

Supplementary Table 3. Co-relation between peaks in the Hg accumulation in the Gur blanket peat core and paleoclimatic events

Peak	Depth, cm	Time period, yr BP	Hg AR extreme value $\mu\text{g cm}^{-2} \text{yr}^{-1}$	Climate	Dominant vegetation in the lower Amur River basin (Bazarova et al., 2008)	Simultaneous geochemical factors
Max 0	(20-30)	(Since 300)*	7.28			Most likely, anthropogenic pollution
Min 0	45-60	(800-1600)*	1.95	Warm (Medieval Warm Period)	Broad-leave species (Quercus dominated, also Ulmus, Corylus, Juglans)	
Min 1	110-125	4700-5650	2.38	Cold and dry; weakening of the East-Asian Monsoon	Shrub birch species, also Picea sect., Omorica, tree birch	
Max 1	155-185	7000-8700	11.9	Warm and wet (Holocene Climate Optimum)	Broad-leave species (Quercus, Ulmus), also coniferous species (Abies, Picea sect. Omorica)	Fe/Mn accumulation
Min 2	190-205	8800-9200	3.91	Cold and dry; weakening of the East-Asian Monsoon	Shrub birch species	
Max 2	210-235	9500-10,600	12.0	Warming, wet	Broad-leave species (Quercus dominated, also Ulmus and Juglans)	C _{org} accumulation

*Questionable accuracy of the radiocarbon dating for the top core.