

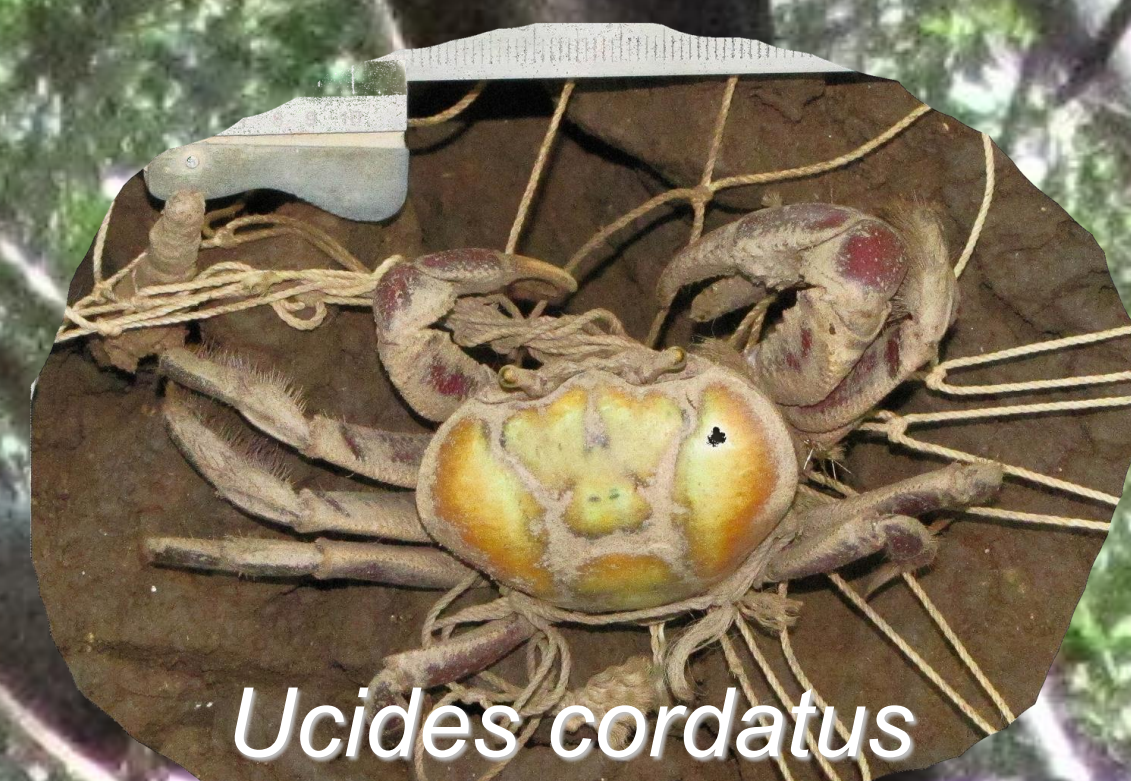
DYNAMICS OF LAND CRABS IN A MANGROVE SYSTEM ON THE EASTERN COAST OF VENEZUELA.

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The purpose of this work

Ucides cordatus and *Cardisoma guanhumi* are two land crabs that can live sympatrically and are commercial exploited in Venezuela. Nevertheless, no information has been given up to date on the dynamics of these species living together. The purpose of this work is to analyze density and body size variations, as well as % of moulting crabs along a period of time in a mangrove system on the eastern coast of Venezuela.



How was it done?

Sampling was undertaken from February to December 2011 in Cumaná-Venezuela (10° 27' 38.8" N; 64° 6' 14.1" W) (Fig. 1), in a mangrove forest composed principally of *Avicennia germinans*. Density from both species was measured by counting the occupied burrows in an area of 120m² every two months. Crab body size was estimated indirectly by measuring burrow diameter. Also, mud-covered burrow entrances were counted, in order to estimate percentage of moulting crabs in both species.



Figure 1: Geographical situation of the sampling site in Venezuela.

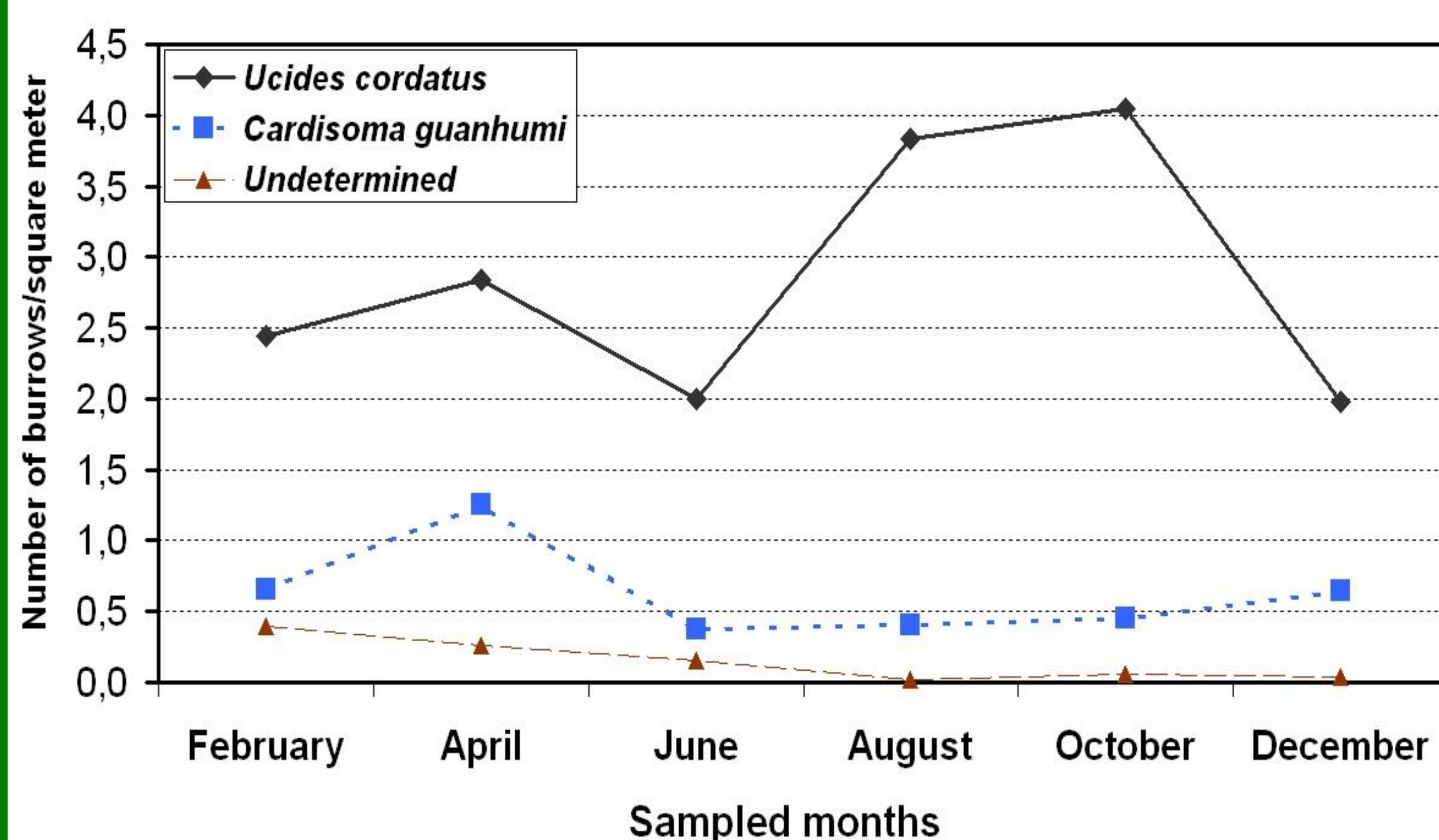


Figure 2: Burrow density variation of *Ucides cordatus* and *Cardisoma guanhumi*.

What was achieved?

Mean density of *Ucides cordatus* was 2.9 ± 0.82 burrows/m² (minima June= 2.0 and December= 2.0; maxima in August= 3.8 and October= 4.0) (Fig. 2). *Cardisoma guanhumi* exhibited a much lower density (mean= 0.6 ± 0.30 burrows/m²; minimum in June= 0.4 and a maximum in April= 1.3) (Fig. 2). Mean burrow diameter (mm) of *U. cordatus* oscillated bimonthly, showing peaks in April (46.1; n=32), August (42.1; n= 80) and December (49.5; n= 50) (Fig. 3). Mud-covered burrows from both crabs were always present along the sampling year, with a mean for *C. guanhumi* of 29.7% (peak in December= 48.7%) and 10.5% for *U. cordatus* (peaks in June= 15, August= 16.1 and October= 13.4) (Fig. 4), but percentage variation on both crab species differed in each of the sampled months.

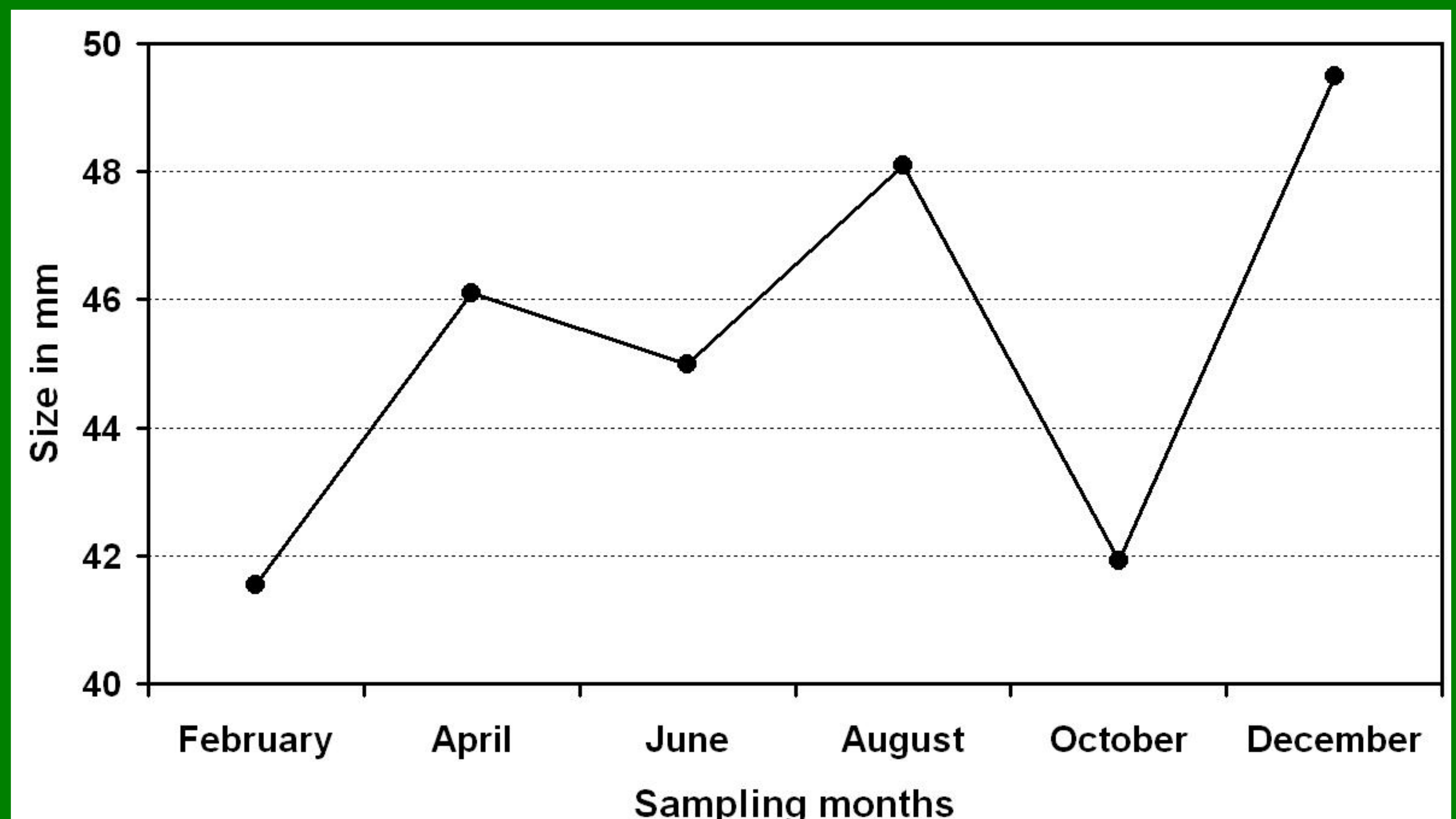


Figure 3: Burrow size variation of *Ucides cordatus*

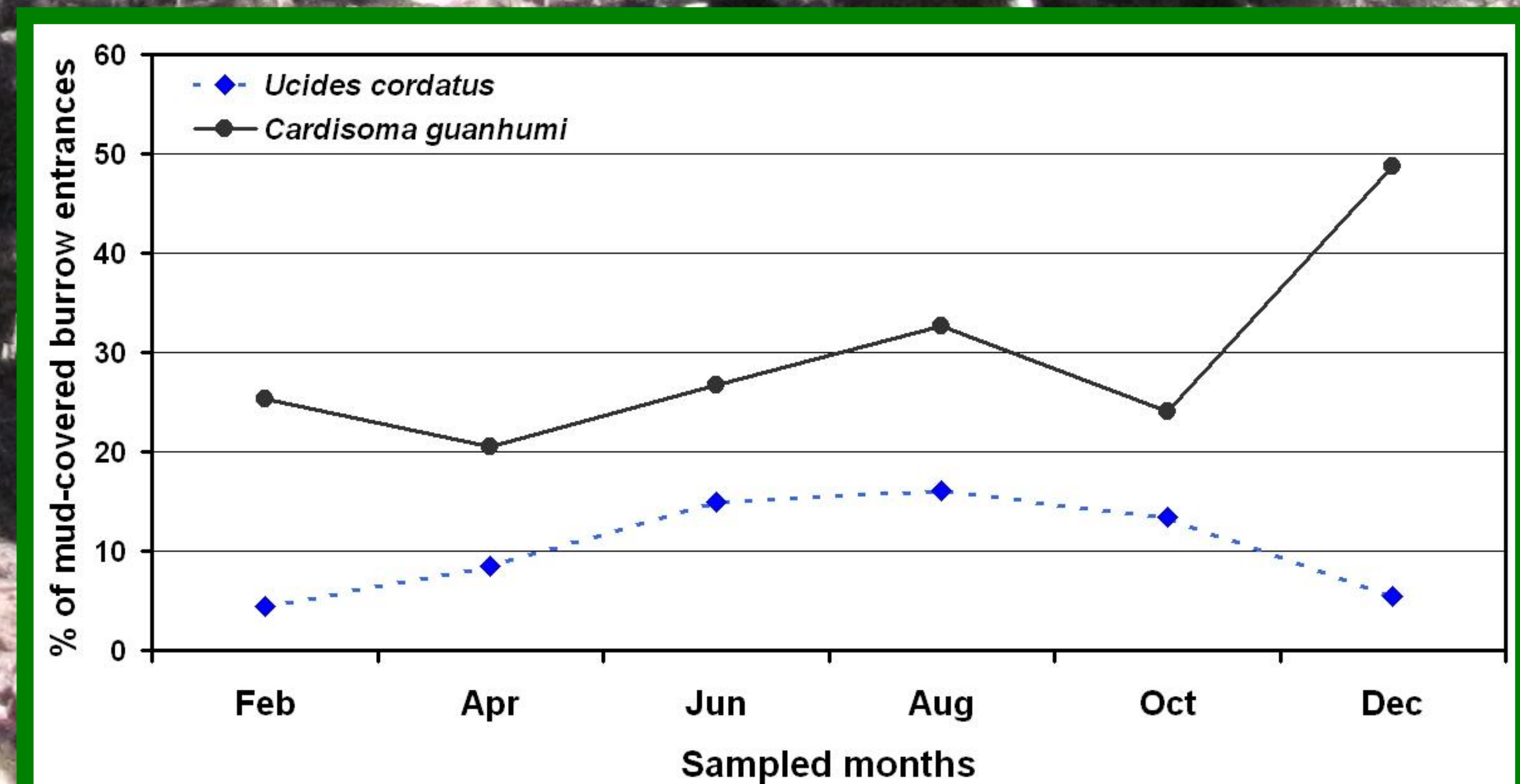


Figure 4: Variation in percentage of mud-covered burrows of *Ucides cordatus* and *Cardisoma guanhumi*.

Considerations

Densities of *U. cordatus* were similar from populations studied in several locations in Brazil, but densities of *C. guanhumi* in Cumaná were much lower than those found in other localities in Venezuela, probably because *C. guanhumi* in these localities was the only land crab present. The high percentage of mud-covered burrows from both species can be an index of high productivity of the mangrove system.