

5. GEOLOGICAL NOTES OF THE MOLTEMYR, BRASTAD AND SOLBERGA AREAS

CURT FREDÉN

Geological Survey of Sweden,
Kungsgatan 4, S-411 19 Göteborg, Sweden

A generalized distribution of the Quaternary deposits around the investigated localities and the main features of the Late Quaternary evolution of western Sweden is shown in Fig. 5:1.

The Moltemyr basin is situated between 55 and 60 m above sea level surrounded by bedrock hills – reaching about 90 to 130 m above sea level – and valley slopes which consist mainly of fine-grained glacial clay. The most pronounced valley has a north-south direction. The basin is drained northwards through this valley.

The raised bog is surrounded by a narrow fen. The bog has been exploited to such a degree that only small parts of the original surface remain.

Shell and shell fragments are found in sandy deposits and in small lenses in the clay around the basin. On the south-western bedrock hill, remains of a small shellbank are situated at a level of about 75 m above sea level in a small fissure valley. A radiocarbon determination of shells and shell fragments yielded an age (uncorrected) of $10\,700 \pm 180$ years B.P. (St 5377). It is assumed that the mollusc fauna in the area is contemporary. Following species of molluscs and barnacles have been identified: *Astarte borealis* (common), *Chlamys islandica*, *Hiatella arctica*, *H.a. uddevallensis*, *Macoma calcarea*, *Mya truncata*, *Mytilus edulis*, *Balanus crenatus*, and *Balanus hammeri*.

The Brastad locality is situated in an extensive, flat-lying clay area, 40–45 m above sea level surrounded by bedrock hills reaching 50–75 m above sea level. The area is drained westwards. Clay sequences of more than 30 m are known.

The Solberga locality is located in a broad valley a few metres above sea level and quite close to the present shore line. The relative relief between the clay surface and the surrounding bedrock hills is 20 to 25 m. Clay thicknesses of more than 30 m are recorded in the broad valley. The surficial clay usually has a postglacial origin at levels below about 20 m above sea level.

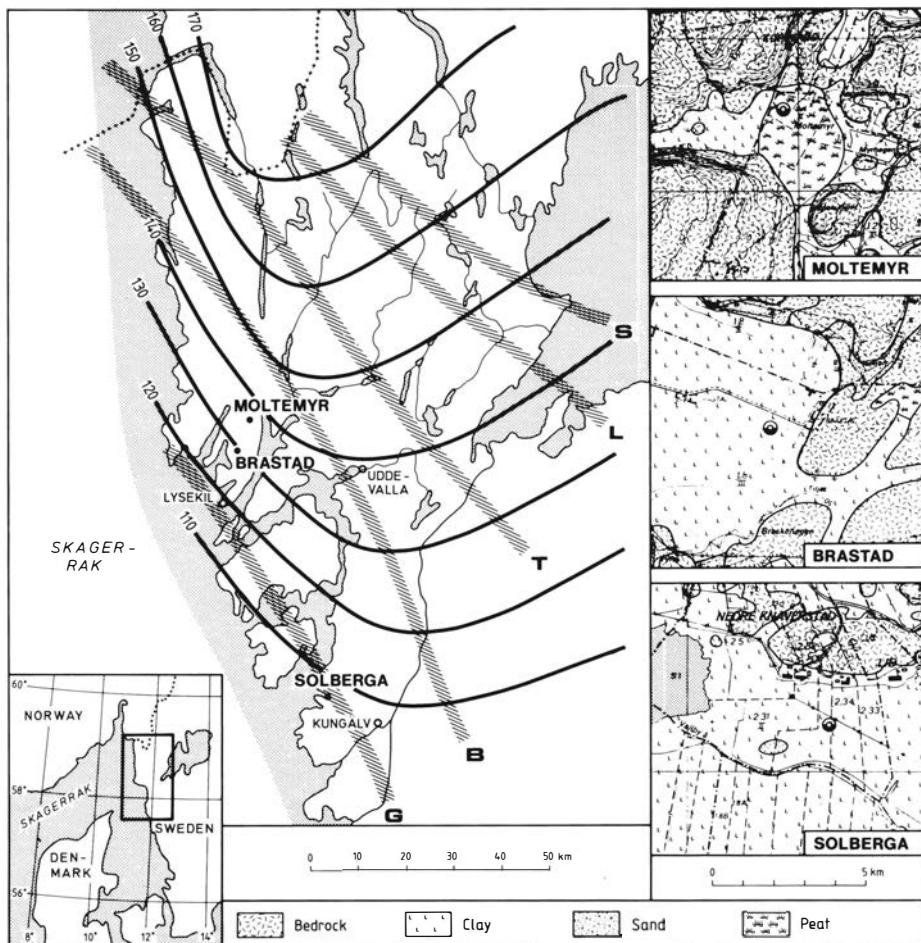


Fig. 5:1. Main features of the Late Quaternary evolution in western Sweden and of the distribution of Quaternary deposits at the investigated localities. The isobases for the highest shoreline in m above sea level are given in rough outline. The main terminal moraine zones are (G) Göteborg moraine, (B) Berghem moraine, (T) Trollhättan moraine, (L) Levene moraine, and (S) Skövde/Billingen moraines.

The geological maps are based upon the economic map sheets 8B 7a, 8A 6j and 7B 6c (*Lantmäteriverket, Gävle*). Contour interval is 5 m. The drilling holes are shown by the circular symbol for Foil Piston Corer.

The Solberga locality is situated on the geological map sheet Göteborg NV, which is to be published in 1983.