

**Supplementary material**

Figure S1 – Pollen diagrams showing the percentage of temperate and Mediterranean taxa for each record from the long marine core ODP 976: A) MIS 1 (Combourieu-Nebout *et al.*, 2009); B) MIS 5 (Combourieu-Nebout *et al.*, 2002; Masson-Delmotte *et al.*, 2005); C) MIS 11 (Sassoon *et al.*, 2023); D) MIS 19 (Toti *et al.*, 2020).

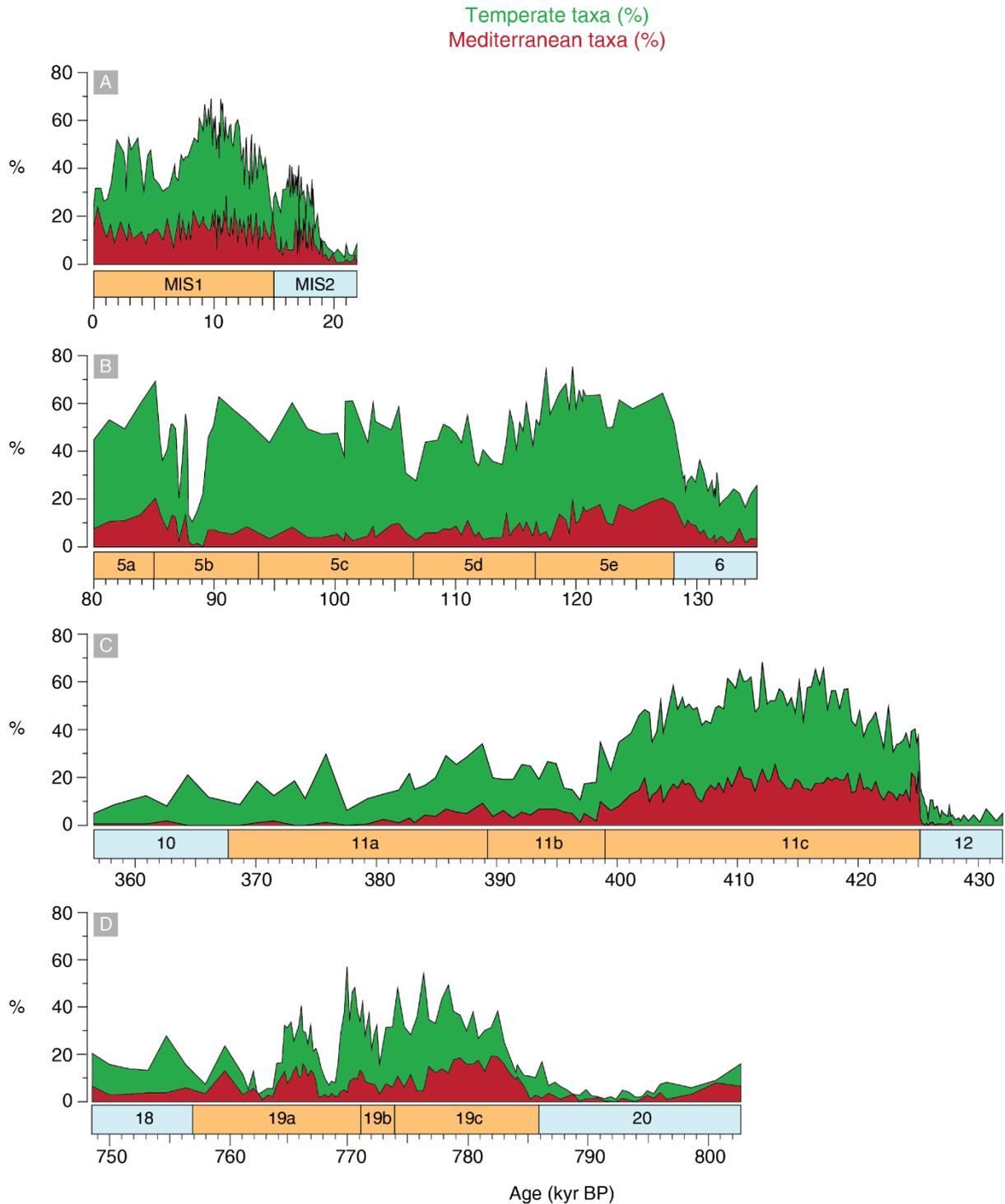


Figure S2 – Quantitative climate reconstructions from pollen analyses obtained for MIS 19 using the BRT (red: dotted line corresponds to error), MAT (blue) and WAPLS (green) methods. Present-day values for temperature (TANN, Tsum and Twin) and precipitation (PANN, Psum and Pwin) are represented by red dots.

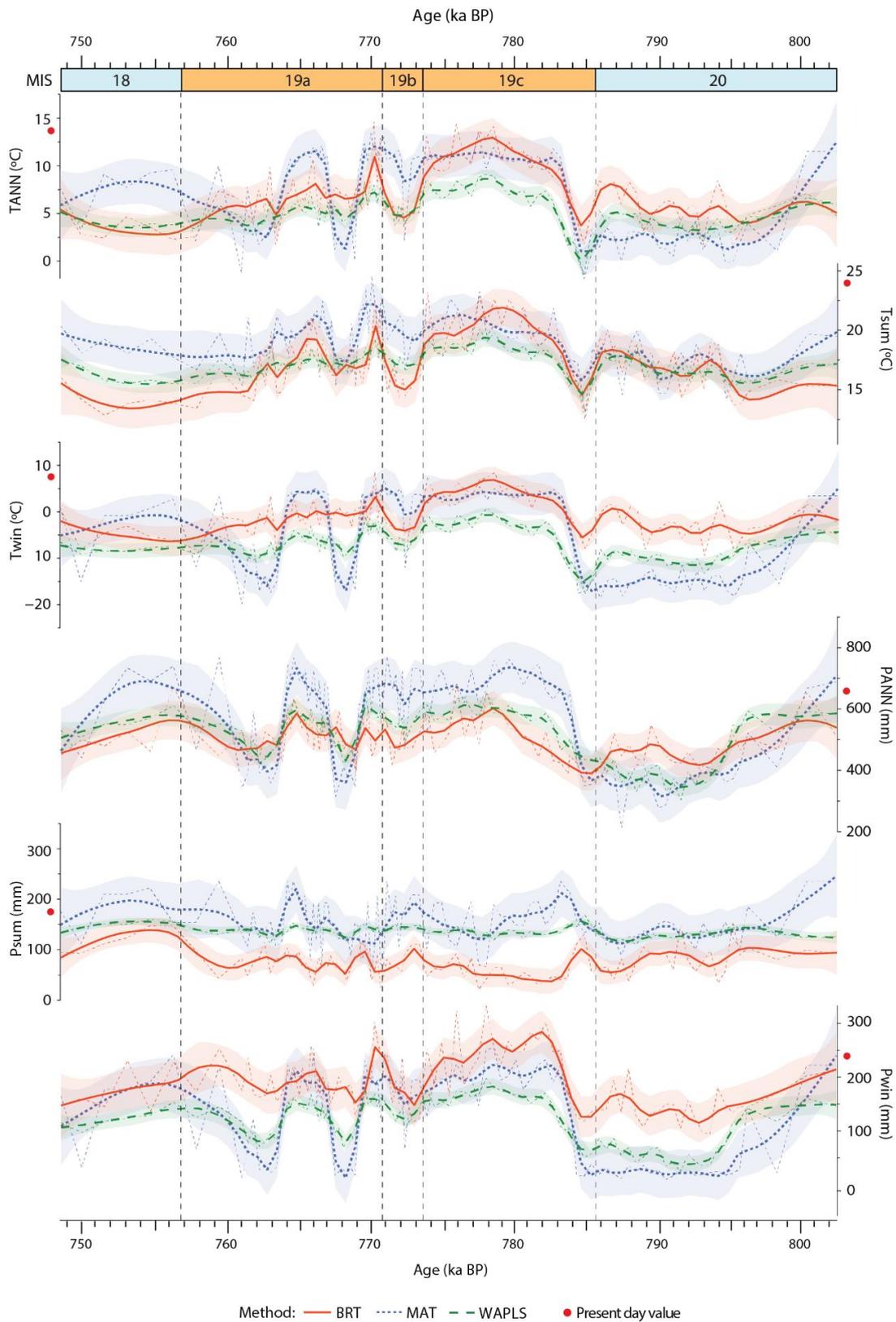


Figure S3 – Quantitative climate reconstructions from pollen analyses obtained for MIS 11 using the BRT (red: dotted line corresponds to error), MAT (blue) and WAPLS (green) methods. Present-day values for temperature (TANN, Tsum and Twin) and precipitation (PANN, Psum and Pwin) are represented by red dots.

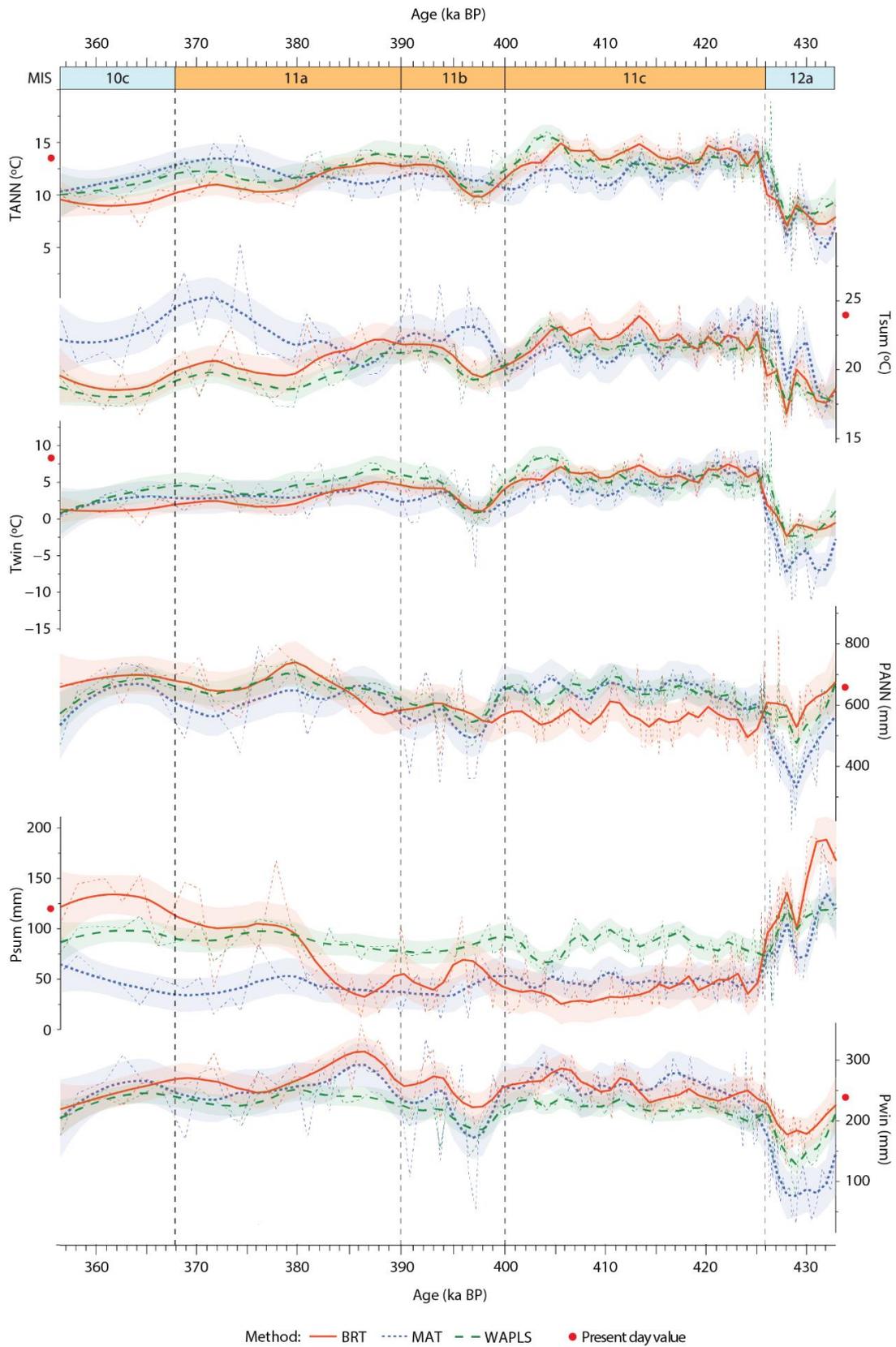


Figure S4 – Quantitative climate reconstructions from pollen analyses obtained for MIS 5 using the BRT (red: dotted line corresponds to error), MAT (blue) and WAPLS (green) methods. Present-day values for temperature (TANN, Tsum and Twin) and precipitation (PANN, Psum and Pwin) are represented by red dots.

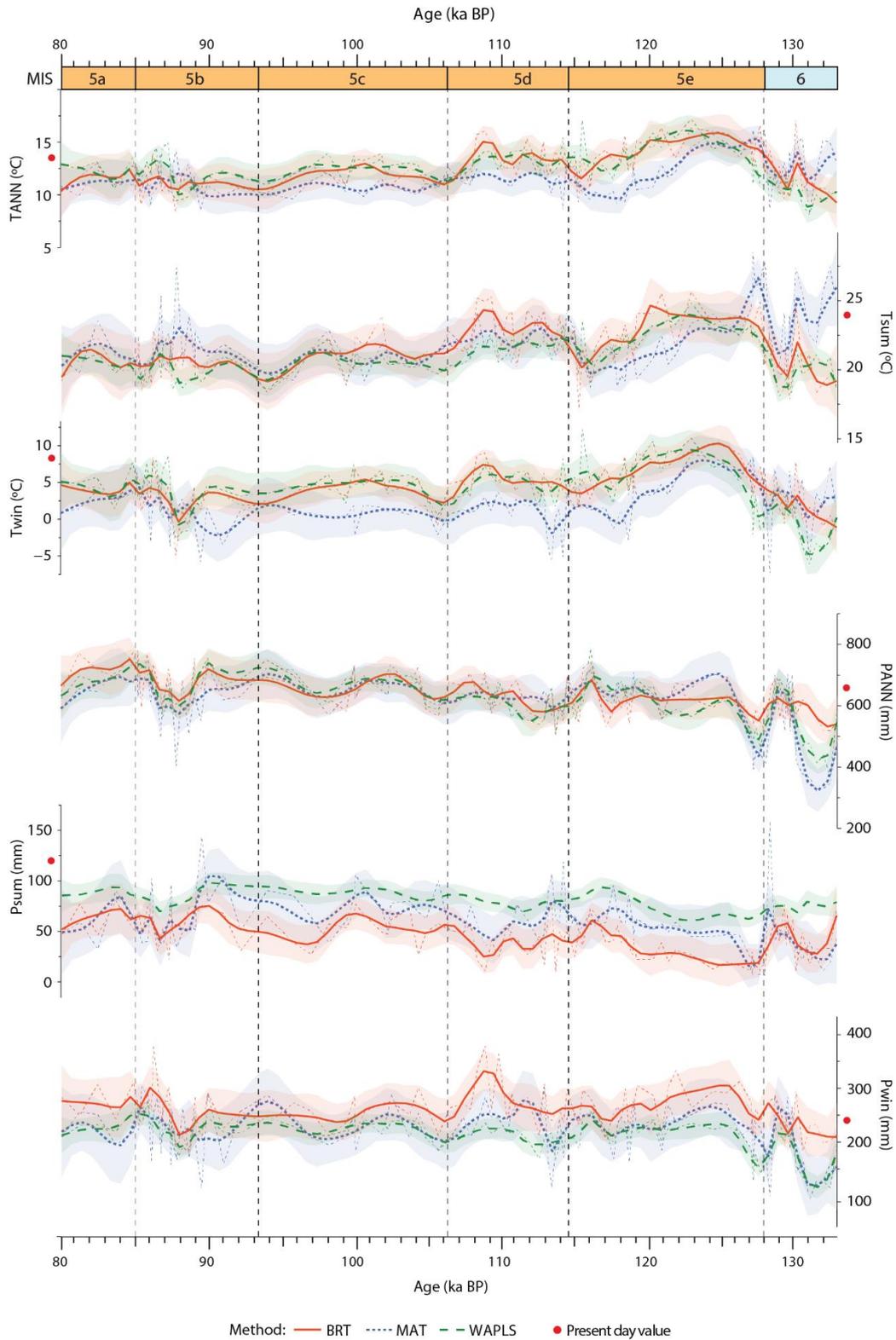


Figure S5 – Quantitative climate reconstructions from pollen analyses obtained for MIS 19 using the BRT (red: dotted line corresponds to error), MAT (blue) and WAPLS (green) methods. Present-day values for temperature (TANN, Tsum and Twin) and precipitation (PANN, Psum and Pwin) are represented by red dots.

