

NOTES AND NEWS

MATING OF THE STONE CRAB, *MENIPPE MERCENARIA* (SAY) (DECAPODA, BRACHYURA) ¹⁾

BY

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A noteworthy by-product of a study of growth and regeneration of the Stone Crab, *Menippe mercenaria* (Say), has been the opportunity to observe and photograph the mating of a pair of captive crabs.

A large number of crabs are being maintained at our Laboratory in two circular concrete tanks (approximately 20' wide and 5' deep). Fresh seawater is continuously pumped from nearby Bayboro Harbor, St. Petersburg, Florida, into both tanks which are inside a covered enclosure of chain-link fence, permitting ventilation on all sides. The water temperature ranged between 80 and 84°F (26.6 and 28.8°C) during the study. Each tank is provided with a dozen or more two-holed concrete building blocks arranged to permit observation. The tanks are surveyed at least twice daily for dead and/or freshly molted crabs.

For at least a week, two crabs remained together within one section of a concrete block; usually the male remained above the female, near the entrance of the hole. The female's fresh molt was recovered on the morning of May 31, 1970. The following morning, 9 : 00 a.m., the pair was found in the mating position (pl. I). The male was in the superior position, cradling the female with its walking legs; the female was in the inferior position and inverted, its telson curved over the male's carapace.

The male lacked a right chela; its left chela was held in an extended, defensive manner. Although the female, which lacked both chelae prior to molting, successfully regenerated its right chela (pincer), its left chela (crusher) was not regenerated and did not appear on the freshly molted animal. (Molting of an animal without regeneration of a missing appendage is an unusual occurrence and is under study at our Laboratory). The female's right chela can be seen held close to its body, the dactyls slightly apart (pl. I). The absence of a chela did not seem to prevent either crab from mating successfully.

The female's telson was not closely appressed to the carapace of the male as is the case in *Callinectes sapidus* Rathbun when the male is carrying the female

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(personal observation). This may be normal or may indicate that copulation had terminated.

By 1 : 30 p.m., the female had righted herself and both crabs remained in the hole, more or less facing each other.

Pairs of stone crabs have been found in the field, always a male with a freshly molted female or with a female presumed near molting. In both cases, the females were very passive and the males were protective and maintained a position near the entrance of the crevice. The mating position was finally confirmed in the field on the evening of July 15, 1970. In this case the female had just molted (the molt was found nearby) and was held by the male in essentially the manner shown in pl. I. When disturbed, they separated quickly, unlike the pair in captivity which allowed bright lights and occasional moving of a nearby pipe during the photographing.

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Mating of *Menippe mercenaria* (Say).