19- Ecology and social structure in the pea crabs *Austinixa aidae* (Righi, 1967) and *A. patagoniensis* (Rathbun, 1918) (Decapoda: Pinnotheridae) in the Southwestern Atlantic

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The genus *Austinixa* Heard & Manning, 1997 (Pinnotheridae) comprises a series of symbiotic species living in galleries of callianassid shrimps. Present study analyses some ecology aspects and social structure of *Austinixa aidae* (Righi, 1967) and *A. patagoniensis* (Rathbun, 1918), two hosts in burrows of *Callichirus major* (Say, 1818) in the Southwestern Atlantic. Specimens of *Austinixa* spp. were collected at Gonzaga beach, in Santos municipality, São Paulo state, Brazil. A total of 376 individuals were collected, with a prevalence of *A. patagoniensis* (n=350) on *A. aidae* (n=26), from within 248 (62%) out of 400 sampled burrows. One (<1%) and four (1.6%) out of the 248 burrows harboring symbiont crabs were inhabited simultaneously by *A. aidae* and *A. patagoniensis* in heterosexual pairs or groups (>9 ind.), respectively, including the presence of only one individual of *A. aida*e in each case. In particular, *A. aidae* lived either solitarily (27.8%) or forming heterosexual pairs (44.4%), with three out of the eight sampled pairs composed by one male and one ovigerous female. On the contrary, *A. patagoniensis* was found living either solitarily (60.6%), forming homosexual (4.3%) and heterosexual (24.7) pairs, or in groups (>9 ind.). A strong ecological competition was detected between both species, in which *A. patagoniensis* is more successful. Also, *A. aidae* presented low frequency of solitary crabs and a balanced sex ratio (monogamous species), while in *A. patagoniensis* occurs a high frequency of solitary individuals and sex ratio skewed towards males (polygamous species). Additional studies on multiple paternities are needed to reveal the mating tactics used by both species.