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## Foraminiferal culture experiments: biological response under controlled conditions

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Planktonic and benthic foraminifera can provide a record of some environmental conditions (e.g., water temperature, salinity, food availability, and thermal structure) through their species assemblage and in the chemical and isotopic composition of individual shells. Fossil foraminiferal shells thus reflect paleo-ocean information. A better understanding of the ecology of living planktonic foraminifera and the relationship between foraminifera and oceanographic conditions is important for detailed reconstruction of paleo-environments. Culture experiments have contributed greatly to illuminate this issue. These laboratory studies can investigate quantitatively the relationship between foraminiferal ecology and parameters such as temperature, salinity, light intensity, etc. In the study, we cultured planktonic and benthic foraminifera under controlled conditions and provide biological information. We focused on the relationships between the foraminiferal record and environmental parameters such as dissolved oxygen (DO 10%-100%) and pH (pH 7.7-8.3; NBS scale), and examined the foraminiferal biological response.

Keywords: culture experiment, planktonic foraminifer, larger benthic foraminifer, dissolved oxygen, pH