

**CHELAR POLYMORPHISM IN INSULAR YELLOW CRAB  
(*Johngarthia lagostoma*), AT TRINDADE ISLAND (~20°S,29°W)**

MARCIO C.A. JOÃO<sup>1</sup>, ISIS F. BATISTELA<sup>2</sup>, ANDREA S. FREIRE<sup>2</sup>,  
MARCELO A.A. PINHEIRO<sup>1</sup>

<sup>1</sup> UNESP, Instituto de Biociências, Campus do Litoral Paulista (IB/CLP), São Vicente (SP), Brasil

<sup>2</sup> UFSC, Departamento de Ecologia e Zoologia, Campus Universitário Trindade, Florianópolis (SC), Brasil  
marcio.camargo96@gmail.com

Generally, brachyuran chelipeds size are associated with sexual selection process. However, chelar format can also vary with gender and maturity, presenting different morphotypes in function of sex and its development phases (juvenile and adult). This study evaluates the chelar polymorphism in *Johngarthia lagostoma*, describing possible variation between sexes and along ontogeny. Crabs were captured at Trindade Island, sexed and measured with precision caliper (0.05mm) – body size (CW, carapace width) and chelae size (PLr and PLI, right and left propodus length, respectively) – and subsequently released. The heterochely ratio (HR=PLr/PLI) was used to differ homochelous crabs (HM:  $0.90 \leq HR \leq 1.10$ ) from heterochelous (HT: left heterochely,  $HR < 0.90$ ; or right heterochely,  $HR > 1.10$ ). The HM and HT proportions were calculated for each sex and in function of size, considering 10mm size classes, with a possible contrast evaluated by chi-square test. A total of 763 specimens (504 males and 259 females) were analyzed, occurring HM morphotype predominance independent of sex, although more evident in females (85.3%;  $X^2=129.30$ ,  $p < 0.05$ ) than males (62.9%;  $X^2=33.53$ ,  $p < 0.05$ ). However, a handedness was not confirmed in HT morphotype (PLr=PLI;  $X^2_{Males}=1.55$  and  $X^2_{Females}=1.68$ , both  $p > 0.05$ ). Chelar morphotypes differ along the ontogeny of each sex, with HM prevalence in females, independent of the size classes. Otherwise, males have a great number of HT specimens since 50mm CW, and an equivalence between HM and HT in larger animals (CW>70mm). The chelar polymorphism in *J. lagostoma* is a specific character of mature individuals, but evaluations about reproductive strategies and agonistic behavior can explain the regulatory sources of this process throughout ontogeny.

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**Keywords:** crustacean, Gecarcinidae, heterochely, oceanic island.