

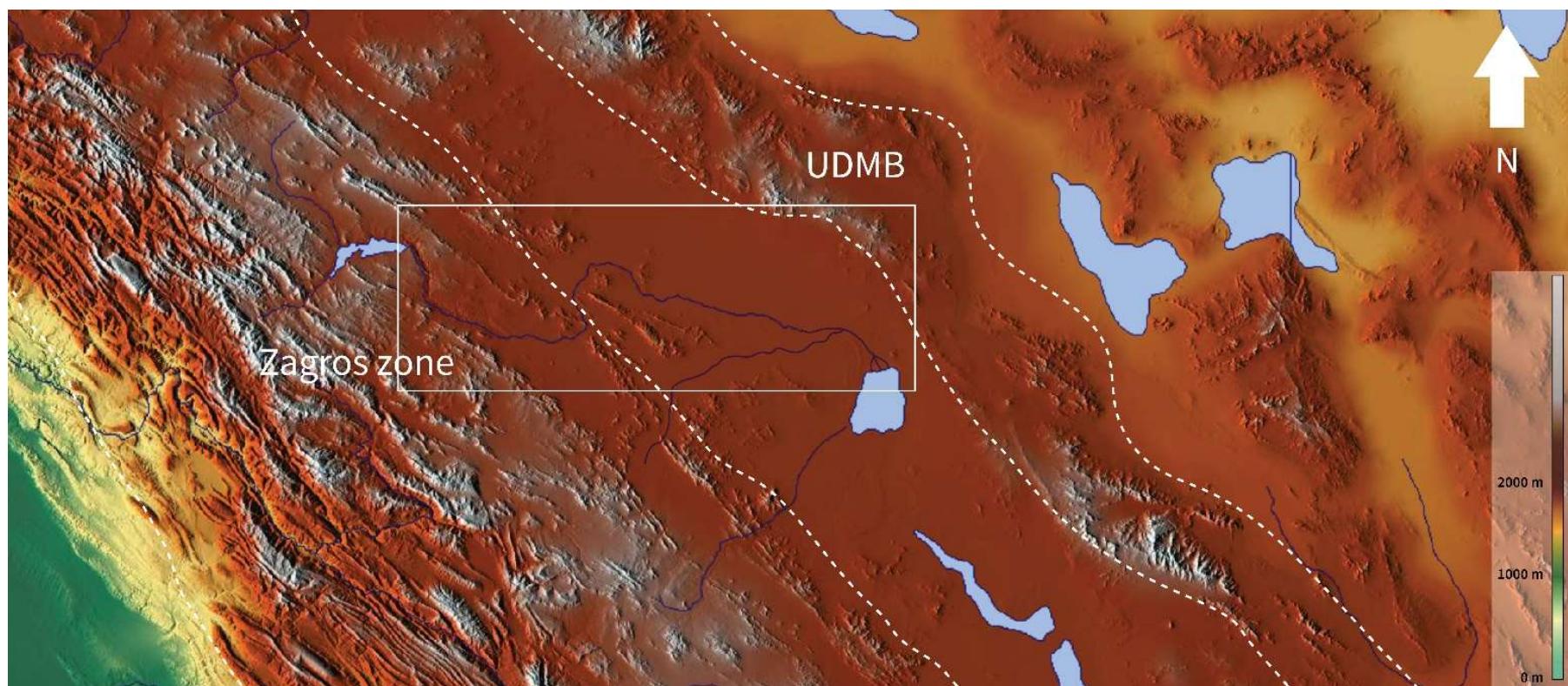


Fig. S1. The position of the study area between Zagros zone and Urumieh-Dokhtar magmatic belt (UDMB).



Fig. S2. The flat surface of the Baharan upper terrace.

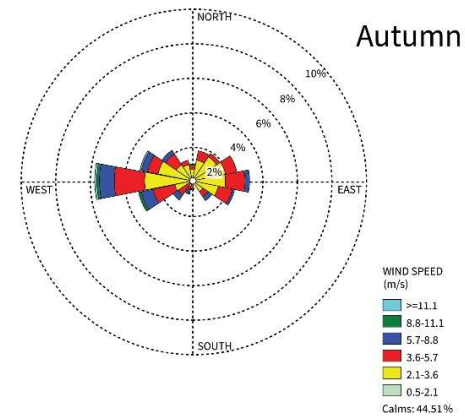
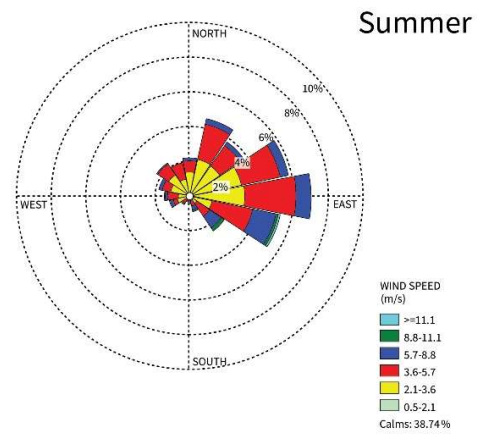
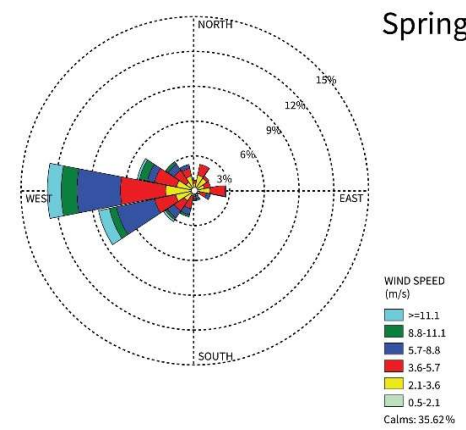
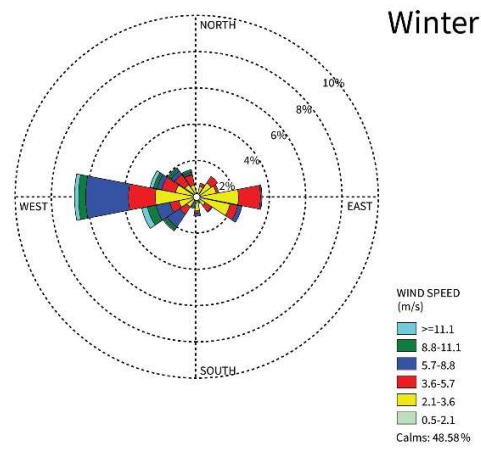


Table S3. Seasonal wind roses of the Kaboutarabad meteorological station (1985-2015).

Table S1. semi-quantitative mineralogical composition of dominant clasts in the Baharan palaeosol.

Rocks/Minerals	Quartz	K-feldspar	Na-plagioclase	Calcite	Rutile	Kaolinite	Mica	Palygorskite	Smectite	Chlorite
Metasandstone	XXXXX	n.d.	XX	tr.	tr.	tr.	XX	n.d.	n.d.	X
Sandstone	XXXXX	n.d.	XX	tr.	tr.	tr.	XX	n.d.	n.d.	X
Quartzite	XXXXXX	n.d.	X	tr.	tr.	tr.	XX	n.d.	n.d.	X

>60%: XXXXXX, 50-60%: XXXXX, 35-50%: XXXX, 20-35%: XXX, 10-20%: XX, 5-10%: X, 5%>: Tr., not detected: n.d.