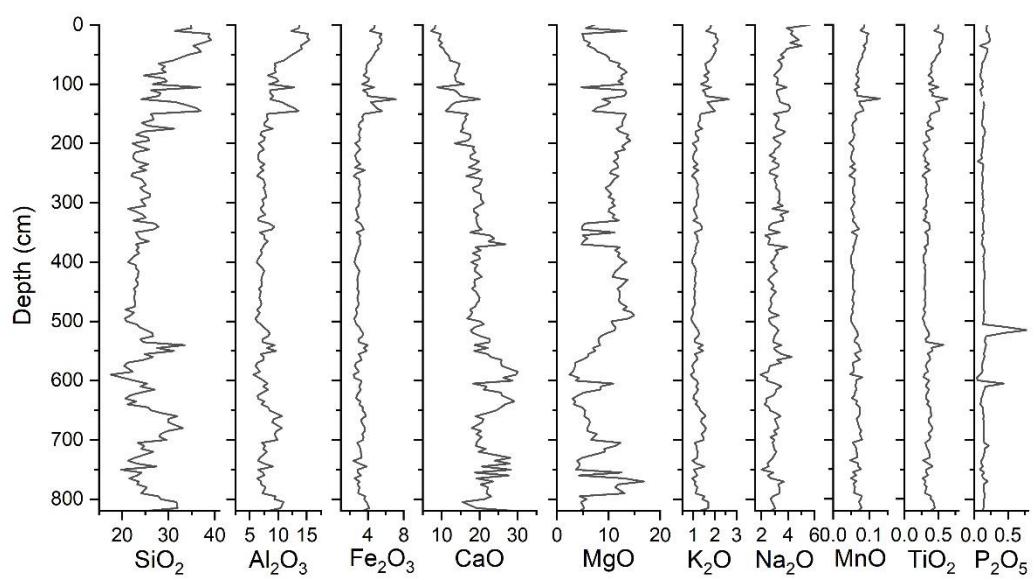
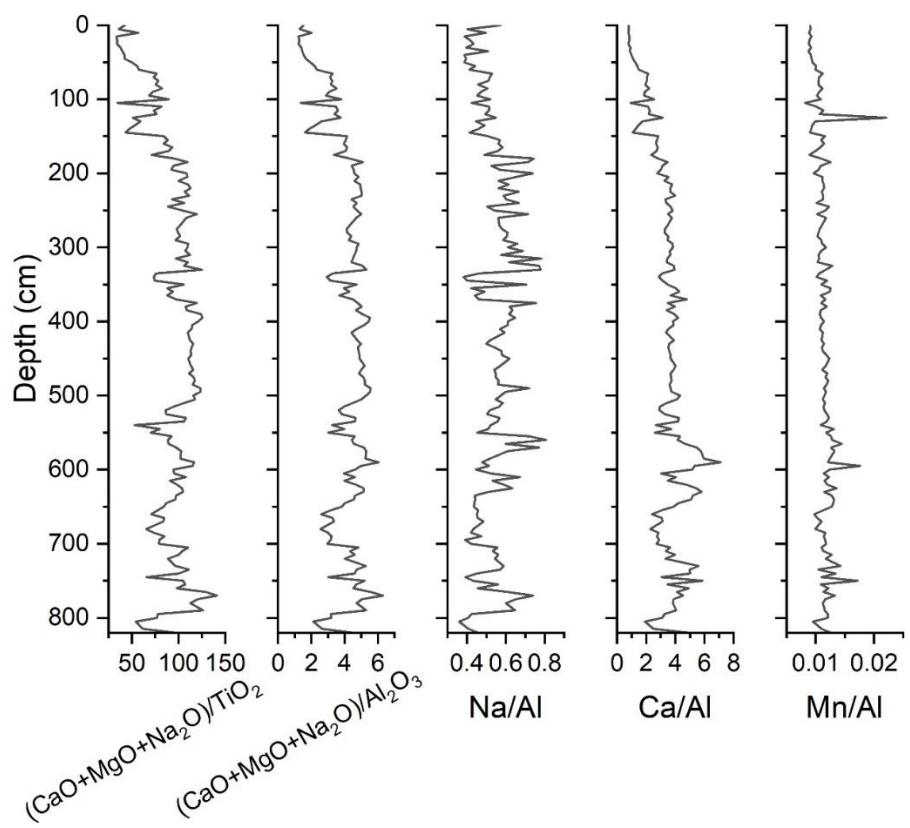


**Table S1** Sediment  $^{210}\text{Pb}$  and  $^{137}\text{Cs}$  of Huangqihai Lake

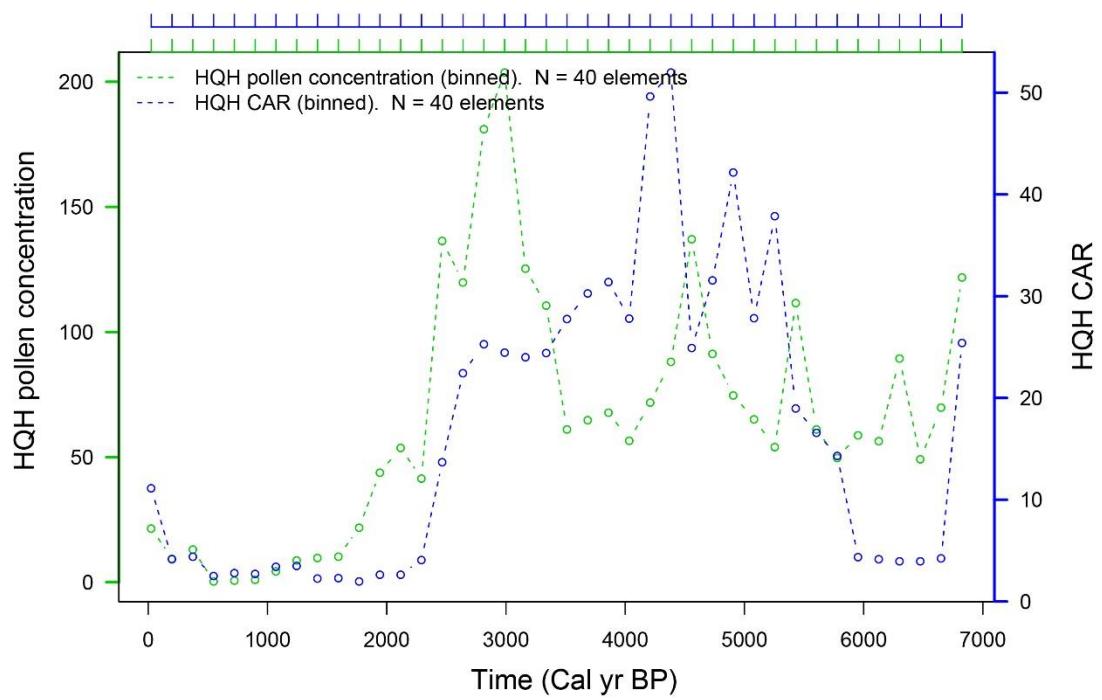
Depth	Sample weight (g)	Cs-137 (Bq/kg)		Pb-210 (Bq/kg)	
		Activity	A.U.	Activity	A.U.
1-2	13.9	15.28	1.96	122.34	17.24
2-3	10.66	15.8	1.91	143.71	17.94
4-5	20.13	13.99	1.61	97.33	14.22
7-8	17.28	11.68	1.68	98.32	14.35
8-9	17.36	15.39	1.84	85.68	13.24
9-10	23.62	20.15	1.7	90.26	12.14
11-12	15.11	44.34	3.27	87.94	14.3



**Figure S1.** Chemical element composition (%) change in the sediment of Huangqihai Lake profile



**Figure S2.** Chemical element ratios change in the sediment of Huangqihai Lake profile



**Figure S3.** Binned correlation of Huangqihai Lake pollen density and CAR by BINCOR