Supplementary Information

Title: Late Cenozoic cooling restructured global marine plankton communities

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Data availability

All data was sourced from the Triton dataset [7]: https://doi.org/10.1038/s41597-021-00942-7

Code availability

The code used to perform all analyses is available at:

https://github.com/anshuman21111/foram-networks
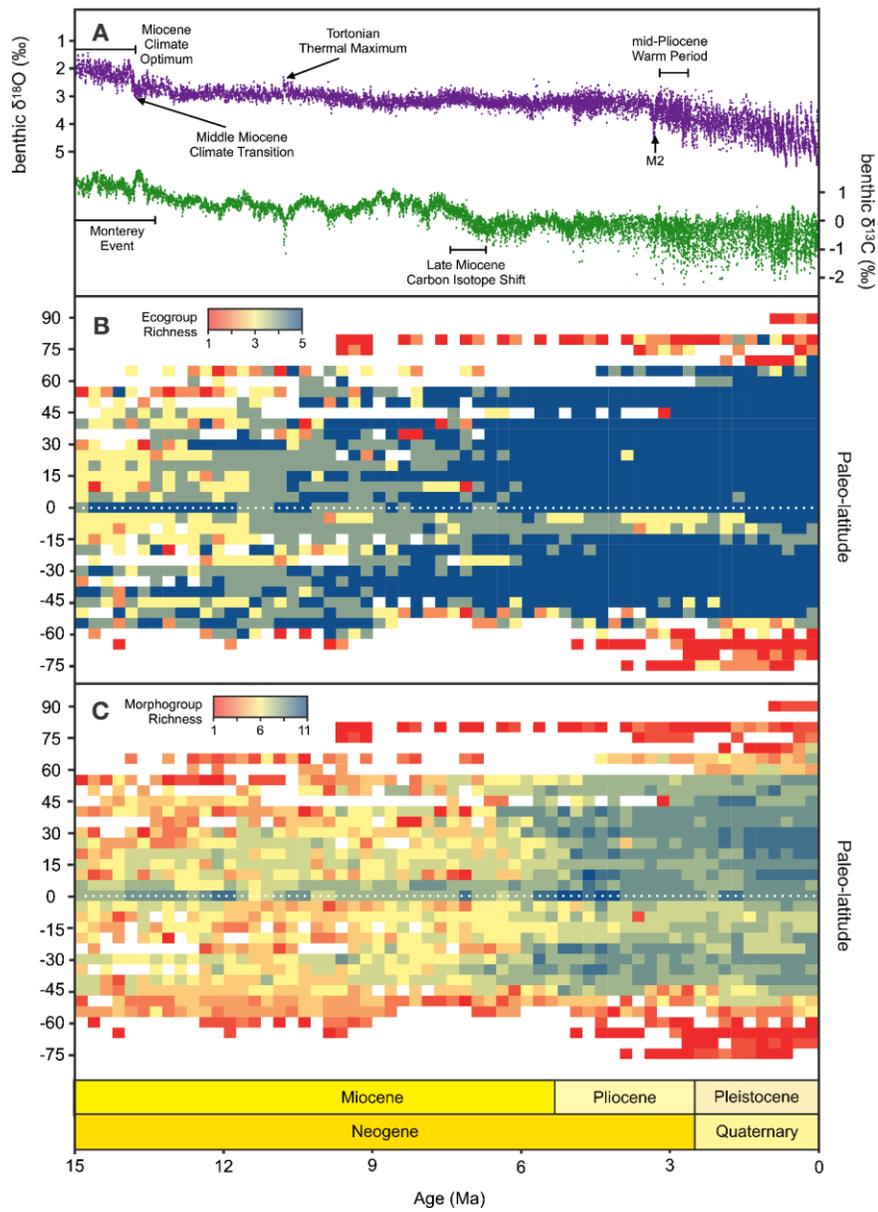
Figure S1. Late Cenozoic climate and major climatic events, and functional group richness. **(A)** Benthic d^{18}O and d^{13}C from Westerhold et al., [48], **(B)** Ecogroup Richness, **(C)** Morphogroup Richness.
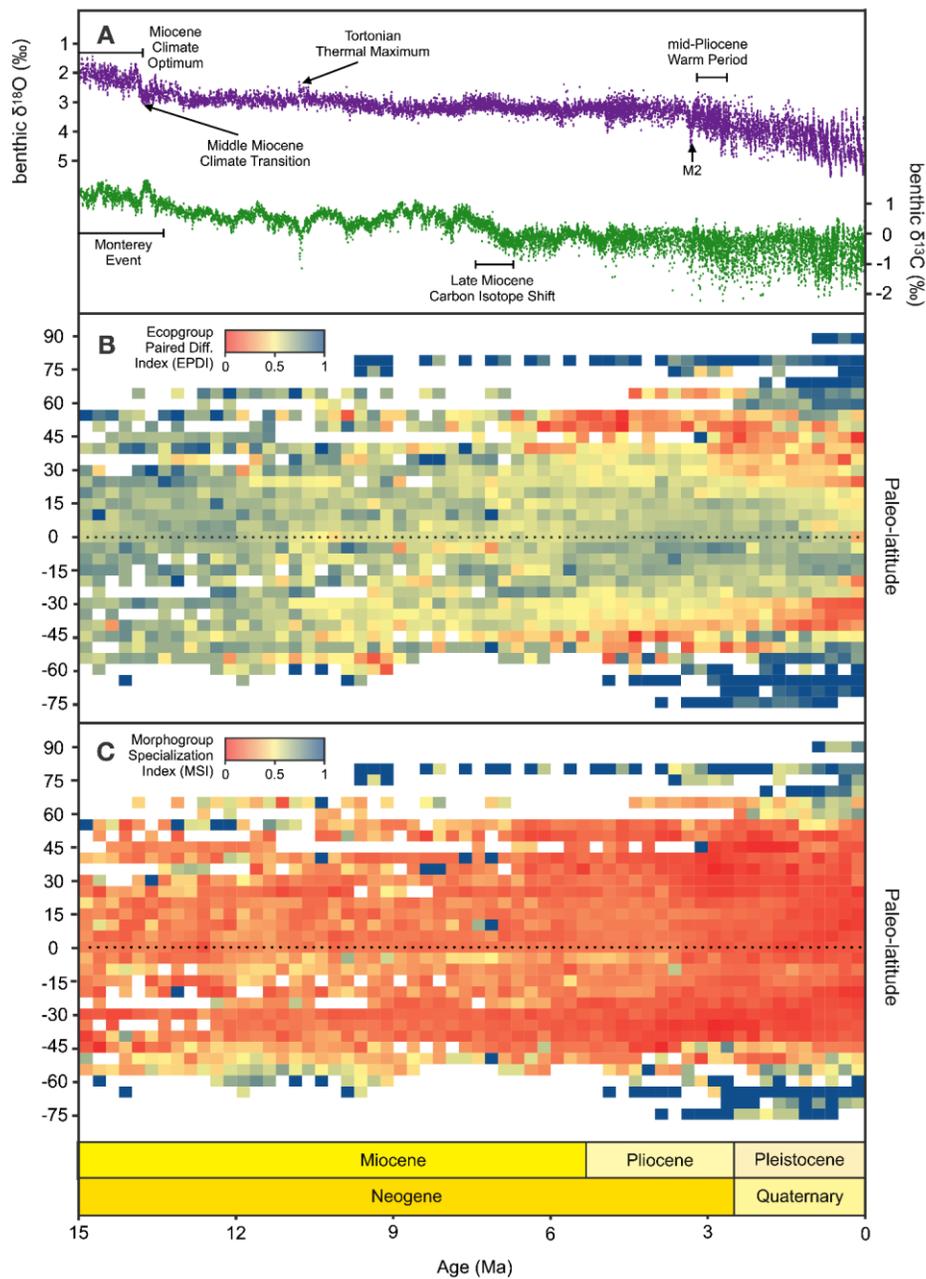
Figure S2. Late Cenozoic climate and major climatic events, and specialization indices. **(A)** Benthic d^{18}O and d^{13}C from Westerhold et al., [48], **(B)** Ecogroup Paired difference index (EPDI), **(C)** Morphogroup Specialization Index (MSI).
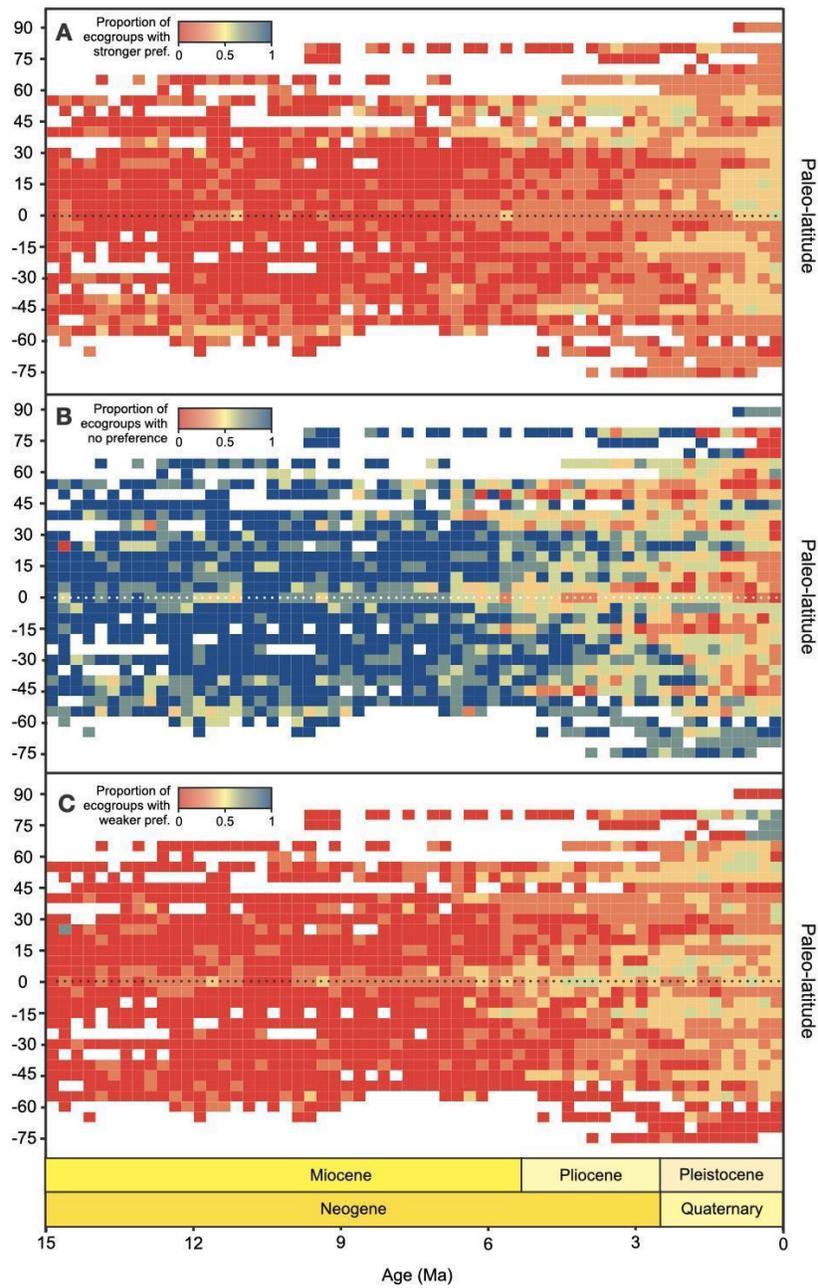
Figure S3. Late Cenozoic null models and ecogroups preferences. The plot shows the proportion of ecogroups in a given bin that exhibited **(A)** stronger, **(B)** weaker and **(C)** no preference as compared to their respective null models. These results indicate that the distribution of ecogroups was far from random chance, especially in the last 8 million years.
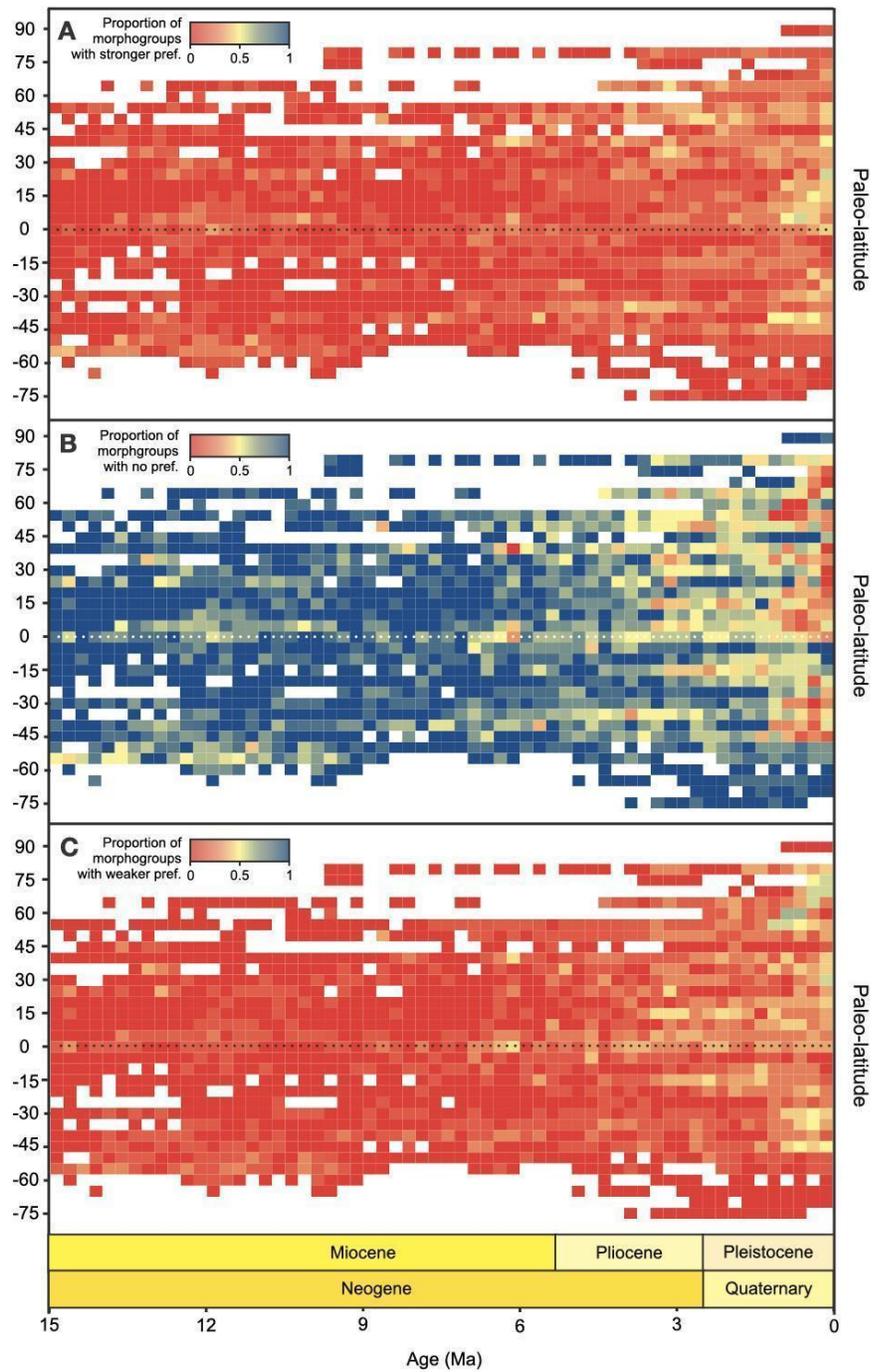
Figure S4. Late Cenozoic null models and morphogroup preferences. The plot shows the proportion of morphogroups in a given bin that were **(A)** stronger, **(B)** weaker and **(C)** no preference as compared to their respective null models. These results indicate that the distribution of morphogroups was far from random chance, especially in the last 8 million years.
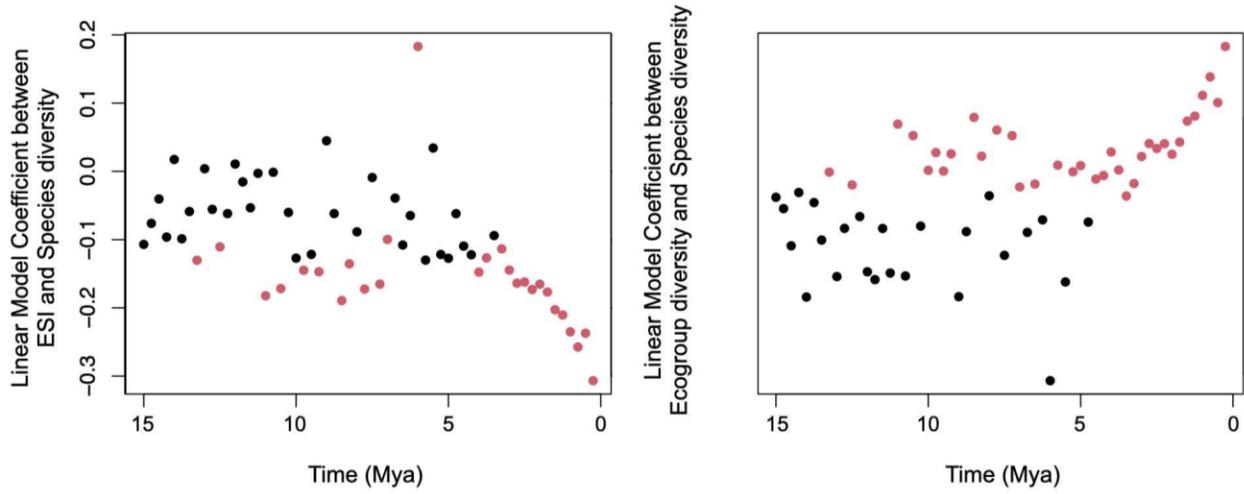
Figure S5. Coefficients (slopes) of linear model between **(A)** ESI and Species diversity, and **(B)** Ecogroup diversity and Species diversity. Red color indicates the slopes with significant p-values (p<0.05) after multiple correlation correction (Bonferroni).
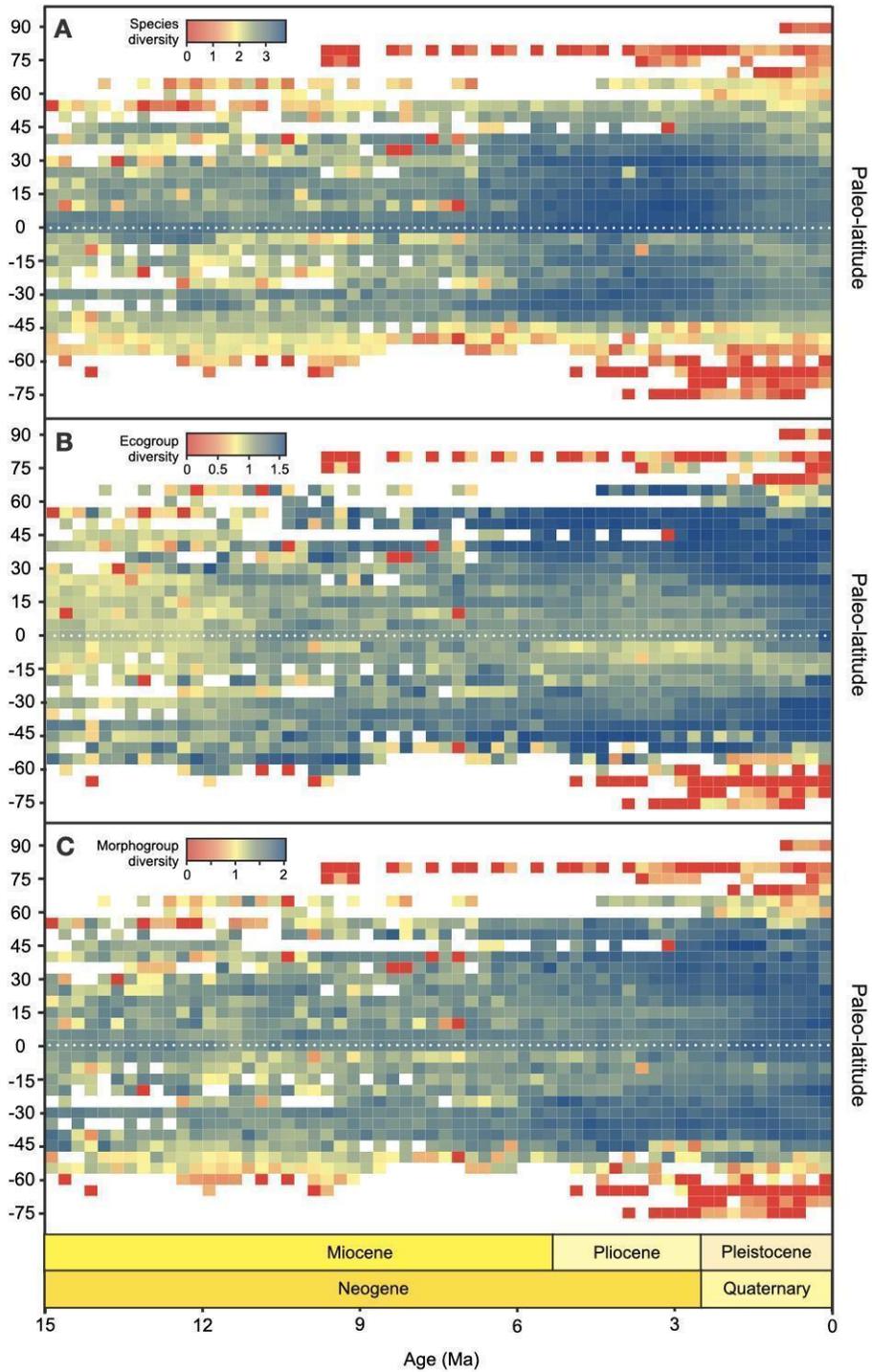
Figure S6. Late Cenozoic species and functional group Shannon diversity. The disjunction between patterns in the species and functional diversity plots necessitates exploration of functional aspects of diversity and how it relates to environmental change.