drilling predators from Karpatian (Upper Burdigalian) and Badenian (Lower Langhian) assemblages in the Central Paratethys. There, Karpatian molluscan assemblages occur in restricted, nearshore environments and, compared to the shelf assemblages of the Badenian, are characterized by rather low diversity (species richness and evenness). From the perspective of evolutionary palaeoecology it is of special interest if the low-diversity assemblages of the Karpatian are also characterized by lower predation intensities than their higher diverse open shelf's counterparts from the Badenian.
Drilling frequencies (df) were calculated from three Karpatian (Kleinebersdorf, Neudorf, Laa) and two Badenian localities (Grund, Gainfarn). Somewhat surprisingly two of the low-diversity, nearshore Karpatian localities, Kleinebersdorf (n = 1431, df=18.0%), Neudorf (n=229, df=12.7%), had distinctly higher predation intensities than the two Badenian localities Gainfarn (n=8719, df=6.6%) and Grund (n=4205, df=5.1%), which are in the range of the third Karpatian locality Laa (n=2451, df=5.6%). This pattern is also roughly reflected in predation intensities of the most abundant species, which vary from locality to locality. In the Karpatian assemblages, the most abundant taxa were *Granulolabium bicinctum* (n=465, Kleinebersdorf df=20.3%), *Amalda glandiformis* (n=54, Neudorf, df=7.4%), and *Agapilia pachii* (n=845, Laa, df=2.7%). In the Badenian assemblages the most abundant taxa were *Corbula gibba* (n=5770, Gainfarn, df=6.6%) and *Timoclea marginata* (n=1616, Grund, df=2.6%).
As a preliminary conclusion, drilling frequency appears generally to be patchy in the Miocene of the Paratethys and low-diversity, nearshore assemblages of the Karpatian tend to have higher drilling frequencies than higher diverse open-shelf assemblages of the Badenian.

The Schützen „hot spot“: 3D-modelling of a shallow aquifer (Northern Burgenland, Austria)

Scheibz, J., Häusler, H., Kardeis, G., Heischmann, J. & Kopecny, A.

Center of Earth Sciences, Department of Environmental Geosciences, University of Vienna, Althanstrasse 14, 1090 Wien; juergen.scheibz@univie.ac.at, hermann.haeusler@univie.ac.at, gkardeis@gmx.at, juergen231@a1.net, a0306265@unet.univie.ac.at

Wachtel (1859) reported the temperature of the Schützen sulphur spring 24-26° Reaumur (equalling 30-32° Celsius), and therefore the former thermal spring of Schützen is comparable to the well known occurrences of natural thermal springs in the vicinity of the Leithagebirge. Later on this hot spring cooled down and suddenly disappeared in 1971 when foundation works cut the groundwater flow close to the dome of Leitha limestone formation of the „Kalkofen“ quarry (Theuer & Trucksitz 1996). The tectonic situation between the Ruster Höhenzug and the Leithagebirge is quite complex, as can be shown by hybrid seismic sections down to 200 metres, and shallow 2D-resistivity tomography profiles (Scheibz 2006). A high resolution 3D-multielectrode geoelectrical survey in the center of Schützen revealed a detailed insight in the near to the surface aquifer geometry of this former hot sulphur spring. The Upper Miocene of the Schützen region consists of Leitha limestone of Badenian to Sarmatian age which is overlain by Lower Pannonian siltstone and claystone. The profile of a bore hole down to eight metres in the discharge area of the former sulphur spring consists of limestone intercalated with sand and gravel. The karstified aquifer is confined by a layer of about three metres consisting predominantly of siltstone (Kollmann et al. 1990). A raster of seven 2D-sections at a length of 100 to 150 metres each and down to a depth of 14 metres revealed a high resistivity centre where a 3D-block was measured. Resistivity tomography of this block of 2500 m^2 in size, down to a depth of 28 metres shows a complex buckling pattern of higher resistivity beds (consisting of Miocene limestone), overlain by lower resistivity beds interpreted as Pannonian siltstone. From the structural point of view this local buckling of karstified limestone may be due to folding and faulting tectonics, comparable to the local uplift of the Kalkofen-slice north of Schützen.
Mulitielectrode resistivity measurements in the vicinity of the up-lifted Leitha limestone revealed that up-thrusting of Miocene beds is only restricted to a narrow corridor between the Ruster Höhenzug and the Leithagebirge.

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Geologic interpretation of shallow and deep geophysical soundings in the section Leithagebirge - Ruster Höhenzug (Northern Burgenland, Austria)

Scheibz, J.[1], Häusler, H.[1], Kohlbeck, F.[2], Chwatal, W.[2] & Kostial, D.[3]

[1]Department of Environmental Geosciences, Center for Earth Sciences, University of Vienna, Althanstrasse 14, 1090 Vienna, Austria; [2]Institute of Geodesy and Geophysics, Workgroup of Geophysics (No. 1282), Vienna University of Technology, Austria; [3]Rainerstrasse 29, Salzburg, Austria, Pöyry Infra GmbH; juergen.scheibz@univie.ac.at, hermann.haeusler@-univie.ac.at; fkohlbec@pop.tuwien.ac.at, wchwatal@mail.tuwien.ac.at; dieter.kostial@poyry.com

DC geoelectric and seismic measurements have been carried out along a profile near the village of Schützen/Northern Burgenland. The profile connected the northeast trending mountain range of the Leithagebirge with the north-south trending „Ruster Höhenzug“ that both can be understood as far foothills of the Central Alpine zone. A section of 2000 m starting from north of Schützen and extending up to the Goldberg in the southeast was investigated. The high resolution seismic survey allowed the interpretation as refraction, reflection and refraction tomography. The approximately NW-SE-trending seismic section revealed a cover with p-wave velocity of 800 m (above the ground water table) over a seismic layer with about 1700 m/s (below ground water table) and a maximum depth of 50 m followed by a layer with velocity increasing from 2000 m/s to over 2500 m/s. A prominent reflection signal indicates the interface between first and second layer into the depth. The velocity of the deepest resolved layer, presumptively the basement, was over 2700 m/s. The basement showed a syncline at profile meter 500 and an anticline at 900 m and further not so prominent undulations at longer distances. A more shallow depression is also visible at the interface between first and second layer. As the amplitudes of reflectors are clearly visible also at greater depth of the basement, folding of the pre-Miocene basement can be deduced, probably followed up by openly folding in Plio/Pleistocene times. A lateral change of the velocity of the basement between profile meter 1000 and 1200 may indicate a change of rock material. The high-resolution electrical resistivity tomography section reveals a low resistivity layer (< 30 Ωm) which can be interpreted as Pannonian beds. From profile meter 1550 on to the south higher resistivities up to 1000 Ùm was interpreted as Leitha limestone according to the geological map 1:50.000, and as mapped on the surface. Lower resistivity beds below this limestone probably belong to the Rust formation, the matrix supported sand and gravel beds of Karpatian age. We interpret the abrupt change from lower to higher resistivities as subvertical fault at the northern end of the Ruster Höhenzug. In total resistivity tomography more resolves the Upper Miocene and in particular Pannonian beds whereas seismics portraits the structures of the crystalline basement and its Paleozoic to Mesozoic cover. Uplift of Miocene beds is proofed by outcrops of Leitha formation of Badenian age north of Schützen, which probably result from local compression between the Leithagebirge in the north and the Ruster Höhenzug in the south (Scheibz 2006). For a more sound interpretation of the geophysical sections north of the Ruster Höhenzug, bore hole drilling is highly recommended.

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Plio-Pleistocene valley incision in the Eastern Alps - Burial age dating of cave sediments.

Schenk, B.[1], Sahy, D.[1], Häuselmann, P.[2], Mihevc, A.[3] & Fiebig, M.[1]

[1]Institute of Applied Geology, Department of Civil Engineering and Natural Hazards, University of Natural Resources and Applied Life Sciences, Vienna, Austria; [2]Swiss Institute for Speleology and Karst Studies, La Chaux-de-Fonds, Switzerland; [3]Karst Research Institute ZRC SAZU, Postojna, Slovenia; diana.sahy@boku.ac.at, bettina.schenk@boku.ac.at, markus.fiebig.@boku.ac.at, praezis@speleo.ch, mihevc@zrc-sazu.si

Speleogenesis and surface landscape development are linked processes which, especially in mountainous areas, are driven by interplay of tectonic uplift and climate-controlled erosion. In karst regions, gradual lowering of valley floors and local base levels by river incision or glacial erosion promotes cave development at lower elevations resulting in the formation of multi-level karst systems (Audra et al. 2007). Dating sediments from various cave levels can provide information about the pace of landscape development, and in particular valley incision rates, provided that a relative chronology can be established between the morphogenesis of the cave and the deposition of the studied sediments (Häuselmann 2007).
The burial age dating, which relies on the differential radioactive decay of the ^{26}Al-^{10}Be isotope pair, can be used to date a large time span. It reaches back to the beginning of the Pliocene. This special dating method can be applied as long as two factors are given: first, that the investigated sediment contains quartz, which was exposed to radiation long enough for the two isotopes to accumulate and second, that the sediment was effectively shielded from further radiation from the moment of its deposition.
Sediment in Alpine caves are widespread, therefore a choice of caves had to be made. This project lays a focus on the Eastern Alps. Forerunning paleomagnetic dating of the chosen Austrian and Slovene caves (e.g. Audra 2000, Bosak et al. 2002) indicted a suitable age for the sediment to be dated by the burial age method. In Slovenia the cave sediment samples have been taken from Snezna, Spehovka, Huda Luknja, Jama pri Planina pri Jezero and Udin Borst. Hirlatz and Dachstein-Mammuthöhle are the caves for burial age dating from Austria. Other sample locations in this region will follow.

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Subtypen von Eisgarner Granit im Böhmerwald im Bereich des Dreiländerecks Österreich-Bayern-Tschechien: Auf der Suche nach einer grenzübergreifend konsistenten Gliederung und Namensgebung

Schiller, D.[1], Knop, E.[1], René, M.[2], Doblmayr, P.[1] & Finger, F.[1]

[1]Fachbereich Materialforschung & Physik, Abteilung Mineralogie, Universität Salzburg, Hellbrunnerstrasse 34, 5020 Salzburg; [2]Academy of Sciences, Institute of Rock Structure and Mechanics, V Holešovickách 41, 18209 Prague 8; Friedrich.Finger@sbg.ac.at, Rene@irsm.cas.cz

Die nördliche Peripherie des Südböhmischen Batholiths wird etwa ab der Pfahlstörung und weiter nordöstlich auf tschechischem Staatsgebiet von Zweiglimmergraniten dominiert. Diese werden in der österreichischen und tschechischen Literatur traditionell mit dem Überbegriff „Eisgarner Granit“ zusammengefaßt (Holub et al. 1995). Auf bayerischer Seite fand der Name Eisgarner Granit bisher kaum Verwendung, obwohl hier nördlich der Pfahlstörung, in der westlichen Fortsetzung der österreichischen und tschechischen Eisgarner Granitvorkommen, ebenfalls große Massen an Zweiglimmergraniten vorliegen (Dreisesselmassiv). Ott (1988) hat die vorherrschenden grobkörnigen Zweiglimmergranite des Dreisesselmassivs auf Grund makroskopischer Kriterien in drei Haupttypen unterteilt: Haidmühler Granit, Dreisessel Granit, Steinberg Granit. Eine von Breiter (2005) im österreichischen Plöckensteingebiet bei Oberschwarzenberg neu auskartierte und als Dreiländereck Granit bezeichnete Th-reiche Variante des Eisgarner Granits stellt eindeutig die Fortsetzung des bayerischen Steinberg Granits dar (Schiller 2007) und sollte besser unter diesem Namen geführt werden. In Salzburg analysierte Proben des Steinberg Granits von der Typlokalität in Bayern ergaben ebenfalls charakteristisch hohe Th-Gehalte von 50-100 ppm.
Von Kartierungsarbeiten auf tschechischem Gebiet ausgehend haben Verner et al. (2007) den Steinberg Granit in Tøístolièník (Dreisessel) Granit umbenannt, was ebenfalls problematisch ist, denn der rund um den Dreisessel Gipfel aufgeschlossene Granit entspricht nicht dem Steinberg Typus (Ott 1992, Schiller 2007). Flächen, die auf den bayerischen Karten als Dreisessel Granit kartiert waren, wurden von Verner et al. (2007) z.T. als Plechý Granit bezeichnet, nachdem sie Segmente des nahezu kreisrunden Plechý Granitstocks in Tschechien bilden. Als konsistente grenzüberschreitende Nomenklatur für Subtypen des Eisgarner Granits im Böhmerwald im Bereich des Dreiländerecks bieten sich also folgende drei Namen an:
Steinberg Granit: für den Steinberg Granit der bayerischen Kar-