

## A new Middle Pleistocene interglacial occurrence in Copenhagen, Denmark

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Only a few non-marine interglacial occurrences have been recorded from eastern Denmark. In connection with borings and excavations for a new metro line in Copenhagen, a new occurrence could be sampled. The succession at the new site consists of Danian limestone, glaciofluvial sand and gravel, a gyttja layer, a lower till bed, glaciofluvial sand and gravel, an upper till bed and glaciofluvial sand. The gyttja layer is up to 0.5 m thick and rich in plant remains; it also contains flattened tree logs. The interglacial layer is located in a channel-like depression and has probably been protected from erosion.

The new occurrence is located 1.4 km from an interglacial occurrence discovered in the free port in 1892, and the stratigraphy as well as the fossil flora and fauna show marked similarities. Hence we suggest that these occurrences represent the same interglacial stage.

The flora includes the trees *Pinus*, *Picea*, *Betula*, *Alnus*, *Quercus*, *Tilia*, *Ulmus*, *Corylus* and *Populus* and the shrubs *Cornus*, *Salix*, *Rubus* and *Empetrum*. These species show that the region was forested but included some light-demanding species. The flora also includes a number of warmth-demanding species. One of them, the small water plant *Najas minor*, has a northern geographical limit in Germany at present, and points to slightly higher summer temperatures than at present.

The fauna includes a small extinct bivalve species, *Pisidium clessini*, which is unknown from Eemian or younger deposits. This species was also recorded from the free port. The free port fauna includes the bivalve *Corbicula fluminalis*. This is an extant species that currently lives in Asia and Africa. It is recorded from many interglacial deposits in NW Europe, but not from Eemian deposits. These bivalves indicate a fluvial palaeoenvironment, but the fine-grained nature of the deposit shows that it was deposited in a low-energy environment, perhaps an oxbow lake.

Attempts are made to date the occurrence by pollen analyses, optically stimulated luminescence dating and amino acid analyses on opercula of the snail *Bithynia tentaculata*.