Quantitative reconstruction of past monsoon precipitation based on tetraether membrane lipids in Chinese loess

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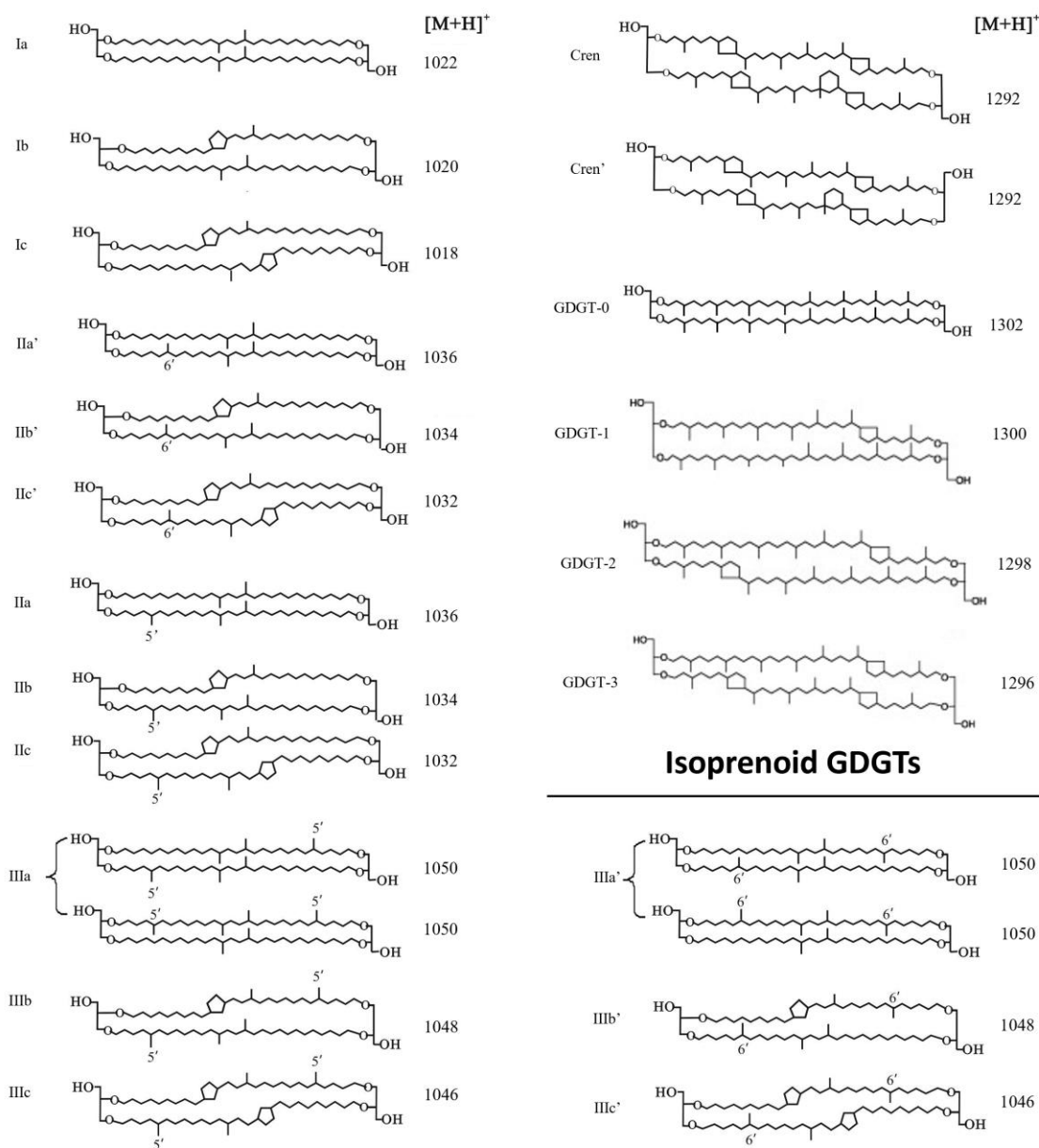
Supplementary figures

Isoprenoid GDGTs

Branched GDGTs

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10 **Figure S1.** Structures of branched (left and bottom right) and isoprenoid (top right) GDGTs.
11 The 6-methyl brGDGTs are represented by prime (′). The structures of penta- and
12 hexamethylated brGDGTs with cyclopentane moiety(ies) IIb′, IIc′, IIIb′, IIIc′ are tentative.

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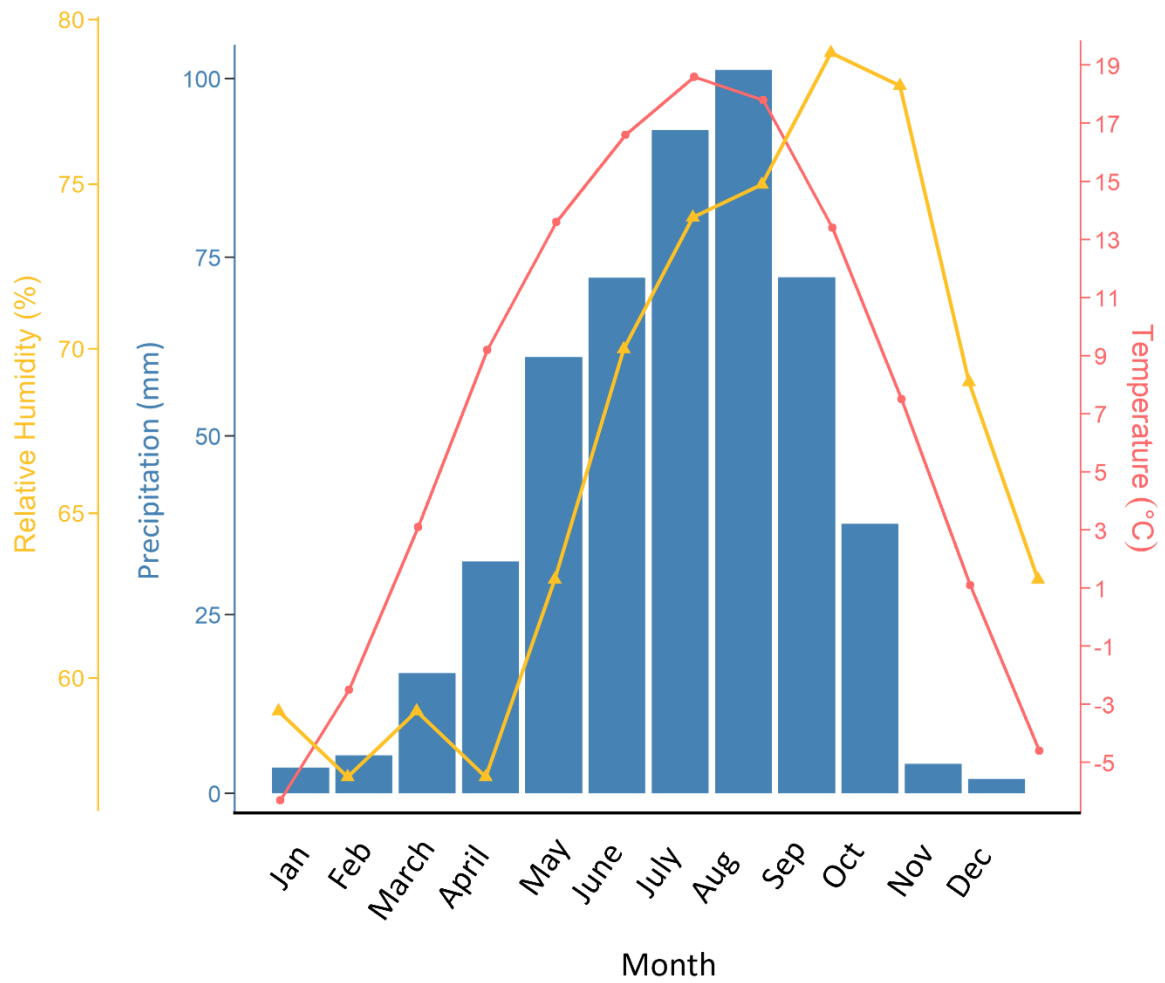
Figure S2. Monthly air temperature, precipitation, and relative humidity (RH) at Linxia city between 1999–2017, close to the Yuanbao section on the CLP. Data obtained from the China Meteorological Data Service Center, http://data.cma.cn/en.

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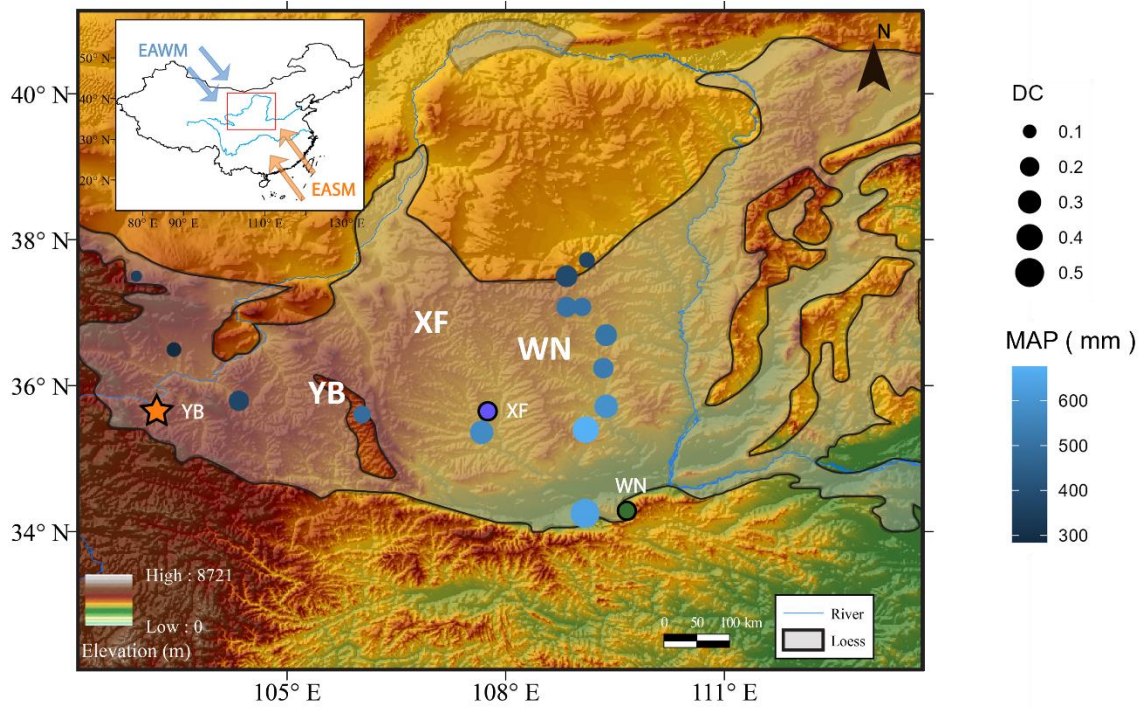
Figure S3. Locations of surface soils from the Chinese Loess Plateau used for Mean Annual
Precipitation (MAP) calibration. The blue gradient and different sizes represent changes in
MAP and DC, respectively. The orange star indicates the section for this study, Yuanbao
(YB). Loess-paleosol sequences mentioned in the text are also indicated (Weinan, WN in
green circle, and Xifeng, XF in purple circle).

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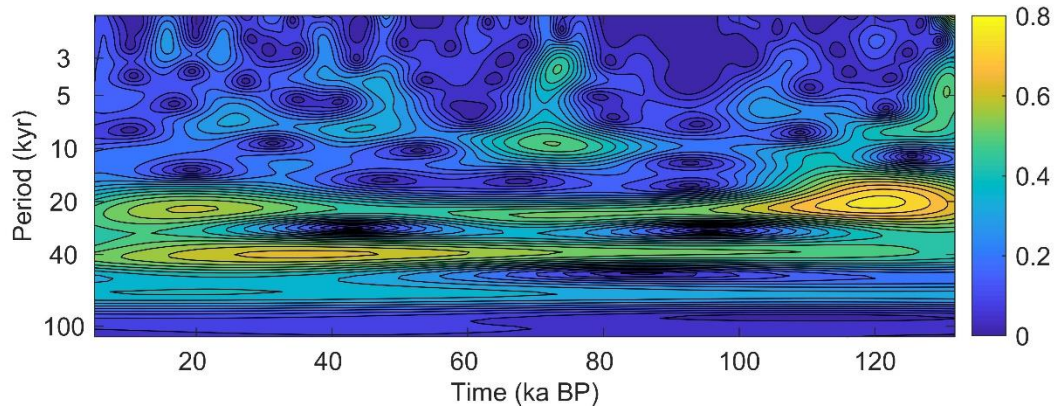
Figure S4. Wavelet power spectrum of degree of cyclization (DC) of brGDGTs from Yuanbao. Color shadings indicate the power of the correlation.

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