

Short Papers and Notes:

OCCURRENCE OF *Squilla heptacantha* (Chace, 1939) (Crustacea: Stomatopoda: Squillidae) IN THE NORTHEASTERN GULF OF MEXICO

The stomatopod crustacean *Squilla heptacantha* (Chace, 1939) was described from two specimens, one each collected off the north and south coasts of Cuba during the first *Atlantis* expedition to the West Indies. The species is the only western Atlantic *Squilla* with seven teeth on the dactylus of the raptorial claw, two subequal lobes on the lateral process of the sixth thoracic somite (Figure 1), and complete longitudinal grooves on the lateral carinae of the first five abdominal somites. With respect to the last two characters, *S. heptacantha* more closely resembles members of the Indo-West Pacific genus *Kempina* Manning, 1978, than it does other species of *Squilla* (Manning, 1971, 1978).

Even though *S. heptacantha* is very distinctive, recent reports of the species have been rare (Springer and Bullis, 1956; Manning, 1959; Bullis and Thompson, 1965; Manning, 1969), probably because of its outer shelf-upper slope distribution. Manning (1969) listed all known records of the species to that date. The known range included the Little Bahama Bank, eastern coast of Florida, Caribbean Sea off Honduras and Panama, and the coasts of Cuba, Dominican Republic, Puerto Rico and the Virgin Islands, in depths of 183-439 m. This paper reports the occurrence of *S. heptacantha* in the northeastern Gulf of Mexico and provides additional information on variable morphological features.

Most northeastern Gulf specimens were collected by personnel of the Alabama Marine Environmental Science Consortium (MESC) during cruises funded by the U.S. Bureau of Land Management under contract numbers 8550-CT5-30 and AA550-CT7-34 to T.S. Hopkins, Dauphin Island Sea Lab (DISL). Additional specimens were collected by personnel of the Florida Department of Natural Resources Marine Research Laboratory, St. Petersburg (FDNR). Most specimens were deposited at those institutions; one specimen was donated to the Division of Crustacea, National Museum of Natural History, Washington, D.C. (USNM).

Northeastern Gulf of Mexico localities for *S. heptacantha* are listed in Table 1. The northernmost records of the species are now south of Pensacola Bay, Florida, on the western side of the DeSoto Canyon; these also represent the shallowest depths from which the species has been collected (105 and 106 m). All other localities are off the western coast of Florida in deeper water. The southernmost eastern Gulf locality

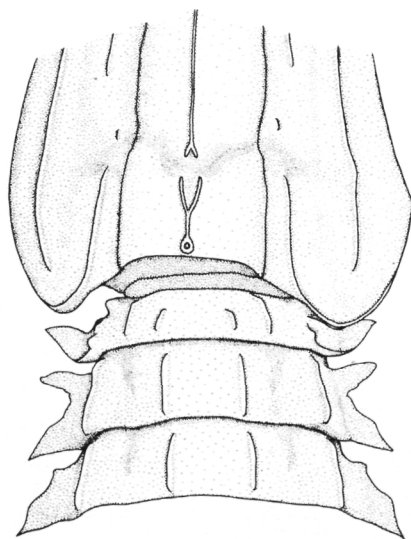


Figure 1. *Squilla heptacantha* (Chace). Posterior portion of carapace and fifth, sixth and seventh thoracic somites; male, carapace length 16.4 mm; FDNR/EJ-81-19.

Table 1. *Squilla heptacantha* from the Northeastern Gulf of Mexico; material examined.

Locality	Depth (m)	Collector/ Station	Date	♂	Number	♀	Carapace length(s) (mm)	Deposition
29°34'58"N, 87°20'W	106	MESC/ 2645	8 IX 1977	1		—	5.8	DISL
29°31'30"N, 87°21'30"W	105	MESC/ 22-VI-C-a-3	19 X 1975	1	fragment	—	18.2	DISL
28°50'59"N, 85°36'56"W	176	MESC/ 441201-BLM 44	11 VII 1976	1		—	9.9	DISL
28°49'51"N, 85°36'53"W	176	MESC/ 2427	7 II 1978	2		—	11.4-14.1	DISL
28°24'15"N, 85°15'11"W	180	MESC/ 2313	29 X 1977	1		—	14.4	DISL
28°23'48"N, 85°14'57"W	174	MESC/ 2313	6 II 1978	3		1	about 11-17.0	DISL
27°50'N, 84°42'W	183	MESC/ 420601-1	18 VII 1976	—		1	13.0	DISL
27°49'56"N, 84°41'56"W	161	MESC/ 0002	5 II 1978	—		1	13.0	DISL
27°47'00"N, 84°42'00"W	187-188	MESC/ 22-II-C-c-7	21 X 1975	1		—	15.4	DISL
27°41'23"N, 84°41'03"W	183	MESC/ 0002	24 VIII 1977	1	fragment	—	11.0	DISL
27°31'N, 84°31'W	136-126	FDNR/ EJ-81-29	25 IV 1981	—		1	16.6	FDNR
26°51'N, 84°35'W	186-178	FDNR/ EJ-81-20	24 IV 1981	—	1	fragment	12.3	FDNR
26°49'N, 84°40'W	210-218	FDNR/ EJ-81-19	24 IV 1981	1		—	16.4	USNM
26°48'N, 84°37'W	190-210	FDNR/ EJ-81-18	24 IV 1981	2		—	18.8-18.8	FDNR
26°27'00"N, 84°10'45"W	174-177	MESC/ 22-I-C-c-4	22 X 1975	1		1	8.5-14.1	DISL
26°27'00"N, 84°20'00"W	180	MESC/ I-C-c-7	28 II 1976	1		—	17.7	DISL
26°26'45"N, 84°19'00"W	180	MESC/ II-C-a-2	27 II 1976	1		1	11.8-18.2	DISL
26°26'00"N, 84°19'15"W	174-177	MESC/ 22-I-C-a	22 X 1975	1	fragment	—	Telson only	DISL
26°25'03"N, 84°14'54"W	171	MESC/ 2106	21 VIII 1977	1		—	19.0	DISL
26°24'40"N, 84°19'50"W	200	MESC/ 410301-BLM 46	16 VII 1976	1		—	19.4	DISL
26°24'40"N, 84°19'50"W	200	MESC/ 0004	3 II 1978	2		2	6.6-16.4	DISL

is offshore of Sanibel Island. The species has not been reported elsewhere in the Gulf.

One secondary sexual character of many species of Squillidae is a noticeable swelling of the dorsal carinae of the telson and some carinae of the abdomen in males. Chace (1939: 53) noted that carinae of his single male of *S. heptacantha* were not noticeably swollen, and Manning (1969: 174) reported swollen telson carinae only on the two largest males

in his material. In material from the northeastern Gulf, only three intact males smaller than 12 mm carapace length lack swollen carinae, whereas all of the larger males have swollen telson carinae. In addition, the lateral abdominal carinae on many large males are swollen to the extent that the longitudinal grooves are almost obscured.

Manning (1969: 173), in his redescription of *S. heptacantha*, stated that the portion of the median carina

of the carapace anterior to the cervical groove is bifurcate only at the anterior end. In the Gulf specimens, however, the carina may be bifurcate at both ends (Figure 1). The posterior bifurcation is variously expressed among the specimens. In some, it is either absent or so weak as to be indiscernible; on others, the bifurcation is barely discernible because it lacks the dark, corneous color of the remainder of the carina. Some large specimens have an obvious, dark-colored bifurcation which can be detected with the unaided eye.

The dorsal crest on the carpal segment of the raptorial claw is multituberculate in this species (Manning, 1969: 173). However, one small female (carapace length 6.6 mm) I examined had no tubercles on the crest.

Finally, each Gulf specimen has a minute tubercle on the proximal ventral margin of the ocular peduncle, a feature which has not been noted before in this species. Except for the variations noted above, all Gulf specimens agreed well with previous descriptions of *S. heptacantha*.

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