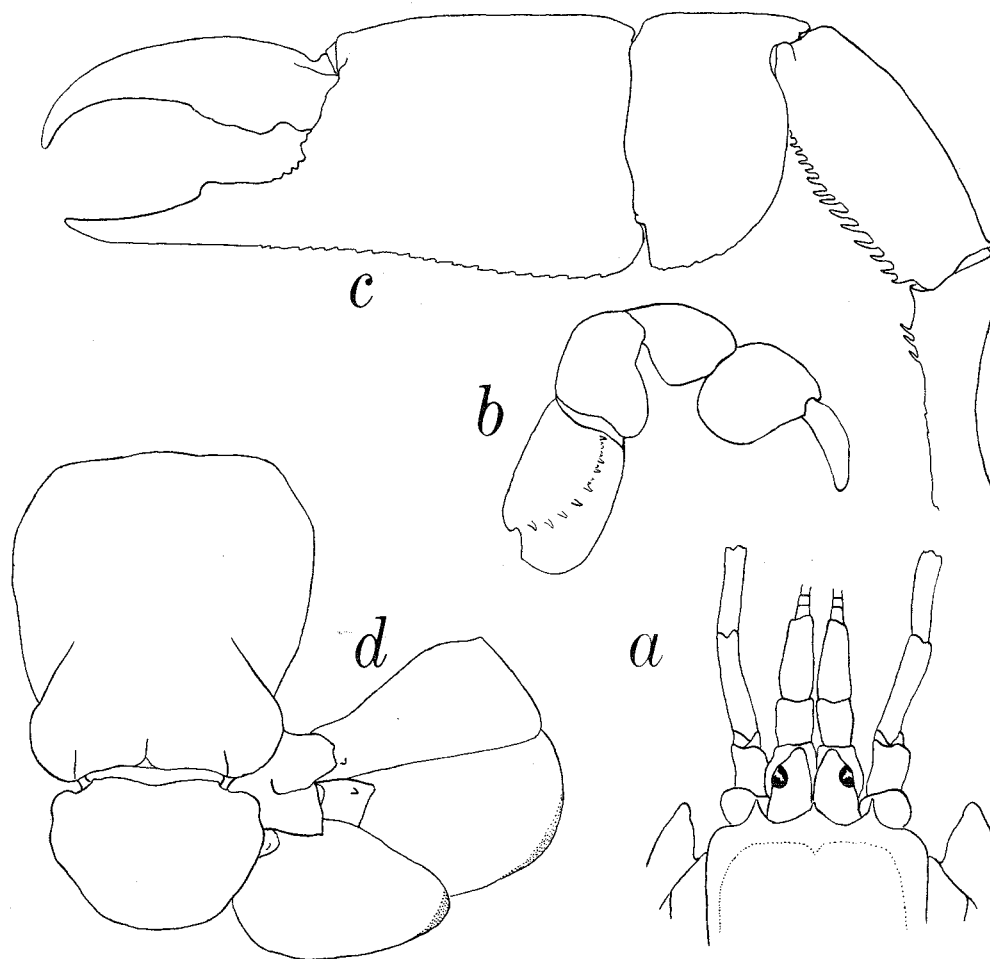


Fig. 1. *Callianassa rathbunae* Schmitt. Male, cl 16.3 mm, Sta RBM FP-82-8: a, Front; b, Inner face of third maxilliped; c, Chela; d, Sixth abdominal somite, telson, and uropod (stippled areas distally on uropods mark regions of dense setation).

St. Lucie County, south side of Fort Pierce Inlet, 27°27.7'N, 80°18.7'W, sand flat with sparse seagrass: Sta RBM FP-83-5, R. B. and L. K. Manning, 12 Jul 1983: 1 ♀, cl 14.5 mm (tl 51 mm).—Sta RBM FP-84-8, R. B. Manning, D. L. Felder, 14 Jul 1984: 1 ♂, cl 15.8 mm (tl 65 mm), 8 ♀, cl 16.1–20.5 mm (tl 69–81 mm).—Sta RBM FP-85-1, R. B. Manning, D. L. Felder, 17 Jul 1985: 6 ♀ (2 ovigerous), non-ovigerous cl 17.2–21.1 mm (tl 62–76 mm), ovigerous specimens damaged, cl ca. 17 mm (tl ca. 62 mm) [1 specimen to Indian River Coastal Zone Mu-

seum, Fort Pierce; 1 specimen to Gulf Coast Research Laboratory (GCRL)].—Sta RBM FP-85-4, R. B. Manning, D. L. Felder, 23 Jul 1985: 1 ♂, cl 19.1 mm (tl 81 mm), 1 ovigerous ♀, damaged (female taken with 2 specimens of *Pinnixa retinens* Rathbun).—Sta RBM FP-85-8, R. B. Manning, M. L. Reaka, W. D. Lee, B. Tunberg, 15 Aug 1985: 2 ♂, cl 18.8–19.0 mm (tl 76–80 mm).

St. Lucie County, north side of Fort Pierce Inlet, south side of Coon Island, 27°28.2'N, 80°18.3'W, muddy, hard packed sand near shore: Sta RBM FP-85-2, R. B. Manning,

D. L. Felder, W. D. Lee, 18 Jul 1985: 1 ♀, cl 19.0 mm (tl 74 mm).

The specimens from both the Indian River (Fig. 1) and Bimini were pink overall in color, with deeper pink to red on the claws. Unlike many callianassids, which appear to be listless when taken from their burrows, the smaller specimens taken at the St. Lucie Inlet site were very active and tried to escape capture.

All of the specimens reported here were taken with a suction or yabby pump. Those from Bimini were taken with an open ended pump, as described by Manning (1975), which can be used by divers as well as from shore, whereas those from the Indian River were collected with a closed-end Australian commercial yabby pump (Hailstone & Stephenson 1961), which can only be used with the lower part of the tube under water. Use of either kind of suction pump greatly simplifies the collection of callianassids and other burrowing crustaceans.

These samples demonstrate that *C. rathbunae* is far more abundant and widespread than suggested by records in the literature, and that it occurs in intertidal habitats as well as in shallow, sublittoral habitats. Curiously, whereas Biffar's collections from shallow water dredging operations off Miami (Biffar 1971:704) yielded about 40 specimens of *C. branneri* and two specimens of *C. rathbunae*, our collections from Bimini yielded 19 specimens of the latter and only one *C. branneri*.

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