

**INFLUENCE OF SEDIMENT BIOTURBATORS ON
THE SUCCESS OF SEAGRASS COMMUNITIES**

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Purpose: Determine the influence of sediment bioturbators (specifically ghost shrimp of the genus *Callianassa*) on the grass beds and sediments in Salt River Canyon (Report No. 80-5)

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Accomplishments: Density surveys (10 m x 10 m) were performed at four depths from 15.2 m to 38.1 m. *Callianassa* were found to be patchily distributed. Two common *Callianassa* types were identified: mound builders (assumed to be *C. rathbunae*, or *C. quadracuta*) and hole dwellers (identified as *C. longiventris*).

Plankton collections were made during the day and at night to determine the diurnal behavioral patterns and distribution of larval *Callianassa*. In addition, emergent larval traps were placed over *Callianassa* mounds and the contents collected at three equal periods during the night for four nights centering on the full moon (the presumed period of larval release).

Burrow morphologies were analyzed by pouring fiberglass resin into open burrows and extracting the hardened resin. Burrows are shown to consist of surface-oriented tubes connected to subsurface chambers. The function of these chambers remains unknown.