



Aeolian dunes of south-central Sweden

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South-central Sweden is home to a number of small, inactive inland dune fields formed on former glaciofluvial deltas. A characteristic of these dune fields is the generally transverse shape of the dunes, in stark contrast to the rest of Sweden where parabolic dunes are the most common type.

One of these dune fields is Bonåsheden in the county of Dalarna. It is the largest continuous dune field in Sweden and covers an area of approximately 15.5 km². The dune field has the last few years been the target of thorough investigations utilising LiDAR (Light Detection And Ranging) based remote sensing, ground-penetrating radar, luminescence dating and sedimentological field investigations. The results show that the dunes of Bonåsheden and the adjacent dune field of Skattungheden formed mainly by north-westerly winds shortly after the deglaciation of this part of Sweden (10.5 ka), and subsequent events of dune formation were uncommon. Some later episodes of sand drift did occur, but only as minor coversand deposition.

The dune field has had a more complex formation than previously thought; a shift in the wind pattern around 10 ka seems to have caused subsequent dunes to have formed by more westerly winds. The reason for this is still not determined, but the increased distance to the Scandinavian Ice Sheet would lessen the capacity of katabatic winds to influence the dune field.