

# Micropaleontology

Micropaleontological research examines fossil, predominantly unicellular organismic remains on a mostly microscopic scale; it serves the questions of

- the age dating and characterization of geological formations (biostratigraphy, biofacies),
- the formation conditions of organogenic sediments
- Paleoecology
- Paleoclimatology as well as
- deposit prospecting (including fossil fuels)

Therefore, according to the research questions listed, the micropaleontology collection holdings include all types of suitable specimens such as

- mud samples from clay sediments
- Microsections and thin sections from sedimentary rocks (microfacies) with often hundreds of microfossils
- microfossils extracted mechanically or chemically from rocks, sometimes on SEM slides and gold-vaporized, otherwise mostly in so-called microcells, as well as
- Single pieces (specimens) and series of larger object types (mm-cm)

According to the type of organism, the collection includes among others

- calcareous nannoplankton
- Radiolaria
- Dinoflagellates
- planktonic and benthonic Foraminifera (main focus)
- Conodonts
- Ostracodes from freshwater, brackish water and marine water deposits

Microscopic algal remains, spores, and pollen are preserved

partly in the Micropaleontology section and partly in the Paleobotany section. Microscopic vertebrate remains (e.g. teeth of small mammals, otoliths and teeth of fish) are altogether assigned to the respective sections of paleozoology.

Naturally, an exact number of fossils in the micropaleontological collection cannot be named, it goes into many millions, the number of specimens includes tens of thousands of inventory units from about 50 countries of the world. The collection focus is Bavaria and adjacent areas, as well as comparative and educational material from all geological eras and numerous regions. Of particular importance are the numerous types, which serve as a benchmark for species identification.