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Aeolian land forms in the Baruth Ice-Marginal Valley and the dune profile in the Picher Berge near Schöbendorf (Brandenburg, Germany)

Wierd Mathijs (Thijs) de Boer

Outline of the excursion area and features

The Brandenburg young moraine landscape ('Jungmoränenland') was formed during the Weichsel glacial stage. The southernmost zone of the young moraine landscape, the zone of till plains and ice-marginal valleys, is situated between the Eberswalde- and Baruth ice-marginal valleys in the north and south, respectively. The Brandenburg ice-margin, about 20/21 000 years B.P. (CEPEK, 1965), with the Głogów(Glogau)-Baruth melt-water valley in front of it, is between Luckenwalde and Lübben not or not well discerned morphologically. MARCINEK (1961) showed, that the Baruth valley was a melt-water course in its whole length only twice; at other times the melt-water only occupied sections of the valley. The loess-free old moraine landscape ('Altmoränenland') is bordered in the north by the Baruth ice-marginal valley and in the south by the northern edge of the continuous loess region. This old moraine area was formed during the Saale ice age. It includes - among other regions - the Fläming Plateau as a part of the Southern Ridge which received its basic shape from the Warthe ice sheet (MAUDREI, 1968). Large areas of the old moraine landscape are covered by wind-blown loessy sands and coversands. Loessy sands ('Sandlöß'), about 50 to 80 cm thick on average, are to be found in a relatively narrow strip between Belzig and Luckau (NITZ, 1991). The Sandlöß is of Late Weichselian age, according to MAUDREI (1968) and DE BOER (1994). Both the old and the young moraine landscape show a lot of - up to 25 m high - inland dunes. The accumulation of Late Weichselian glacial aeolian sheets (coversands) and dunes, as well as the deflation of a part of these sands during the Holocene - the latter almost always due to human influence - have been described by DE BOER (1992a, 1995a). The dunes consist of almost pure quartz sands, mainly between 63 and 630 µm in diameter (DE BOER, 1990, 1992a). The main dune forms are longitudinal, transverse, hummocky ('Kupstendünen') and parabolic dunes (DE BOER, 1992b). These dune forms were, to a great extent formed by winds from the West and from the South (DE BOER, 1996). DE BOER (1994, 1995b) distinguished 12 phases in the dune formation.

Sand pit South of Schöbendorf

(Topographische Karte 1: 25.000: Blatt 3946 Paplitz, Gauss-Krüger 4. Streifen (Bessel): Rechtswert 45 98 292, Hochwert 57 69 260; EPSG (3)25833 / ETRS89 Brandenburg Zone 33: 392425.55, 5767587.88; geographische Koordinaten ETRS89: 13.4313, 52.0484; WGS84: 52º2.9070’N 13º25.8767’O).

In this dune profile one can observe at least five well developed buried soils. Not only the uppermost part of the dune, the 'young dune' part, in which fragments of pottery of bronze age and flints were found, but also the 'old dune' part of the dune was subdivided several times by buried soils. At the basis of the 'old dune' part, loessy sands alternate with cover sand strata.

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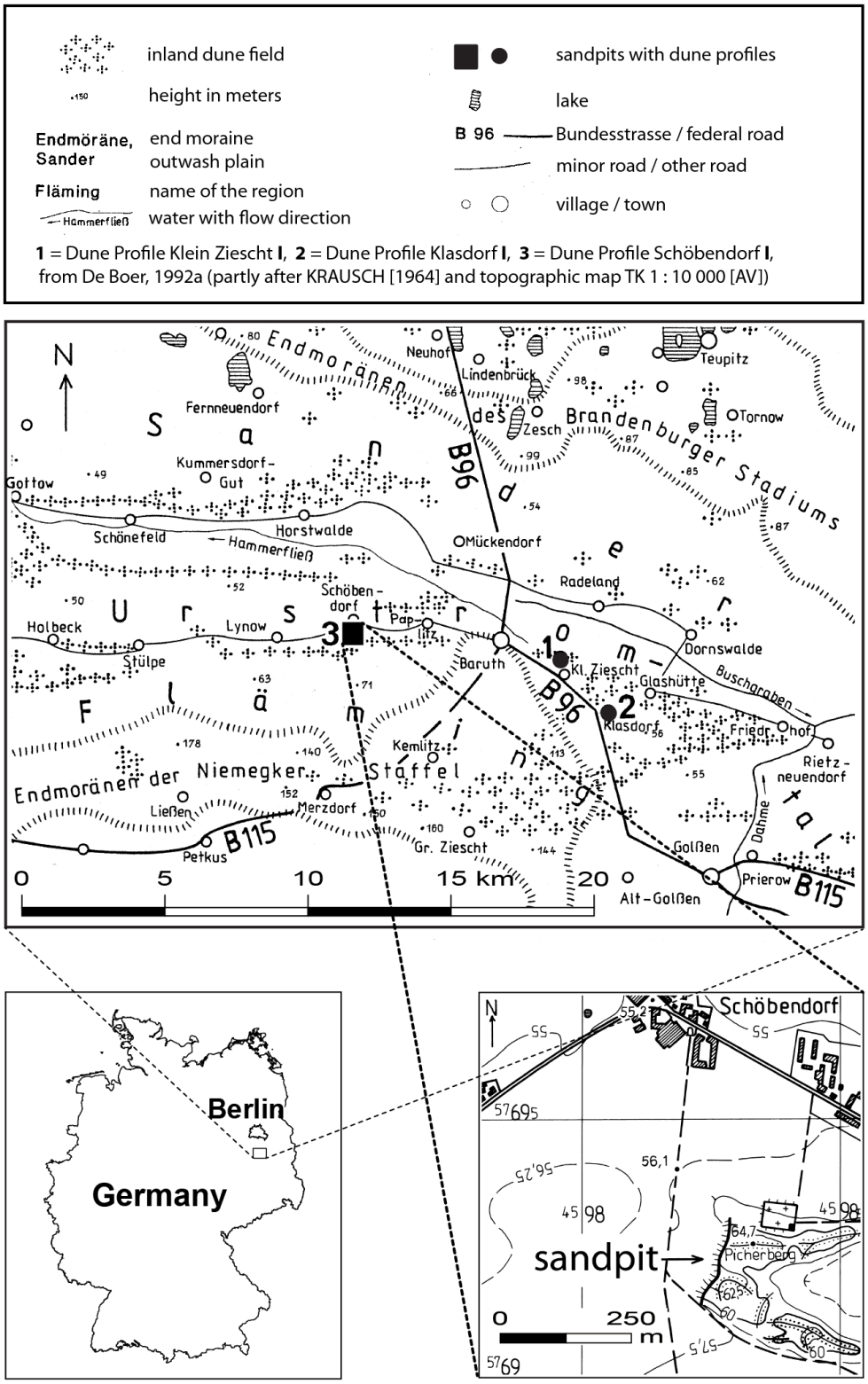
Location of dune fields and three important dune profiles in the Central Baruth Ice-Marginal Valley (from De Boer, 1992a)



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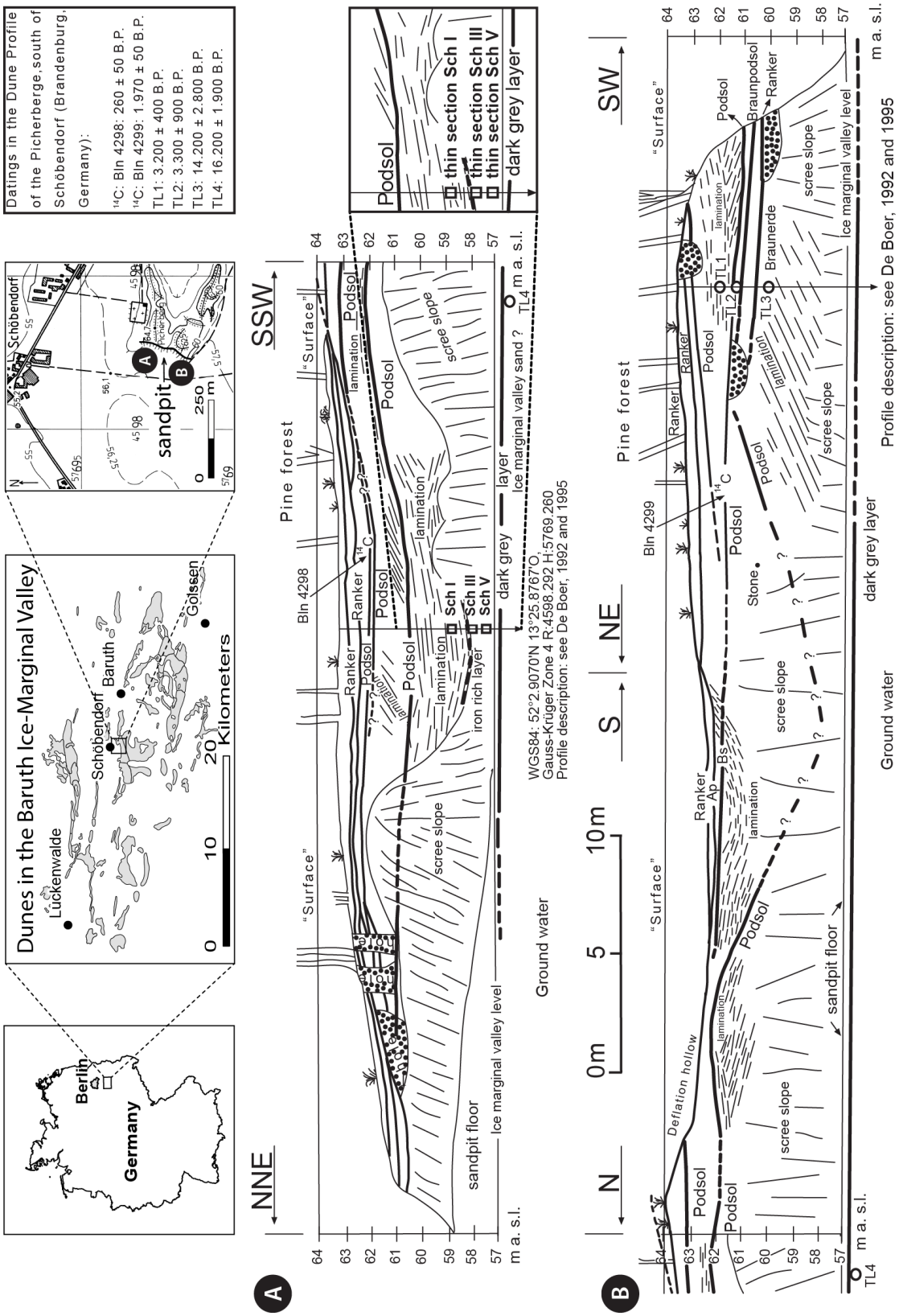

Profile drawing of the dune profile of the sandpit in the Picher Berge near Schöbendorf (Brandenburg) (from W.M. de Boer, 1992a, extended with overview maps in 2012).

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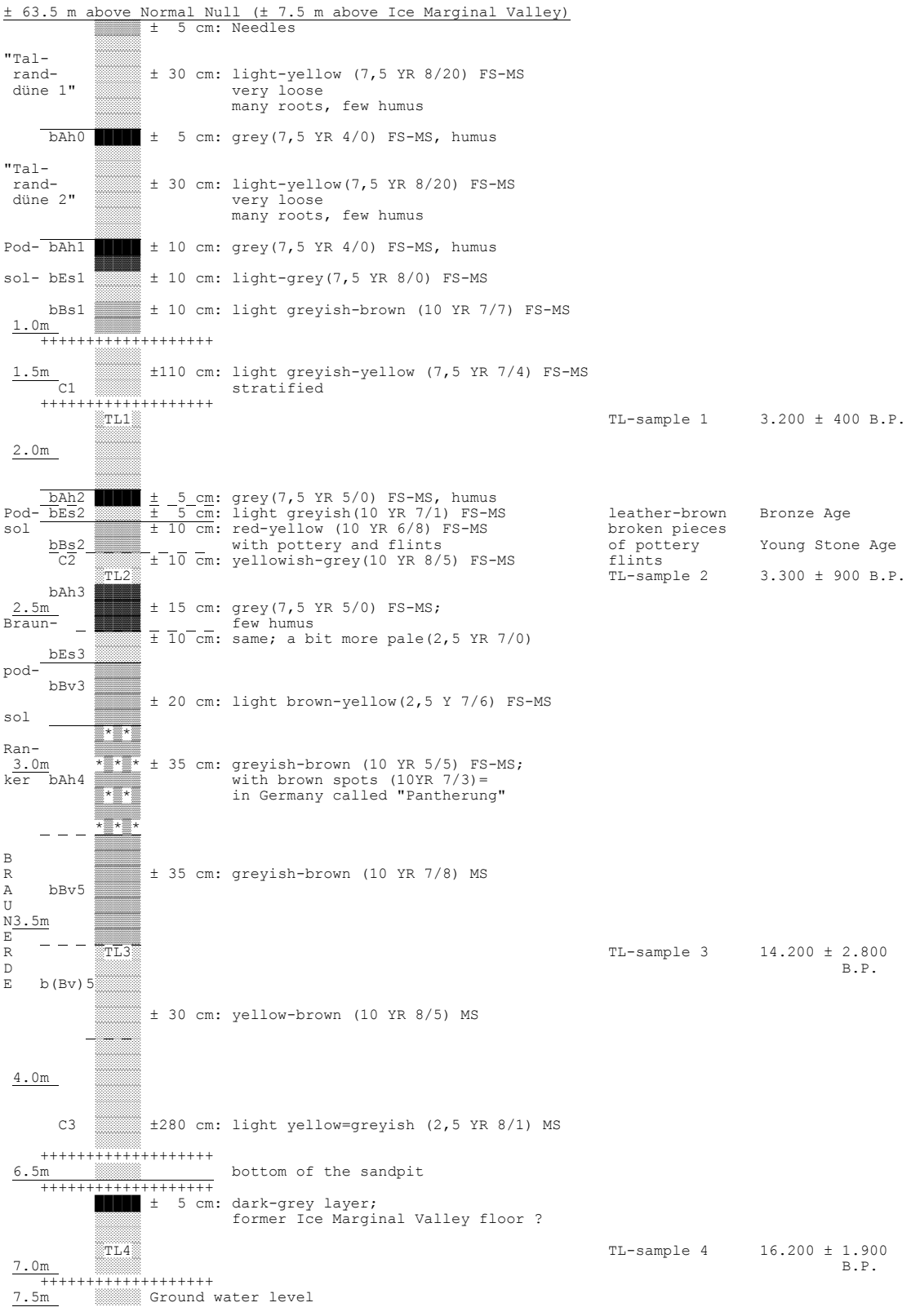
Profile in the Picher Berge south of Schöbendorf (for location see map and drawing)

Lithology

(FS: Fine Sand 0.06 - 0.2 mm Ø, MS: Middle Sand 0.2 - 0.6 mm Ø)



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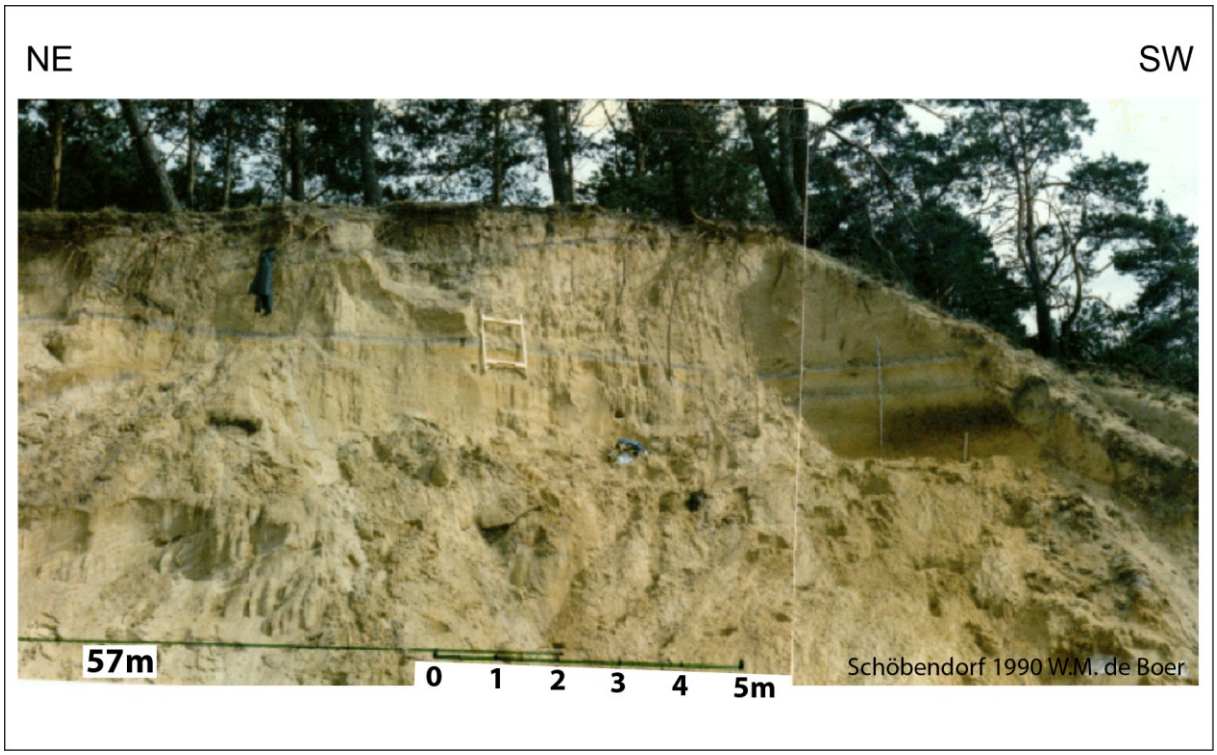
Southern part of dune profile of the sandpit in the Picher Berge near Schöbendorf, Brandenburg, Germany (photograph made by W.M. de Boer in 1990). The wooden frame (inner square) is 50 cm long and 50 cm high.



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