We greatly appreciate the Editor's thorough review and constructive suggestions. Here we provide the point-by-point response to all the comments:

Abstract: Your abstract should be more informative; a comparison between the chironomids -based and the pollen-based climate reconstruction is lacking; I would like you add more details on the key results obtained.

The comparison between chironomid-based and pollen-based climate reconstructions was added including MTWA values. Moreover, other elements from the latter reconstruction such as winter temperatures (MTCO) and annual precipitation sum (PANN) are now briefly presented in the revised abstract.

Introduction

Line 63: "Hence, knowledge about climatic conditions at this time is mainly derived from pollen data", could you be more precise: "is mainly derived from Southern Europe pollen data".

This was corrected accordingly.

Line 66: "and marine core from ODP site 976 in the Alboran Sea (Sassoon et al., 2023, 2025)". Could you replace by : "and marine cores from ODP site 976 in the Alboran Sea (Sassoon et al., 2023, 2025) or from the North Atlantic off the Iberian coast (Oliveira et al., 2016)".

This was corrected accordingly.

Line 100: For clarity, could you move the sentence "Holsteinian Interglacial was followed by gradual cooling period (MIS 11b) which resulted in annual temperature decline and forest 100 contractions (Tzedakis et al., 2006; Kousis et al., 2018; Hrynowiecka et al., 2019; Sassoon et al., 2025)." to the line 111, just before "MIS 11b brought the AP percentages"?

This was corrected accordingly.

Line 115: Could you move the sentences: "The warm phase of the Holsteinian Interglacial was also confirmed by oxygen isotope analyses on endogenic lake carbonates 115 (Nitychoruk et al., 2005) and snail shells (Szymanek, 2018). These showed significant changes in climatic conditions 116 throughout the Holsteinian Interglacial, during which, continental and maritime influences intertwined in Central Europe. 117 Continental influences resulted in a shortened vegetation period with long winters, whilst the opposite occurred under maritime 118 influence, i.e. the vegetation period was significantly longer, temperatures were milder and precipitation rates were higher, 119 also reflected by the appearance of stenothermal plant species (Nitychoruk et al., 2005)" at the end of the line 110.

This was corrected accordingly.

Line 122: Replace "based on chironomid and pollen analyses." by ""based on chironom tym razem id and pollen analyses of the Krępa core (southeastern Poland)".

This was corrected accordingly.

Line 124: Replace "section of the core" by "section of the Krępa core".

This was corrected accordingly.

Study site and methods

Line 129: Please replace "2.1 Study area " by "2.1 Study area, coring and lithology"; please add few sentences on the dating (lack of age model).

Respective changes were made in the section title. The paragraph concerning lack of depth-age model was added and reads as follows:

"Due to the inability to apply radiocarbon dating (e.g. 14C) and the challenges in developing an age–depth model, the direct dating of Holstein interglacial sediments is highly limited. In this context, palynology plays a key role, as pollen analysis enables biostratigraphic comparison between sites. Vegetation changes that occurred during the Holstein interglacial show a relatively uniform pattern across Central Europe from boreal phases to the development of thermophilus deciduous forests (Nitychoruk et al., 2005; Koutsodendris et al., 2010; Hrynowiecka and Winter, 2016) and cooling period (MIS 11b) thereafter (Hrynowiecka et al., 2019). Thanks to the

repeatability of this vegetational succession, it is possible to correlate sediment profiles from different locations and assign them to a common stratigraphic framework. Thus, palynology becomes the primary tool for reconstructing and comparing environmental records from this period, despite the lack of precise absolute dating."

Line 194: Replace" transfer function" by "regression"; RMSEP: give the name not just the acronym.

This was corrected accordingly.

Line 219: "All reconstructed climatic factors were based on modern data sourced from the Northern Hemisphere database compiled by Herzschuh et al. (2023a, b)". You can delete this sentence as the same sentence is written line 232 (better to keep the second one): "Modern pollen data used in the reconstructions were sourced from the Northern Hemisphere database 232 compiled by Herzschuh et al. (2023a, b)".

The first sentence was deleted as suggested.

Results and interpretation: just "Results", keep the interpretation for the discussion.

This was corrected accordingly.

Lines 247-275: "Corynocera ambigua is a species often described as cold-adapted oligotrophic (Fjellberg, 1972; Pinder and Reiss, 1983; Walker and Mathewes, 1988; Brooks et al., 2007; Luoto et al., 2008; van Asch et al., 2012), inhabiting shallow lakes in arctic and subarctic regions, … Both Chironomus anthracinus-type and Corynocera ambigua are found in stratified lakes (e.g., Saether, 1979; Heiri, 2004). As we observe in our record, both species are relatively resistant to unfavourable environmental conditions, so possess a wide range of conditions in which they can occur." The same sentences (line 247-275) appear also in the discussion part: better to remove it to the results part and keep it in the discussion.

According to the suggestion, these sentences was removed from Results section.

Line 294: “Figure 2: Stratigraphic diagram of the Chironomidae assemblages. Caption: Chironomidae species are presented as counted numbers of specimens.” Some details are lacking, please add in your caption : Chironomidae counts before merging; simplified pollen diagram at the right and for the pollen diagram caption, see figure 3; LPAZ=...

This fragment was edited as follows:

“Figure 2: Stratigraphic diagram of the Chironomidae assemblages with simplified pollen diagram (left) and Local Pollen Assemblages Zones (LPAZ). Caption: Chironomidae species are presented as counted numbers of specimens before merging.”

Line 300: “In this period, average July temperatures still ranged between 17 and 19 °C before rapidly dropping to about 16 300 °C and increasing again to 18-20 °C in LPAZ KR-12b.” just refers to the figure 4

Respective reference was added.

Table 1: the LPAZ in function of the different depths does not correspond to the LPAZ of the figure 2; please check and correct it in the table.

Table 1 was corrected accordingly.

Line 324: Please replace “3.3 Vegetation changes during the Early Saalian Glaciation at Krępa site” by “3.3 Vegetation changes during the Early Saalian Glaciation at Krępa site and comparison with Chironomids assemblages changes”.

This was corrected accordingly.

Line 331: “Corynocera ambigua » in italic.

This was corrected accordingly.

Line 357 : "The two pollen-based... WA-PLS" please delete, the same sentence is written line 350, 351.

This sentence was deleted in the revised version of the manuscript.

Discussion

Lines 533-534: Replace by "Contrary to the chironomids-based temperature reconstruction, the pollen-based reconstructions using MAT and WAPLS methods provide continuous temperature and precipitation records."

This was corrected accordingly.

Line 537: "This is in agreement with the observed dominance of Pinus forests with some admixed Picea during this phase, reflecting more humid but not necessarily warmer conditions (Caudullo et al., 2016)." If your sentence refers to the Krespa pollen sequence, delete this sentence as it's a circular reasoning.

This sentence was deleted aaccording to the suggestion.

Line 562: replace "Tann" by "TANN", check also in other parts of the discussion (Pann also).

The manuscript was inspected again and mistakes of this sort were corrected.

Line 584: ODP 976 not 986

This was corrected accordingly.

Conclusion

Line 618: "These climatic trends coincide with marked vegetation changes, including forest retreat and a rise in herbaceous taxa during colder phases" please avoid: circular reasoning as the climate reconstruction is based on the same pollen sequence.

This sentence was removed from revised version of the manuscript.