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NOTES ON *STENOPUS SCUTELLATUS* AND *S. HISPIDUS*
(DECAPODA, STENOPODIDAE) FROM MISSISSIPPI

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ABSTRACT Two species of *Stenopus* were collected in 1976 from a Liberty ship artificial reef near Horn Island, Mississippi. Six specimens of *S. scutellatus* were collected. This represents an occurrence record for Mississippi. Five specimens of *S. hispidus* were also collected; thus, extending the range in the Gulf of Mexico by about 400 km to the northwest.

Two species of *Stenopus* were collected during June through November of 1976 from an artificial reef located in the Gulf of Mexico (30°09'00"N, 88°44'50"W) approximately 10 km south of Horn Island, Mississippi. The reef consists of a scrapped World War II Liberty ship which was sunk on June 10, 1975, in approximately 14 m of water. This hull, designated the Waterhouse Reef, provides approximately 76,200 square meters of artificial substrate. Observations and collections were accomplished by employing SCUBA techniques.

Six specimens of *S. scutellatus* were collected (Table 1) from the artificial reef. In addition many other specimens were observed. They were most frequently seen in rock piles or under pieces of wood or pipe. Over half of those observed were egg-bearing females, easily distinguished by their bright green egg masses.

Previous Gulf of Mexico records for *S. scutellatus* include Rathbun (1919), Holthuis (1946, 1959), and Springer and Bullis (1956) from Florida, and Dawson (1963) from Louisiana. The present observations are the first records for Mississippi.

Five specimens of *S. hispidus* were collected during the study (Table 1). Others observed were most frequently seen on pipes or braces along the sides of the Liberty ship hull.

Again, over half were egg-bearing females, the egg mass of *S. hispidus* being bright blue.

Previous Gulf of Mexico records for *S. hispidus* include Holthuis (1946) from south Florida and Hopkins (personal communication) who found this shrimp on the Florida middleground (28°42'00"N, 84°26'30"W). The northernmost record for *S. hispidus* in American waters is from Cape Lookout, North Carolina (Kruczynski and Jenner 1969). Present observations extend the known Gulf of Mexico range about 400 km to the northwest.

Observations on the Waterhouse Reef have continued, but *Stenopus* have not been observed during the December 1976 through June 1977 period.

Limbaugh et al. (1961) reported behavioral differences between *S. scutellatus* and *S. hispidus*. According to their observations, *S. scutellatus* prefers to live in small holes or crevices and tends to be cryptic. They also stated that cleaning behavior of this species is restricted to small fish. *S. hispidus* on the other hand, prefers a more open existence living in large caves, and will clean small and large fish. These habitat preferences were noted during the Mississippi artificial reef study, but cleaning behavior was not observed.

Yaldwyn (1964, 1966) noted pair formation in *S. hispidus*. All specimens of *S. hispidus* and *S. scutellatus* on the Mississippi artificial reef were observed in pairs. It is difficult to speculate about the origin of the population of the two species of *Stenopus* found on the Waterhouse Reef. It is possible that the adult specimens developed from current-borne larvae. Little is known about reef-like habitats off Mississippi, and it is also possible that a permanent population of both species of *Stenopus* exists in deep waters. The Liberty ship artificial reef provides a substrate for many organisms previously thought to be uncommon off the Mississippi coast, and continued studies of the biota and ecological succession should be rewarding.

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TABLE 1.

Date of capture, *in situ* hydrographic parameters, and carapace length of collected specimens of *Stenopus*.

| Species | Date | Salinity* ‰ | Temperature °C | Length (mm) |
|-----------------------|----------|----------------|-------------------|------------------------|
| <i>S. scutellatus</i> | 6/24/76 | 30 | 23.1 | 15.0 |
| | 7/7/76 | 38 | 23.0 | 16.5** |
| | 10/13/76 | 33 | 25.3 | 16.0 16.5 17.0** |
| <i>S. hispidus</i> | 11/3/76 | 30 | 19.8 | 17.5 |
| | 6/14/76 | 31 | 23.0 | 14.0 |
| | 7/7/76 | 38 | 22.0 | 15.5 16.0** 16.0 |
| | 10/13/76 | 33 | 25.3 | 17.0** |

*By refractometer
**Ovigerous female

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