

Primeira Sessão: Ecologia e Fisiologia – Pôsteres

Characterization of the oocyte development of the dusky grouper *Epinephelus marginatus* (Teleostei, Serranidae)

Santos, Rayanne A (1); Araújo, Bruno C (2); Mello, Paulo H (3); Moreira, Renata G (4); Honji, Renato M (5)

(1) Universidade São Judas Tadeu, USJT, São Paulo, SP, Brazil. (2) Universidade de Mogi das Cruzes, UMC, Mogi das Cruzes, SP, Brazil. (3) King Abdullah University of Science and Technology, Thuwal, Arábia Saudita. (4) Instituto de Biociências da Universidade de São Paulo, IB/USP, São Paulo, SP, Brazil. (5) Centro de Biologia Marinha da Universidade de São Paulo, CEBIMar/USP, São Sebastião, SP, Brazil.

The teleost reproductive physiology is modulated by several environmental signals, which in turn stimulate the Hypothalamus-Pituitary-Gonads axis to synthesize and secrete the neurohormones and hormones responsible for the reproductive processes. The dusky grouper *Epinephelus marginatus* is a protogynous hermaphrodite species of great economic importance and is listed on the International Union for Conservation of Nature (IUCN) Red List as “vulnerable” species. The interest in breeding of this species in captivity is evident, but the restocking program becomes complex due to the female’s dysfunction showed in captivity, mainly in reach the complete ovarian maturation. Therefore, the aim in this study is evaluate the oocyte development of *E. marginatus* in the natural environment compared to animals in captivity. The animals were caught in the natural environment by artisanal fishermen around Montão de Trigo Island (São Sebastião city, São Paulo). *E. marginatus* born and raised were acquired from Redemar Alevinos (Ilha Bela, São Paulo), and transferred to the Marine Biology Center (CEBIMar/USP). These analyses were performed during the reproductive period (October to January) and outside the reproductive period (April to August). Fish were anesthetized, euthanized, and ovaries were collected; fixed in Bouin’s solution for 24h and submitted to routine histology techniques (staining with haematoxylin and eosin). Histological sections (5 µm) were analysed under a transmitted light microscope, in which the different stages of oocyte development were described. The ovarian phases identified were: oogonia, oogonia nests, perinucleolar oocytes (initial and advanced), alveolar cortical oocytes, vitellogenic oocytes and atretic oocytes. On the other hand, alveolar cortical and vitellogenic oocytes were only observed in the natural environment group during the reproductive period. All this information is important for improving the artificial reproduction of *E. marginatus* through controlled breeding programmers, and these results may support future studies on Brazilian aquaculture of marine teleost species.

Financiamento: Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP); Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq); Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).

O trabalho foi desenvolvido com o uso da infraestrutura do CEBIMar? Sim