

## Blatt 24 Mistelbach

### **Bericht 2000 über die sedimentologische Bearbeitung der Hollabrunn-Mistelbach-Formation auf den Blättern 24 Mistelbach, 25 Poysdorf, 38 Krems, 39 Tulln und 41 Deutsch Wagram**

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Deposits of the Hollabrunn-Mistelbach-Formation (Pannonian) on the above mentioned map sheets are products of several depositional environments. Whereas the sediments on the maps 38 and 39 (western area) are products of gravelly braided river deposition, on the maps 24, 25, 41 (eastern area) they are products of coarse-grained delta and associated braidplain or coastal deposition. The role of synsedimentary tectonic and rapid deposition was recognized on several localities.

On the maps 38 and 39 deposits of Hollabrunn-Mistelbach-Formation are dominantly built of gravel facies (Gm, Gt, Gp). Gravels represent gravelly bars and channel deposits. Sandy beds (facies St, Sp, Sh and Sr) are usually subordinate, but their presence is sometimes significant (over 25%) and only exceptionally dominant (more than 50%). They represent channel or lateral accretion deposits. Fine-grained facies (Fm, Fr, Fl) were recognized on almost all localities. Their presence is usually highly subordinate, but they also can be several meters thick. They are products of deposition in rapidly abandoned channels. Repeated erosion of these „overbank fines“ by gravels and high presence of muddy intraclasts reflect the multi-storey evolution of channels (6th order surfaces?).

Gravels are polymict. Quartz pebbles play the dominant role in this area (47.5 %–76.8 %). Sedimentary rocks represent 16.8 %–48.8 % of pebbles and crystalline rocks 4.0 %–16.6 %. The maximum diameter of clasts ranges from 25 to 5 cm and the largest pebbles are often gneisses. The intraclasts are bigger than the associated extraclasts. Morphology (pebble shape and roundness) of quartz reflects great differences in the pebble shapes. Localities with highest presence of discoidal pebbles are dominant, but also localities with the dominant role of spherical or rod pebbles have been recognized. The mean maximal projec-

tion sphericity (SNEED & FOLK, 1958) ranges from 0.66 to 0.68 and the mean flatness index (CAILLEUX, 1945) from 1.95 to 2.06. The mean Krumbein roundness (KRUMBEIN, 1941) ranges from 0.46 to 0.53 and the presence of well-rounded pebbles is between 6.5 % and 20.8 %.

Deposits of Hollabrunn-Mistelbach-Formation on the maps 24, 25 and 41 significantly differ from the above-mentioned ones. Gravel facies are dominant only in parts of the localities and represent gravelly bars (mouth bars, channel bars), channel deposits and probably also coarse-grained beaches. Sandy beds are dominant on some localities, on others play a significant role, but also localities with their minimal presence exist. Sands represent channel or lateral accretion deposits (beaches?). Fine-grained facies were also recognized and their presence is often significant or even dominant. They form several meters thick beds and are interpreted as lagoonal deposits. Trace fossils were described on several localities. Gravels are polymict. Quartz pebbles play a dominant role in this area only in some localities, and their content varies from 10.0 % to 71.8 %. Sedimentary rocks form 7.1 %–85.1 % of the pebbles and crystalline rocks 4.3 %–29.6 %. Maximum diameter of clasts range from 20 to 2.5 cm and the largest pebbles are usually limestones or dolomites. Presence of almost white, probably Ernstbrunn limestone is important. The intraclasts are very rare or absent, but typical is the content of mollusca shells in some localities. Morphology (pebble shape and roundness) of quartz reflects great differences in the pebble shapes. Localities with highest presence of discoidal pebbles dominate, but also localities with the dominant role of spherical, rod or even blade pebbles were recognized. The mean maximal projection sphericity (SNEED & FOLK, 1958) ranges from 0.6 to 0.73 and the mean flatness index (CAILLEUX, 1945) from 1.69 to 2.49. The mean Krumbein roundness (KRUMBEIN, 1941) ranges from 0.45 to 0.55 and the presence of well-rounded pebbles is between 3.1 % and 24.6 %.

Results from the studied area will be compared with the data from maps 22 Hollabrunn and 23 Hadres (NEHYBA, 2000). Lateral and also vertical arrangements of various facies and architectural elements of the Hollabrunn-Mistelbach-Formation will help to recognize the development of its sedimentation.

## Blatt 25 Poysdorf

Siehe Bericht zu Blatt 24 Mistelbach von S. NEHYBA.

## Blatt 38 Krems

### **Bericht 2002 über Mikromorphologie, Typologie und Stratigraphie quartärer Böden vom Buriweg in Langenlois auf Blatt 38 Krems**

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Im Rahmen der Bergung eines Bisonschädels im März 2000 im Weinkeller Wagner am Buriweg in Langenlois wur-

den 3 Proben für die mikromorphologische Untersuchung entnommen. Probe 3 (10 YR 6/6, Trockenmessung) stammt aus dem basalen Boden im Weinkeller Wagner, der an der Oberfläche von zahlreichen Rissen durchsetzt ist. Probe 2 (10 YR 7/2) wurde aus dem oberen Boden entnommen, der in diesem Keller über dem Löss ca. 2,6 m höher als der basale Boden liegt.

Ergänzend dazu wurde die Probe 1 (10 YR 7/4) im Hohlweg außerhalb des Kellers aus einem Profil entnommen, welches nur wenige Meter vom oben erwähnten Auf-