

**INSIGHTS ABOUT POPULATION BIOLOGY OF THE YELLOW CRAB
(*JOHNGARTHIA LAGOSTOMA*), AT TRINDADE ISLAND (~20°S, 29°W)**

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Johngarthia lagostoma is a terrestrial crab that occurs only in four oceanic islands in the world: Fernando de Noronha, Rocas Atoll, Ascension and Trindade. Previous studies were focused in Ascension Island where the species suffers high anthropogenic impact. According to the current evaluation of endangered Brazilian crustacean species, *J. lagostoma* is considered as endangered species (EN) and studies in the Brazilian islands were indicated as priority. This study evaluates the population structure and sex ratio of *J. lagostoma* at Trindade Island. Specimens were randomly sampled in February 2019, sexed, size measured (CW, carapace width) and further released in field. Body size (CW) was compared between sexes (W, Mann-Whitney test) and size classes (10mm CW). Number of size cohorts in population was determined with FiSA software and posteriorly compared between sexes. Sex ratio (SR) was established as the ratio between males and the total of animals, analyzed for the total population and in function of size. The proportion between sexes was compared with the natural proportion 1:1 (X^2 , chi-square test). Male specimens (76.5 ± 18.3 mm CW) were larger than females (68.4 ± 18.9 mm CW) ($W=52.41$, $p<0.05$), with three cohorts identified in both sexes. A total of 800 animals (523 males and 277 females) were studied, with predominance of males (1.89:1 = 65%, $X^2=75.6$, $p<0.05$), especially among large size (70-100mm CW), but without difference between sexes in small-size classes. Some differences in population structure were verified in relation to Ascension Island, where the similar proportion between sexes (1:1) was explained by the sampling during reproductive season. Juveniles (CW<60mm) in Trindade Island population (26%) was 37 times higher than in Ascension Island (0.7%), possibly due to the lower human impact in Trindade, or an extreme low recruitment in Ascension. Recent studies showed that Trindade has a unique genetically differentiated population, as well as Ascension. The present results are essential to improve the knowledge about the largest population of *J. lagostoma* in the Atlantic Ocean, close to pristine conditions and genetically isolated.

Financial support: CNPq-Universal (#404224/2016).

Keywords: crustacean, Gecarcinidae, population structure, sex ratio.