Chapter 19
ERLANGEN: The Erlangen Paleobiology Collections

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19.1 History

The palaeontological collection of the Friedrich-Alexander University (FAU) of Erlangen-Nuremberg has its seeds in the "Naturalienkabinett" of Margrave Friedrich of Brandenburg-Bayreuth. After the death of the margrave in 1763 the material was moved to the new Erlangen University (Wittern-Strezel 2007). Due to acquisitions and donations the "Erlanger Kabinett" grew massively and had to be moved repeatedly into larger premises. In the course of progressive specialization in science, the "Kabinett" was split into a mineralogical and a zoological part in 1833. Fossils stayed with the mineral collection. The ever increasing amount of material finally required the construction (from 1896 onwards) of a separate building, the future "Geologisch-Mineralogisches Institut" in the Schlossgarten of Erlangen. In the 1930s a museum was established in several rooms of this new building. The palaeontological collections on display were Franconian Mesozoic fossils and Pleistocene vertebrates from caves.

During Word Wars I and II, the collection was largely unaffected, even though it had to be removed for two years whilst the building was used as an American school in 1946–1947. An own Palaeontological Institute was founded in 1972 and established in a separate facility but the geological, mineralogical and palaeontological collections remained in the Schlossgarten until the closure of the museum in 1990 (Höfling et al. 2007). Due to space constraints large parts of the collections were then transferred to the "Naturhistorische Gesellschaft" in Nuremberg as a permanent loan.

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Fig. 19.1 Skull of a cave hyena (*Crocuta crocuta spelaea*) from the Zoolithenhöhle in the Erlangen Paleobiology Collection (Inv. 103/203)

19.2 Situation at present

The total number of objects in the palaeontological collections is currently > 50,000 specimens. A few thousand specimens, predominantly invertebrate fossils, are kept in the Schlossgarten for teaching. The remaining parts of the palaeontological collection are temporarily stored in several university buildings in Erlangen. Among those are the Pleistocene vertebrates from Franconia. A small part, mainly the material of recent scientific work, is housed in the basement of the Palaeontological Institute.

The research focus on carbonate microfacies analysis since 1972 has added numerous carbonate thin sections to the collections, which form the basis for student education as well as for the annual, international "Flügel microfacies course". Active research on older collection material focuses on Pleistocene vertebrate fossils from Franconian caves (e.g., Stiller et al. 2014). The biggest part of this collection is from the Zoolithenhöhle near Burggaillenreuth (Fig. 19.1). Another big part of the vertebrate collections derives from Hunas, near Pommelsbrunn (Rosendahl et al. 2011). The Hunas excavation commenced in 1956 and continued with interruptions until 2016. The third focal point of the Erlangen Paleobiology Collection is Mesozoic invertebrate fossils collected in the nineteenth and twentieth century. This part of the collection is intensively used for teaching (Fig. 19.2).

19.3 The future

With the employment of a permanent database administrator (C. Krause), the institute has started to catalogue and digitize its collections. The majority of Pleistocene vertebrates and more than 3000 invertebrate fossils are currently available in a MySQL database. The database has two levels of access: the public version allows

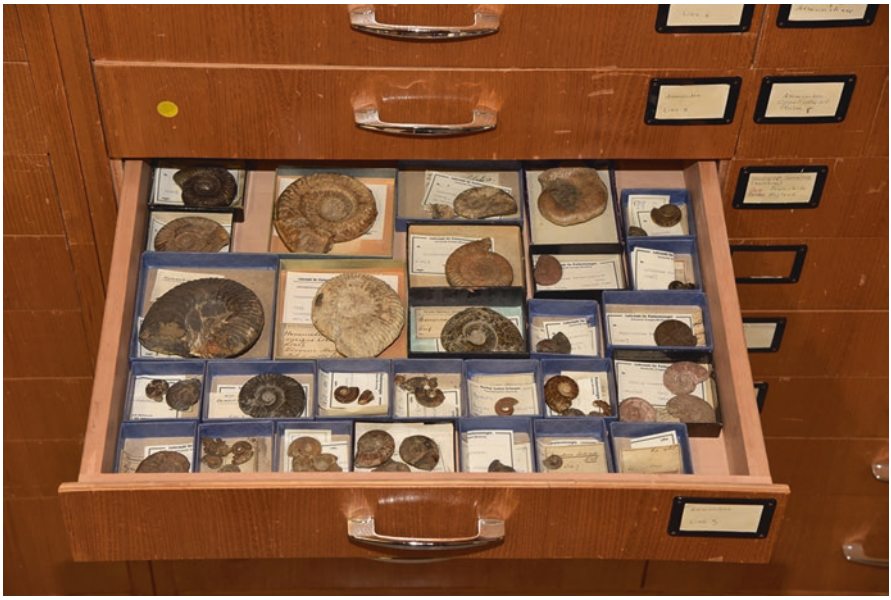

Fig. 19.2 Drawer with Early Jurassic ammonites in the study collection

data query and displays basic information, whereas the password-protected versions give access to all data and have a download function. Importantly, the digitized collection data are also available through the Global Biodiversity Information System (http://www.gbif.org/dataset/11a9393f-2fe9-4404-ad1d-3f2f6c1a6376). The current database has information on taxonomy, geography and stratigraphy. Photographs of the most important fossils are currently being linked with the data and will be mobilized as soon as possible.

Lack of space and staff for curation remain issues at Erlangen. New fossils collected during field campaigns are usually transferred to museums with curatorial staff after study. Precious material from Erlangen is already housed at the Bayerische Staatssammlung für Paläontologie und Geologie in Munich and the Senckenberg Museum in Frankfurt. The fate of the vertebrate collections is currently uncertain.

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