The aim of this study was to determine the influence of temperature increase combined to conditions of light incidence on functional response of Heleobia australis. Experiments were conducted using nine to ten food concentrations for each treatment: 20°C without light; 30°C without light and, 30°C under low light intensity. For each experiment, the functional response type III (sigmoidal) was fitted and equation parameters were determined. Results suggest that, if the sediment temperature increases, H. australis will not have its ingestion rates affected negatively, whilst its feeding behavior seems to be negatively affected by light. Ingestion rates estimated for organic content in the Guanabara Bay were: 0.34 gC ind⁻¹ h⁻¹ at 20°C without light, 1.44 gC ind⁻¹ h⁻¹ at 30°C without light and 0.64 gC ind⁻¹ h⁻¹ at 30°C under light incidence. Higher ingestion rates were estimated at the high temperature, even under light incidence, and temperature seems to have outweighed the light effect. In contrast, if higher carbon content is considered, despite high temperature, the experiment conducted with light incidence showed lower ingestion rates than those from the experiment at 20°C without light. This study provides the first quantification of H. australis ingestion rates and the effects that changes in temperature and light have on its feeding behavior.

**Keywords**

Hydrobiid, ingestion rates, estuarine system, gastropod.