From ice-dammed lake to aeolian dunes in the Store Mosse area, SW Sweden

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Aeolian deposits surround and stretch across the Store Mosse (Great Bog) bog complex in southwestern Sweden. Both peat and aeolian sand are underlain by lacustrine sediment and the deposits record the area's transition from an initially ice-dammed lake to Ancient Lake Bolmen, which gradually drained, exposing sediments to wind erosion and allowing peat to start forming in basins.

Here, we present 25 luminescence ages from lacustrine/fluvial and aeolian deposits that range from the time of deglaciation (~14.5 ka) to the late Holocene (~3.5 ka). Most of the water-lain sediments are dated to 12-10 ka while the bulk of the dunes formed 10.5-6.5 ka ago, possibly during two phases in the early and early-mid Holocene, respectively. Single younger ages likely record limited re-activation of dunes during the mid-late Holocene. The relationship of the dune record to environmental changes and a regional peat-based palaeostorm record (Kylander et al. 2023) will be discussed.

References

Kylander, M.E., Martínez-Cortizas, A., Sjöström, J.K., Gåling, J., Gyllencreutz, R., Bindler, R., Alexanderson, H., Schenk, F., Reinardy, B.T.I., Chandler, B.M.P., Gallagher, K., 2023. Storm chasing: Tracking Holocene storminess in southern Sweden using mineral proxies from inland and coastal peat bogs. *Quaternary Science Reviews 299*, 107854.