Experimental and Oxygen Isotopic Analysis on Benthic Foraminifera *Rosalina leei* and *Pararotalia nipponica*

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Experiment was conducted to study the combined effect of temperature and salinity on benthic foraminifera *Rosalina leei* and *Pararotalia nipponica*. The specimens of *R. leei* were subjected to temperature range of (25°C, 30°C and 35°C) and salinities (25‰, 30‰ and 35‰) whereas specimens of *P. nipponica* was subjected to a temperature range of(25° C, 27° C and 30° C) and salinities (25‰, 30‰ and 35‰). Maximum diameter was noted at the duration of every eight days in both the specimens. Initially the specimens showed good growth no matter what temperature or salinity they were subjected to but later the growth decreased in the specimens kept at higher temperature and lower salinity. In case of *P. nipponica, m*aximum growth was noticed in the specimens kept at 27°C temperature and 35‰ saline water then of the specimens maintained at 30‰. The specimens maintained at 27°C and 25‰ saline water initially showed growth but later the test started dissolving. The specimens kept at 25°C and 30°C temperature and different salinities showed very less growth as compared to the specimens maintained at 27°C temperature. In case of *Rosalina leei*, it was observed that growth was directly proportional to salinity and inversely proportional to temperature. Maximum growth was reported in the specimens kept at 25°C temperature and 35‰ saline water while the rest of the specimens maintained at 30‰ and 25‰ saline water showed comparatively lesser growth. The specimens kept at 30°C and 35°C temperature and different salinities showed very less growth as compared to the specimens maintained at 25°C temperature. In view of application of isotopic composition of foraminifera in quantitative reconstruction of past climate, at the end of experiment, specimens of both the species grown in controlled environmemtal conditions were subjected to oxygen isotopic analysis. The results indicate that the relationship between stable oxygen isotopic composition of *Pararotalia nipponica* and seawater temperature is better than *Rosalina leei*.