



## REPRODUCTION INTENSITY OF *Pachycheles laevidactylus* ORTMANN, 1892 (ANOMURA: PORCELLANIDAE)

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This study describes the reproductive intensity of the porcelain crab *Pachycheles laevidactylus*, as associated fauna in sandy reefs of the polychaete *Phragmatopoma caudata*. Specimens were monthly collected during one year (July/1991 to May/1992), at Ubatuba, SP, Brazil, sexed and had size measured (CL, carapace length). The frequency of ovigerous females (OF%), adult-based sex ratio (OSR, operational sex ratio: males: females) and the average size of both sexes were compared between seasons to assess possible contrasts. For such, we used the seasonal frequencies of males and females, using a multiple proportions test for both situations. The average size of males and females was attested by a two-way-ANOVA to assess whether the CL varied between seasons, sex and the interaction of these factors. All seasons showed a high frequency of ovigerous females ( $\geq 54\%$  of the total number of females sampled). The frequency of ovigerous females differed between seasons ( $\chi^2 = 5.99$ ,  $p < 0.001$ ), with greater intensity in autumn (93.8%) and winter (86%). In the other seasons, the percentages were below 80% and represent a seasonal-continuous reproduction. The frequency of adult males and females was similar in winter, autumn and summer ( $OSR > 1:0.84$ ,  $\chi^2 \leq 3.04$ ,  $p \geq 0.08$ ), being males more frequent only in spring ( $OSR = 1:0.6$ ,  $\chi^2 = 18.63$ ,  $p < 0.0001$ ). The smallest individuals of both sexes on average were found in spring (males:  $5.2 \pm 1.6$  mm CL; females:  $5.2 \pm 1.4$  mm CL), while the largest individuals occurred in winter (males:  $6.7 \pm 1.6$  mm CL; females:  $6.8 \pm 1.6$  mm CL) ( $F = 52.49$ ,  $p < 0.0001$ ). The ovigerous females of tropical species can spawn in cooler seasons due to their milder temperatures; this allows the juveniles to occur in the warmer periods and favors a greater frequency of molting and availability of food for these planktotrophic animals. This fact is evidenced for *P. laevidactylus* in Ubatuba, Brazil (23° 28' 24" S) with the highest occurrence of ovigerous females in autumn and winter and the presence of the smallest individuals in spring and summer, which indicates indicating reproduction and recruitment in those seasons, respectively.

**Keywords:** Porcellanidae, ovigerous females, Ubatuba.

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