

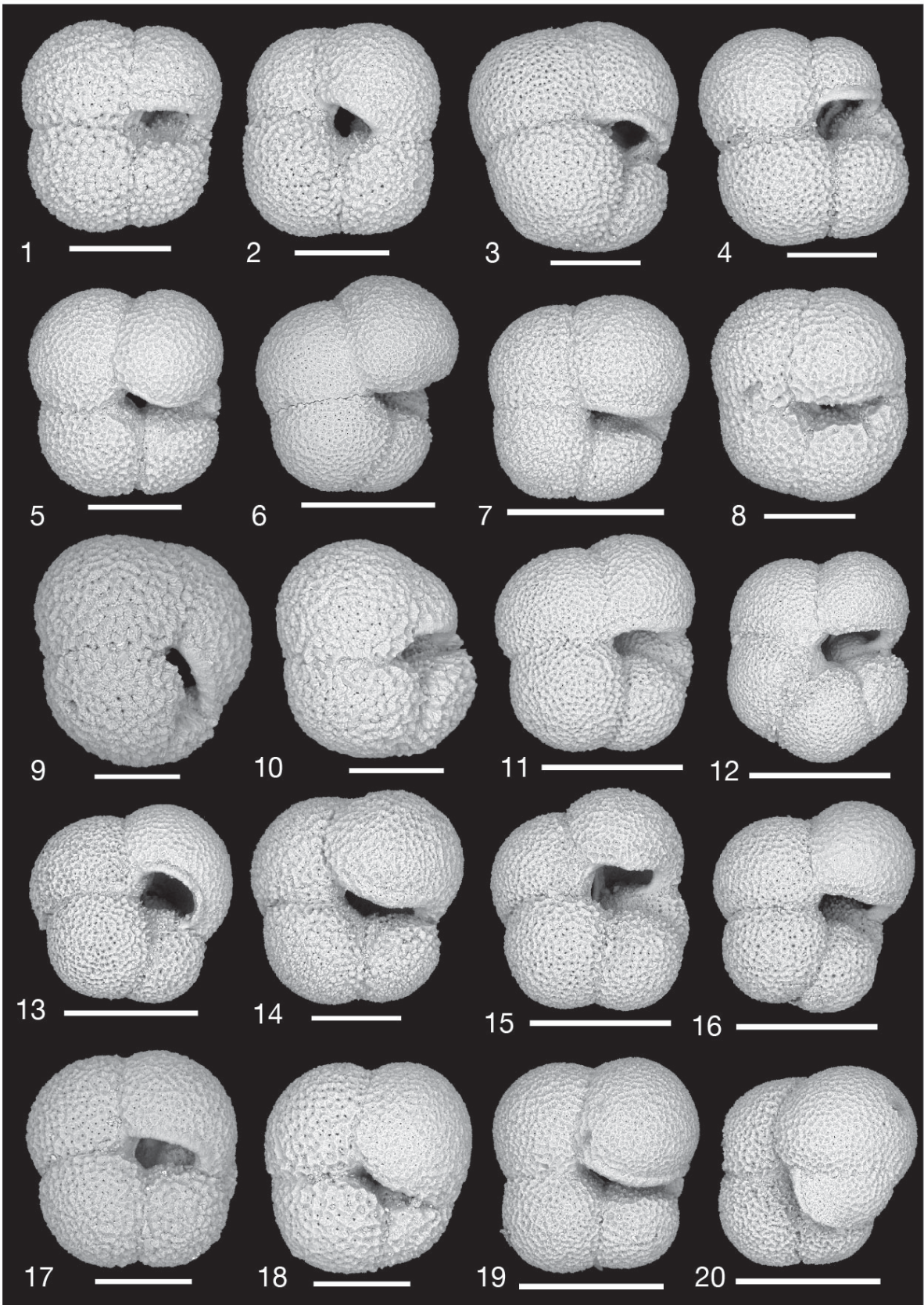
**Supplementary material for**  
**Mega et al. “Subtropical gyre persistence in the Gulf of Cadiz, southern Iberian margin,**  
**interrupted by extremely cold surface water incursions during the Early – Middle**  
**Pleistocene Transition”**

**Supplementary Table 1** Province assemblage means for the different Marine Isotopic Stages (MIS) at IODP Site U1387

<b>MIS</b>	<b>% Tropical+Subtropical Species</b>	<b>% Transitional Species</b>	<b>% Polar+Subpolar Species</b>
18	12.78	57.74	29.48
19	20.97	45.75	32.84
20	24.92	46.84	28.25
21	26.93	38.06	34.92
22	19.72	30.33	49.90
23	23.56	31.28	45.09
24	16.25	43.04	40.67
25	27.04	41.13	31.83
26	19.73	41.80	38.47
27	21.42	47.15	31.44
28	16.92	35.03	48.05

**Supplementary figure 1:** SEM images of *N. pachyderma* from IODP Site U1387

1-2: U1387B-21X-1 52-54 cm, scale bar 100µm, 790.25 ka; 3-5: U1387B-22X-3 52.5-54.5 cm; scale bar 100µm; 863.92 ka; 6: U1387B-22X-3 78-80 cm, scale bar 200µm, 866.01 ka; 7-10: U1287B-22X-3 102-104 cm, scale bar 100µm, 867.92 ka; 11-12: U1387B-22X-3 120-122 cm, scale bar 200µm, 869.36 ka; 13: U1387A-23X-2 88-90 cm, scale bar 200µm, 890.80 ka; 14: U1387B-24X-CC 21-23 cm, scale bar 100µm, 958.41 ka; 15-18: U1387B-24X-CC 26-28 cm; 15, 16 scale bar 200µm, 17, 18 scale bar 100 µm, 958.54 ka; 19-20: U1387B-25X-6 125-127 cm, scale bar 200µm, 1001.26 ka



## Supplementary Figure 2: Probstack related age model and sedimentation rates

A:  $\delta^{18}\text{O}$  (‰) *G. bulloides* from IODP Site U1387 for the Probstack related age model (red) and the LR04 age model (black). Marine Isotopic Stages and Substages are indicated numbers and letters. B:  $\delta^{18}\text{O}$  (‰) *G. bulloides* from IODP Site U1385 on its Probstack related age model (Hodell et al., 2023b). Arrows between A and B indicate the tuning points between the two records, which remain at the same stratigraphic positions as for the tuning to the U1385 LR04 related age model. C: Sedimentation rates (cm/kyr) for IODP Site U1387 related to Probstack (red) and LR04 (black).

