

UNIVERSITY OF THE PHILIPPINES VISAYAS

Miagao, Iloilo, Philippines

**REPRODUCTIVE BIOLOGY OF COCONUT CRAB *Birgus latro*
(LINNAEUS 1767) FROM ANTIQUE, WESTERN VISAYAS, PHILIPPINES**

A Special Problem

Presented to

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ABSTRACT

The coconut crabs *Birgus latro* continue to decline globally and are now considered as an endangered species. In order to prevent further depletion of the species, much effort must be placed on implementing municipal ordinances such as seasonal closures and minimum legal size limits. This study aimed to monitor the breeding cycle of the *Birgus latro* from the islands of Sibolon and Maniquin, Antique, Philippines using macroscopic and microscopic techniques. A minimum of ten crabs were collected every month for six months (Aug. 2015 – Jan. 2016). The crab samples were examined based on the morphological and histological appearance of the gonads. The body weight, thoracic length (TL), cephalothoracic length, carapace width, pleonal expansion, gonad weight and hepatopancreas weight were measured. The gonadosomatic index (GSI), hepatosomatic index (HSI), pleonal expansion index (PEI) and gonad index (GI) were calculated. The results revealed two stages of development for both the male and female *B. latro*. The testicular stages were a) maturing stage – creamy white with the presence of spermatogonia, spermatids and spermatozoa; b) mature stage – creamy white and larger with the presence of the spermatozoa only. The ovarian stages were a) maturing stage – light yellow with the presence of oogonia, endogenous and exogenous vitellogenic oocytes and follicle cells; b) mature stage – reddish brown and larger with the presence of the fully mature oocytes. The smallest sexually mature crab for the male was 28 mm TL and for the female was 32 mm TL. The mature testes were observed all throughout sampling period, while the mature ovaries were only in August, September and October. The occurrence of the male *B. latro* was higher than the females. In males, the GSI and GI were directly proportional to the developmental stages. The HSI was inversely proportional, while the PEI showed no relationship. In females, the GSI, HSI, PEI and GI showed a direct relationship with the stages of development.