

Supplementary Material

Methodology for single-cell genetic analysis of planktonic foraminifera for studies of protist diversity and evolution

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1 Influence of region on amplification success rates

Figure 1: Influence of sampling region on the amplification success rates in planktonic foraminifera, leaving out some morphospecies, to test the robustness of this trend. Boxplots showing the median (thick black lines), interquartile range (blue boxes), and $1.5 \times$ interquartile range (whiskers) of the success rates in molecular analysis of planktonic foraminifera. Box width is scaled to the number of observations within the respective level. Lower case letters above boxes indicate groups between which success rates differ significantly. (A) Leaving out *G. ruber* and *O. universa* (the only two species with significantly different success rates) does not show any effect on the measured differences between regions. Regions differ significantly in amplification success (p = .002), with samples from mid-latitudes yielding significantly better results than samples from tropic (p = .003) or polar regions (p = .027), and samples from polar and tropical regions working equally well (p = .134). (B) Using only *G. bulloides* and *N. pachyderma*, to test if the lower success rates in polar regions result from species which are very abundant there. Even then, the differences remain significant at p = .005. Differences between tropics and mid-latitudes (p = .021) and polar regions

and mid-latitudes (p = .021) remain significant, while tropics and polar regions show no significant difference (p = 144).



2 Influence of storage time in buffer on amplification success

Figure 2: Influence of storage time in buffer on DNA amplification success rates in planktonic foraminifera for a time span of 0-150 days storage time. Even for this continuous spectrum of storage times in buffer after isolation from the plankton sample the correlation between storage time and amplification success seems to be positive (slope of regression line significantly different from zero at p < .001).