Supplementary information

Exceptional preservation of Palaeozoic steroids in a diagenetic continuum

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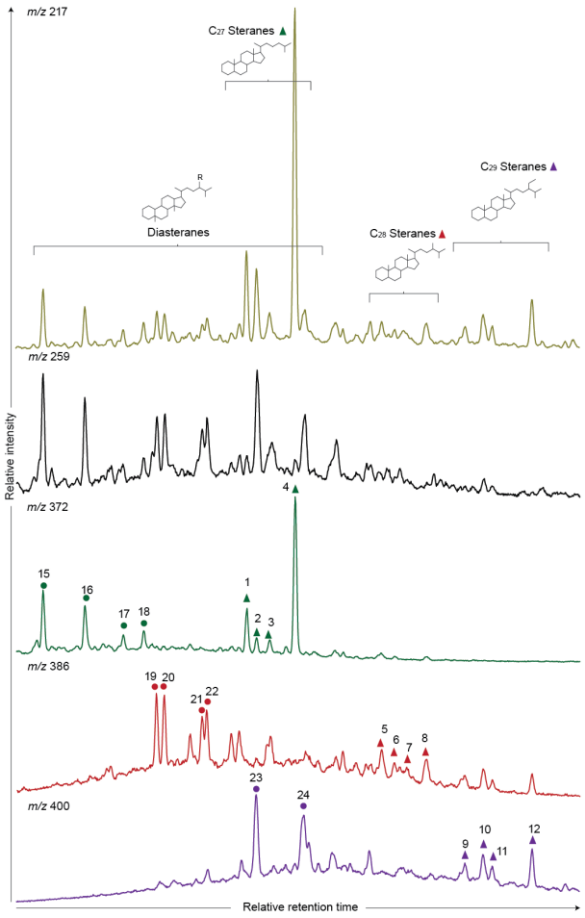

Fig. S1. Mass fragmentograms: *m/z* 217, 259, 372, 386 and 400, showing the distribution of steranes and diasteranes in the saturate fraction of the fossil layer (numbered peaks refer to Table 1). R= H, CH_3, C_2H_5.

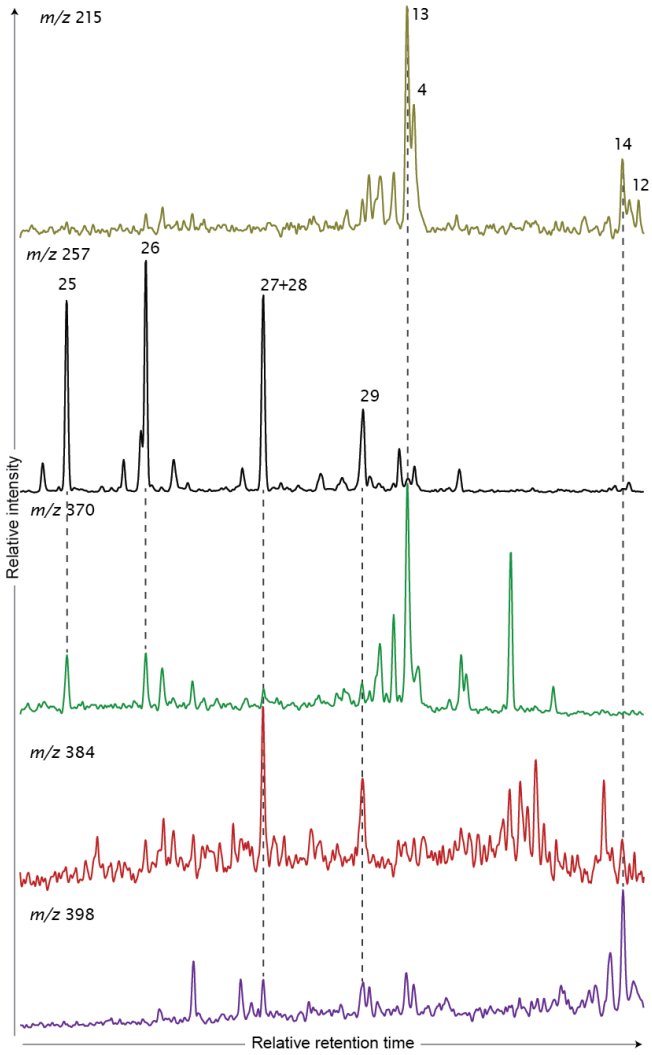

Fig. S2. Mass fragmentograms: *m/z* 215, 257, 370, 384 and 398, showing the distribution of sterenes and diasterenes in the saturate fraction of the fossil layer (numbered peaks refer to Table 1)

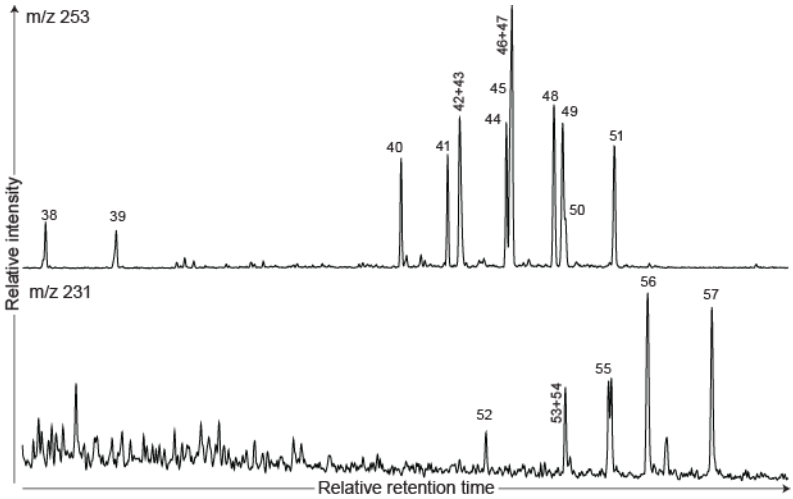

Fig. S3. Mass fragmentograms: *m/z* 253 and 231 of the aromatic fraction from the fossil layer, showing the distribution of mono and tri-aromatics steroids (numbered peaks refer to Table 1).

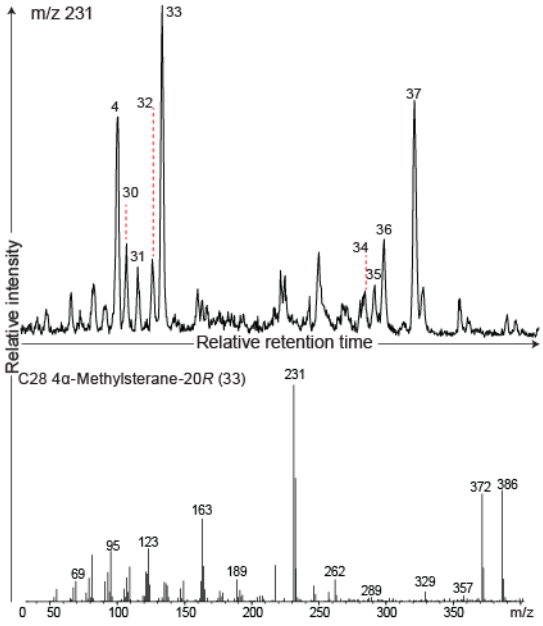

Fig. S4. Mass fragmentogram: *m/z* 231, showing the distribution of 4α-methylsteranes in the saturate fraction of the fossil layer (numbered peaks refer to Table S1) and mass spectrum of the C_{28} 4α-methylsterane-20*R* (33) confirming its identification.

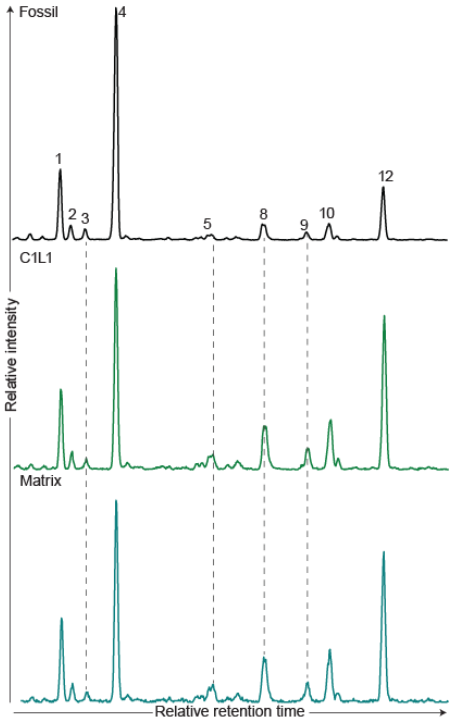

Fig. S5. Mass fragmentogram: *m/z* 217 of the fossil layer and subsequent matrix layers showing the variation in the distribution of steranes across the concretion (numbered peaks refer to Table 1).

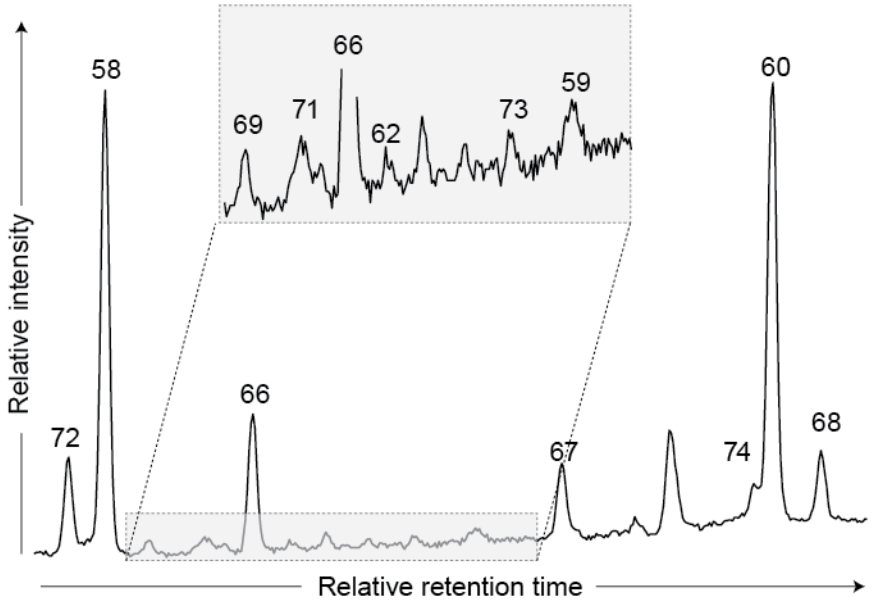

Fig S6. Partial total ion chromatogram of the derivatized alcohol fraction in fossil (numbered peaks refer to Table 1).

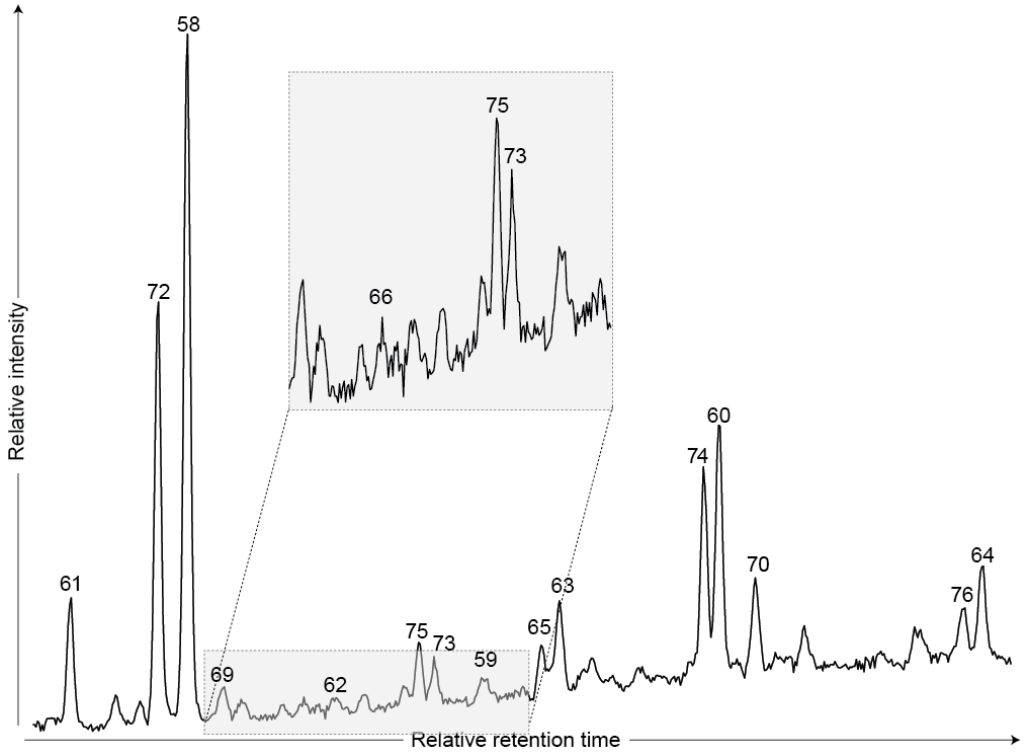

Fig S7. Partial total ion chromatogram of the derivatized alcohol fraction from the matrix-L1, located underneath the fossil (numbered peaks refer to Table S1).

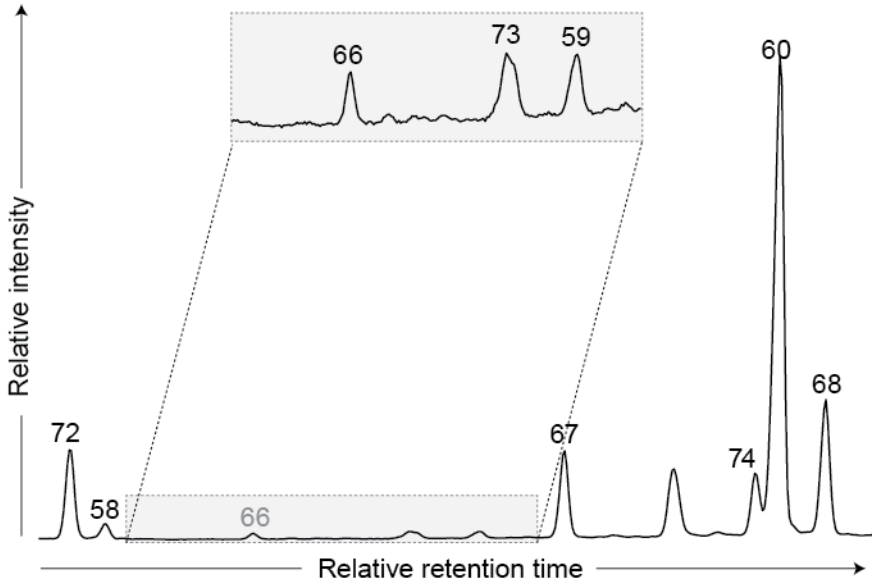

Fig S8. Partial total ion chromatogram of the derivatized alcohol fraction from the matrix (numbered peaks refer to Table 1).