

Pleistocene–Holocene calcareous nannofossils and foraminifera from the Argentine Continental Margin, southwest Atlantic Ocean

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<https://doi.org/10.58998/jnr3273>

As part of the “Pampa Azul Initiative”, a national program aimed at promoting ocean science research in Argentina, several sediment cores were obtained during the YTEC-GTGM 5 cruise in 2022 aboard the R/V *Austral*. Calcareous nannofossils and foraminiferal assemblages were analyzed in 14 samples recovered from two gravity cores taken on the slope of the Argentine Continental Margin. Both cores contain abundant foraminifera and calcareous nannofossils but also show evident signs of reworking. In the gravity core AU_GEO05_GCA (478 cm; water depth 1865 m), calcareous nannofossil assemblages are characterized by the dominance and high abundance of *Emiliania huxleyi*, followed by *Gephyrocapsa muelleriae*, *Gephyrocapsa oceanica*, and *Gephyrocapsa* spp. small. Foraminiferal assemblages are composed of planktonic species that include *Globoconella inflata* (d’Orbigny, 1839), *Globigerina bulloides* (d’Orbigny, 1826), *Globorotalia truncatulinoides* (d’Orbigny, 1839), and *Globorotalia hirsuta* (d’Orbigny, 1839). They are accompanied by, in a much lower abundance, benthic foraminiferal species that include *Cibicidoides* spp. (Thalmann, 1939), *Lobatula wuellerstorfi* (Schwager, 1866), and *Pullenia bulloides* (d’Orbigny, 1846). Towards the base of the core, a decrease in nannofossil and benthic foraminiferal abundances was recorded, together with an increase in reworked calcareous nannofossils (*Reticulofenestra* spp.), radiolarians, and silicoflagellates. According to the dominance of *Emiliania huxleyi* in all samples, we interpreted a Late Pleistocene–Holocene age (Subzone NN21b).

Gravity core AU_GEO05_GCB (631 cm; water depth 2375 m) was divided into two sections based on the microfossil assemblages. The lower section (570–275 cm) contains a nannofossil assemblage dominated by *G. muelleriae* and *G. oceanica*. The most abundant foraminiferal taxa are *G. inflata* and *G. bulloides*. In the overlying section (187–8 cm), the nannofossil assemblage is composed of *E. huxleyi* with *Gephyrocapsa* spp. as accompanying taxa. With regard to foraminifera, *G. inflata* and *G. bulloides* have the highest abundances, but an increase in *Neogloboquadrina pachyderma* (Ehrenberg, 1861) and *Neogloboquadrina incompta* (Cifelli, 1961) was observed. Although reworked specimens were recognized in all samples, at 275 cm, the highest abundance of *Reticulofenestra* sp. specimens was recovered. Calcareous nannofossil assemblages allowed us to assign a Middle Pleistocene age (Zone NN20) to the lower section, and a Late Pleistocene–Holocene age (Subzone NN21b) to the upper section. Although the cores were collected from near each other at similar depths and having similar thicknesses, it is interesting to highlight the differences in the ages of their lower sections.