Fig. S1: PCA loadings for Hole U1575A.

Fig. S2: PCA loadings for Hole U1576A.

Table S1: Calcareous nannofossil and planktonic foraminiferal taxa relative abundances (%) for Hole U1575A biostratigraphy analyses. The abundances for planktonic foraminifera were indicated as follows: A (abundant) = taxon represents >20-50% of the analyzed sample; C (common) = taxon constitutes >5-20% of the washed sample; F (few) = species represent 1-5% of the analyzed sample; R (rare) = taxon constitutes <1% of the washed sample; \* = reworked specimens. Species abundances for calcareous nannofossils were estimated as follows: D (dominant) = >100 specimens per field of view; A (abundant) = >10-100 individuals per field of view; C (common) = >1-10 specimens per field of view; F (few) = 1 specimen per 10 fields of view; R (rare) = <1 specimen per 10 fields of view; \* = reworked specimens.

Table S2: Calcareous nannofossil and planktonic foraminiferal taxa relative abundances (%) for Hole U1576A biostratigraphy analyses. The abundances for planktonic foraminifera were indicated as follows: A (abundant) = taxon represents >20-50% of the analyzed sample; C (common) = taxon constitutes >5-20% of the washed sample; F (few) = species represent 1-5% of the analyzed sample; R (rare) = taxon constitutes <1% of the washed sample; \* = reworked specimens. Species abundances for calcareous nannofossils were estimated as follows: D (dominant) = >100 specimens per field of view; A (abundant) = >10-100 individuals per field of view; C (common) = >1-10 specimens per field of view; F (few) = 1 specimen per 10 fields of view; R (rare) = <1 specimen per 10 fields of view; \* = reworked specimens.

Table S3: Complete dataset exhibiting planktonic foraminifera relative abundances as well as univariate statistical methods (minimum, maximum, average and standard deviation) for each species in Hole U1575A. In addition, average abundances of the species for each cluster and the results of the SIMPER analyses are indicated for each sample. The file also includes the calculations for the *Globorotalia truncatulinoides* coiling ratio as well as for the Agulhas Leakage Efficiency (ALE) Index.

Table S4: Complete dataset exhibiting planktonic foraminifera relative abundances as well as univariate statistical methods (minimum, maximum, average and standard deviation) for each species in Hole U1576A. Additionally, average abundances of the species for each cluster and the results of the SIMPER analyses are shown for each sample. The file also presents the calculations for the *Globorotalia truncatulinoides* coiling ratio and for the Agulhas Leakage Efficiency (ALE) Index.

Table S5: Complete dataset showing the values of *G*. *menardii*, *G*. *crassaformis*, the ALE Index and SSTs from previous studies used for the comparison with data recorded in this study.