Effect of season and leaf species type on mangrove leaf Consumption by grapsid crabs

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Abstract

The feeding behavior of mangrove grapsid crabs (*Helice leachi* and *Parasesarma pictum*) was investigated by field experiments in Oura Bay mangrove forest during the winter and summer seasons. The experiments were conducted in two sites (upper and lower mangroves) within the mangroves. Mangrove leaves of *Bruguiera gymnorrhiza* and *Kandelia candel* were used. Leaves of different conditions; fresh (mature green leaves), yellow, brown, 2 weeks and 4 weeks decayed leaves were used for the crab feeding experiments. Results indicated that there were significant differences in leaf consumption by crabs between the two mangrove leaf species, seasons and sites. In both seasons and sites, crabs consumed significantly more leaves of *K. candel* than *B. gymnorrhiza*. Seasonal comparison indicated that significantly more leaves were consumed during summer than during winter, while site comparison indicated that significantly more leaves were consumed in the upper intertidal mangrove than in the lower mangroves. Although crabs preferred aged leaves; during the winter season crabs consumed significantly more green leaves of *K. candel* than yellow and brown leaves of *B. gymnorrhiza*. Leaf consumption rate by crabs was also different among the different times in a day. Significantly more leaves were consumed during the morning and evening hours at low tide than during the afternoon tides.