Early benthic life stages of many crab species are rarely seen due to their small size and cryptic behaviour. Hence, little is generally known about their habitat and ecology (Wolcott 1988). This also holds true for the mangrove crab *Ucides cordatus* (Linnaeus, 1763): while larger juveniles and adults are frequently encountered in the mangrove forest, where they inhabit conspicuous burrows excavated in the mud, small juveniles with a carapace width (CW) < 1 cm had hardly ever been found in former population samplings. Therefore, there is a gap in knowledge concerning the early juvenile stage in the life history of this ecologically and economically important mangrove crab species. Follow-up studies are however needed to fully determine the role of conspecific burrows for juvenile habitat choice and survivorship in *U. cordatus*.

**KEY WORDS.** Caranguejo-uçá; juvenile; recruitment; settlement; size-frequency.
of the hosting owner crab or inside the sediment of the plugs of these burrows. Mean diameter of the burrow openings of the hosting owners was 3.6 ± 0.08 cm (Fig. 1, minimum 1.4 cm, maximum 5.7 cm).

![Figure 1](image1.png)

Figure 1. Size-frequency distribution of opening diameter (mean and standard error) of U. cordatus burrows with conspecific co-inhabitant crabs, n = 137.

All hosting burrows showed fresh tracks of larger crabs, indicating that they were inhabited. In 27 cases, the crab gatherer was successful in capturing the hosting owner crabs from these burrows. A total of 63% of the latter were males and 37% were females. The smallest and largest crabs had a CW of 2.1 cm and 5.7 cm, respectively, and average size was 3.8 ± 0.20 cm (Fig. 2). From the non-hosting burrows (without co-inhabitants, n = 1187) 414 crabs were captured. Their minimum and maximum sizes were 1.1 and 7.0 cm and average CW was 3.6 ± 1.03. Figure 3 compares the size-frequency of burrow owners (n = 441; 27 hosts and 414 non hosts) versus co-inhabiting co-inhabitants, n = 160) and conspecific burrow owner crabs (hosting and non-hosting owners pooled together, n = 441).

![Figure 2-3](image2.png)

Figures 2-3. Size-frequency distribution of U. cordatus: (2) burrow owners (n = 27, mean and standard error of carapace width) hosting conspecific co-inhabitants crabs; (3) co-inhabitants (n = 160) and conspecific burrow owner crabs (hosting and non-hosting owners pooled together, n = 441).

been encountered in the field prior to our study in Canavieiras, state of Bahia in 2004. In 2007-2008 similar observations were made for a U. cordatus population in Cabaracuara, state of Paraná, South-Brazil (Alexandre D. Kassuga, Universidade Federal do Paraná, pers. comm.). Juveniles associated with adults are also known from other species, e.g. Neosarmatium meinterti De Man, 1887 – Emmerson (2001), Neohelice granulata (Dana, 1851) – Luppi et al. (2002) and Cardisoma carnifex (Herbst, 1796) – Vannini et al. (2003). This suggests that recruits co-inhabiting burrows of larger conspecifics may be common in semi-terrestrial crabs.

The number of co-inhabiting U. cordatus recruits found relative to the overall number of examined burrows was relatively low. However, the true number of recruits was probably underestimated, due to the difficulties in locating them in the sediment. The ability to locate these small crabs increases with experience. Thus, future studies using this methodology should include training prior to sampling. Recruits were found inside burrows of both sexes of mostly intermediate-sized crabs. As indicated by the low frequencies in size classes larger than 0.5-1.0 cm, most co-inhabitant crabs seem to leave the conspecific burrow at a relatively small size/early age. Some, however, stay longer, a conclusion based on the fact that we still found crabs with a CW of 2.5 cm inside conspecific burrows.

Recent laboratory experiments showed that chemical cues emitted by conspecific crabs, regardless of gender, enhance the survivorship and induce the settlement of U. cordatus megalopae (Diele & Smith 2007, Smith & Diele 2008). As U. cordatus odour concentrations are likely to be higher inside conspecific burrows than outside, settlement may indeed occur more frequently (or exclusively?) inside these burrows and explain our findings in the field. However, our sampling did not include the sediment outside the burrows. Consequently, we cannot rule out the possibility that recruitment also takes place elsewhere, irrespective of the presence of conspecific burrows. We will conduct further studies in this context to fully understand habitat choice of the settlers and the significance of co-inhabiting conspecific burrows for juvenile survival.
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