

ABSTRACT

Distribution and Reproductive Biology of Two Mussels, Mytella guyanensis and Mytella falcata (Bivalvia: Mytilidae) in Trinidad.

Rosemarie Kishore

M. guyanensis is found on the mud-flats of mangrove swamps along the west coast of Trinidad. It builds a byssal nest in swamp sediments and attaches superficially to mangrove rootlets on firmer ground. Populations of M. guyanensis are not in decline as previously reported.

M. falcata is found attached to mangrove prop-roots on both the east and west coasts of Trinidad and also on rocky outcrops and partially buried in open mud-flats along the west coast. Populations of M. falcata are not as stable as those M. guyanensis with those of Red Mangrove roots appearing to be on the decline.

Stereological analysis of the reproductive cycles of both M. guyanensis and M. falcata reveal a maturation period from September to March. Spawning is initiated by rapid salinity changes. Spawning in M. guyanensis is sporadic occurring in March, May and November. Spawning in M. falcata occurs in February and June with the latter being the greater period. Stereology reveals the continuous production of gametes and the absence of post-

spawning resting periods. Plankton and recruitment studies did not show any concordance with spawning patterns determined stereologically. This suggests that larval settlement type studies can be misleading when done in isolation. A complete evaluation of reproductive activity should therefore include histological studies preferably using stereology.

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TITLE OF THESIS DISPERSSION AND REPRODUCTIVE BIOLOGY OF TWO MUSSELS, MYTELLA GOMMERSI AND MYTELLA FRONTALIS (MYSIDAE) IN TRINIDAD.

DEGREE FOR WHICH THESIS IS PRESENTED M. PHIL

DATE OF AWARD OF DEGREE (to be completed by The University)

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