

# Geosciences Working Group 2008

The Geosciences Working Group of the Faculty 5 of the University of Bremen offers an approach to geology, palaeontology and mineralogy to the public at 7 pm on each second Thursday of the month. These meetings allow to discuss with each other and to get advice from a scientist. Beginners will benefit from getting an easy access to geosciences. These meetings include a generally comprehensible talk on geoscientific topics. Further information can be found on our homepage: [www.geosammlung.uni-bremen.de](http://www.geosammlung.uni-bremen.de)

## 10th January 2008

**Lecturer:** Werner Bartholomäus (Hannover)

**Topic:** Petrography of stony meteorites (chondrites)

**Media:** Power Point



Meteorites are solid bodies hitting the Earth. The most common type of meteorites are chondrites, a term derived from mm-size small silicate spherules that are called chondrules. Chondrites consist of silicates, like pyroxene and olivine, these are minerals that build up a major part of earthly basalt. The talk focuses on the genesis and transformation (metamorphosis) of these stony meteorites, illustrated by images of thin sections. In the end the origin of our solar system is discussed.

## 14th February 2008

**Lecturer:** Carl-Christian von Fick (Bremen)

**Topic:** The Reckumer Mühlenberg sand pits in Bremen-Farge

**Media:** Slides



In the sand pits of the Reckumer Mühlenberg in Farge, in the north of the city of Bremen, a succession of Pleistocene (ice age) sands can be studied. The pit limits have been documented during ongoing digging by photos and laquerwork specimens. This produced valuable geological documents, but also exciting and beautiful artwork produced by nature. Bedding structures are one of the examples conserved for ensuing ages. A center of this talk is a comparison of profiles documented by the laquerwork specimens with photos of the outcrop.

**13th March 2008**

**Lecturer:** Werner Liebenberg (Bremen)

**Topic:** Deposits of the ice age in the river Elbe-river Weser region

**Media:** Power Point



The landscape of the region between the rivers Elbe and Weser in northern Germany is formed by the ice ages as indicated by many remains of this time interval. The talk is only mentioning the conspicuous erratic boulders (geschiebes) of crystalline rocks that weight up to several tons and have been often used for megalithic tombs. Moreover, sedimentary rocks and their fossil content are focused in this talk – sediments and fossils that have been dislocated by ice drift. Among many others, examples are sandstones with *Scolithos* of the Cambrian period and fossil sea-urchins of the Cretaceous period.

**17th April 2008**

**Lecturer:** Michael Guhl (Bremen)

**Topic:** The early evolution of birds: *Archaeopteryx* and the feathered dinosaurs

**Media:** Power Point



Since the discovery of a single feather of the early bird *Archaeopteryx* from the Solnhofen lithographic limestone in the year 1860 and a complete specimen one year later, there is an ongoing debate about these fossils. Meanwhile ten or more complete specimens have been excavated in the state of Bavaria in southeastern Germany, coming from the late Jurassic period - about 140 million years ago. The talk refers about these findings and the current state of the research that is enriched by the recent findings of feathered dinosaurs from Early Cretaceous deposits in China.

**08th May 2008**

**Lecturer:** Dr. Barbara Donner

**Topic:** Out of paradise - Plate tectonics, climate and the evolution of man

**Media:** Power Point



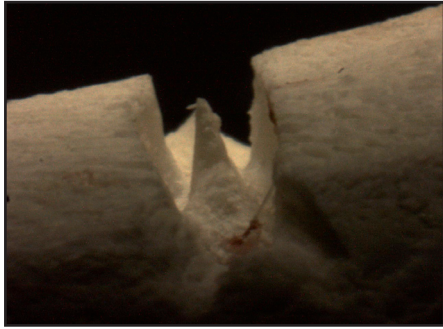
Man originates from the tree savannas of the east African highlands. Why from there? The eastern part of Africa is characterized by an enormous crack in the Earth's crust, known as the Great Rift Valley. This tectonic fault was especially active about 8 million years ago and caused regional climatic changes. This is the main issue to understand the evolution of man. What caused different groups of humans to leave Africa northwards during the last hundred thousands of years - especially during times of glaciation?

**12th June 2008**

**Lecturer:** Hans-Christian Küchelmann (Bremen)

**Topic:** Traces in bone specimens

**Media:** Power Point



This talk is about bone specimens - not on osteological questions but on changes and traces in bones. After the death of an animal a variety of so-called taphonomic processes affect a body before it might result in an archaeological or paleontological bone find. These processes determine if a bone is preserved at all and they cause traces that can be interpreted. The investigation of taphonomy might significantly contribute to a diagnosis and might add important information.

**10th July 2008**

**Lecturer:** Friedrich Hoppe (Beverstedt)

**Topic:** The geology of the Eifel synclines

**Media:** Power Point



Geologically the Eifel area is one of the oldest regions in Germany. During the Devonian period, about 390 million years ago, coral reefs existed in this region. Above all a large number of other animals and plants existed in the vicinity of these reefs, for example brachiopods, crinoids and trilobites. Later the former sea floor was lifted up, folded and the geological structures that are called Eifel synclines today, have been formed. However, the landscape of the Eifel area changed many times during the succeeding million of years, by erosion of Devonian rocks as well as by volcanic eruptions.

**11th September 2008**

**Lecturer:** Ludwig Kopp

**Topic:** Fossils in the popular belief

**Media:** Power Point



Fossils fascinated people at all times. Therefore they not only play an important role in evolutionary terms and the living Earth in general, but also from a cultural point of view and the history of science. This talk focuses on the usage and interpretation of fossils from the stone-age to modern days. In earlier times when the interpretation in palaeontology was not that well founded as today, fossils were often a part of myths and legends. In the popular belief fossils were used as a medicine or as a subject of meditation.



**09th October 2008**

**Lecturer:** Carl-Christian von Fick (Bremen)

**Topic:** Inklus from the Baltic amber – solely because they are beautiful

**Media:** Slides



Amber is a fossil resin that has been produced by trees that lived million years ago. Numerous insects, spiders and many other remains of organisms stuck on the surface of the resin. This talk focuses on aesthetically specimens from the largest and most important area where amber is found - the northern European-Baltic region. The insects from the Baltic amber forest are in between 40 and 50 million years old. The lecturer's hobby is microphotography with self-made equipment and this talk also illustrates the possibilities and limits of this method.

**13th November 2008**

**Lecturer:** Jörg Pöhl (Verden)

**Topic:** The Mien lake – a meteorite crater in Sweden

**Media:** Slides



The impacts of a meteorite that formed the Mien crater in Sweden took place in the Cretaceous period. Today, a lake is still indicating the impact site on the Earth's surface. The Mien crater has a diameter of approximately 5.5 km and is Early Cretaceous in age. Therefore this event dates back about 121 million years ago and caused an impact melted texture of the local granite, but some fragments preserved parts of the original granitic texture. At the end of the talk the Mien event is compared to other examples of impacts in Earth history, like the Nördlinger Ries in Bavaria.

**11th December 2008**

**Lecturer:** all

**Topic:** „Weser Geo-highlight of 2008“ award & Christmas celebration

**Media:** Power Point



Many Bremen citizens have collected rocks, fossils and minerals during 2008. Therefore, to add to the general warmth of the Christmas celebration, a prize will be given for the “Exhibit of the year”. The most interesting, most pretty or best prepared specimen will be voted as the “Weser Geo-highlight of 2008” and honored with a prize - no matter if it has been found the Bremen area, distant regions in Europe or even from overseas. In addition, the Geo-collection will present its new acquisitions of the year. The program of talks for 2009 will also be introduced.