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Wolfgang Schirmer (ed.)

9
Rhein Traverse

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9. Rhein Traverse, W. Schirmer. –
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tion by its increase of nonarboreal heliophilous pollen types most of all *Artemisia* and *Thalictrum* which reach their absolute maxima. The increase of *Betula* and *Salix* may be caused by their shrub shares.

PDZ 3 / Bølling

This pollen zone features the full expansion of arboeal *Betula*. A radiocarbon date of wood places the *Betula* maximum to 12,225 ± 95 yr BP (Hv 18,443). The Late Glacial heliophyts decrease to the values of PDZ 1.

PDZ 4 / Allerød (*Betula* phase)

The pollen record shows the steady expansion of *Pinus* – with *Betula* still dominating – and the rapid decline of the heliophilous types.

PDZ 5 / Allerød (*Pinus* phase)

The highest part of the profile is characterized by the final expansion of *Pinus* which in most middle European pollen records precedes the event of Laacher See tephra. A radiocarbon analysis of wood dates the top of the profile to 11,185 ± 90 yr BP (Hv 18,444). This age fits perfectly to the presence of the topping LST.

Stop 42: Gravel pit Klee, Bad Breisig (NT 3)

D – TM 25: sheet 5409 Linz,
R 25914, H 55995, 60 m a. s. l.

The NT 3 (Ebing Terrace) rises to a similar level as the NT 2 (Schönbrunn Terrace) (Fig. 60). However, mostly it remains 1–2 m below the NT 2 level. Bearing reworked pebbles of Laacher See pumice throughout its terrace accumulation, the NT 3 evidences to be younger than Allerød. Exhibiting locally cold-climate indicators, it has to be placed into the Younger Dryas period, the last cold period of the Würmian glaciation.

Stop 43: Gravel pit east of Torney (W. Schirmer & A. Ikinger)

D – TM 25: sheet 5511 Bendorf,
R 339375, H 559250, 120 m a. s. l.

As soon as the Laacher See tephra mantle is thinning to few meters off its eruption center, the Holocene soil formation penetrates through the whole tephra and sometimes beyond it into its bedrock pervading there the pre-existing and tephra-buried Mendig soil. In this case it is difficult to separate the Allerødian soil formation from the Holocene one. Thus a long scientific discussion is going on whether an A-C soil or an A-B-C soil would have developed during the Mendig soil period. Wherever the Mendig soil is not affected by later soil formation processes it presents a calcaric regosol (pararendzina) (Rohdenburg & Meyer 1968). Ikinger (1995) found that by damming of the pore solution on top of the Mendig soil, luvisol features developed on top of this fossil soil, in places within this soil and beneath in its protolith.

The section exhibited here presents the Holocene luvisol penetrating the Laacher See tephra (exploited as far as the basal few centimeters), the Mendig soil (calcaric regosol) and parts of the loess below it.

Ikinger, A. (1995): Bodenbildung unter Laacher Bims im Mittelrheinischen Becken. – Inaug.-Diss. Univ. Düsseldorf: 131 p., 4 Beil.; Düsseldorf. [Maschinenschrift]

Rohdenburg, H. & Meyer, B. (1968): Zur Datierung und Bodengeschichte mitteleuropäischer Oberflächenböden (Schwarzerde, Parabraunerde, Kalksteinbraunlehm): Spätglazial oder Holozän? – Göttinger Bodenkundl. Ber., **6**: 127–212; Göttingen.

Stop 44: Prehistoric Museum Monrepos

D – TM 25: sheet 5510 Neuwied,
R 250248, H 559492, 290 m a. s. l.

As department of the Römisch-Germanisches Zentralmuseum in Mainz, this museum of Pleistocene archaeology housing in the Schloß Monrepos works as place of investigation as well as museum for the Palaeolithic archaeology of the Mittelrhein area. The museum exhibits finds beginning with *Homo erectus*, 1 Mio years ago, through the time of *Homo sapiens neanderthalensis* (200,000–40,000 yr BP) peaking in the Magdalénien of Neuwied-Gönnersdorf (ca. 12,500 yr BP) with engraved slate slabs figuring picturesquely man and glacial fauna.

Bosinski, G. (1992): Eiszeitjäger im Neuwieder Becken. – Archäologie an Mittelrhein und Mosel, **1**, 3. Aufl.: 148 p.; Koblenz.

Stop 45: Eppelsberg volcanic scoria and lapilli cone

D – TM 25: sheet 5509 Burgbrohl,
R 259395, H 55859, 265 m a. s. l.

The Eppelsberg – as a typical example of the polygenetic scoria cones of the East Eifel – exhibits five eruption units (A–E) separated by unconformities (Schmincke et al. 1990: 112; Schmincke 1994: 26). These unconformities encompass periods of volcanotectonical displacement and/or soil development. Within these units the rock composition turns from early tephrite to late basanite. The two basal units (A, B) represent initial maar phases with predominantly hydroclastic well bedded tuff deposits. The third unit (C) is the main Strombolian phase with eruption of lava that mainly appears as scoria breccias, short lava tongues and