

Chapter 16

DORTMUND: Museum für Naturkunde der Stadt Dortmund



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16.1 General Information

The Museum was first opened to the public in 1912. Palaeontological collections date back to 1887 when the Naturwissenschaftlicher Verein Dortmund was founded and have incorporated earlier private collections of society members.

There are approximately 70,000 specimens in the entire geological collection. It contains samples of rocks, coal types, fossils, minerals (e.g. 1500 agates), and meteorites.

Additionally, the museum maintains a biological collection of extant species: 150,000 insects, 3000 other invertebrates (mainly molluscs, echinoderms, and corals), 2200 vertebrates, and a herbarium with 20,000 plants.

About 30,000 objects are of palaeontological interest. The focal point is on the local strata found in Dortmund and surrounding Westphalia. Mentionable are e.g. giant ammonites from the Cretaceous (*Lewesiceras mantelli* and *Mesopuzoia mobergi*) which weigh up to 280 kg each. Due to the historical and local context of the extraction of coal from the Ruhr area seams the museum has an extensive palaeobotanical collection of Carboniferous and Devonian plant remains.

About 800 fossils from the Messel pit (Eocene) are an extraordinary part of the collection, including one specimen of the equid *Propalaeotherium hassiacum* (Fig. 16.1). Furthermore, a number of specimens comes from the Hunsrück slate (Lower Devonian).

Additionally, there are systematic and stratigraphical sub-collections with specimens from the Precambrian to Quaternary and subfossil species. A synoptic overview with the approximate number of specimens in each category can be found in Jansen & Steininger (2002, p. 29).

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Fig. 16.1 *Propalaeotherium hassiacum* from a palaeontological excavation campaign of the museum in the Messel pit near Darmstadt, unearthed in 1978



The collection is supervised by one geoscientific curator and maintained by two geological preparators.

The collection itself is stored in three depots with a total space of 165 m². Preparation and exhibition arrangements are mainly carried out in two rooms with less than 95 m² in total.

The Museum für Naturkunde is a municipal museum and part of the Kulturbetriebe, an owner-operator of the municipality of Dortmund. Due to this, it has a limited financial budget. Nevertheless, an extensive modernisation is in progress at the deadline of this chapter. This includes not only a building restoration but also the renewal of the permanent exhibition.

16.2 History

In the nineteenth century, Dortmund was a hotspot of industrial development in Germany. The social structure was agriculturally shaped but rapidly changed into a big city community with a high rate of immigrants from all over Europe. The heavy industry with its factory fumes, noise and space requirements had also direct consequences for the environment, just as for the fauna and flora. The progressive loss of homeland, forests, and countryside motivated some citizens of Dortmund to campaign for natural history. On April 2nd 1887 a small number of people met in an inn called “Kaiserhalle” to found the Naturwissenschaftlicher Tauschverein. The founding members contributed their own private collections of fossils, rocks, minerals, plants, insects etc.—so the basis of the present-day museum collections was provided. Initially, the centrepiece consisted of extant insects and minerals. Members frequently met in the “Kaiserhalle” to discuss and exchange specimens. In 1888, this kind of casual club became the character of an official society and was re-named to Naturwissenschaftlicher Verein in Dortmund. In the next twenty years, the

society grew and became more and more active in nature protection. Additionally, from the very beginning on there was a strong interest in education, too. According to this, the society lent collection exemplars to schools and gave public talks.

In the beginning of the twentieth century, the teacher Edgar Weinert took care of the natural history collection of his school and was in close interaction with the society. His fund grew so extensively that Weinert proposed the foundation of a municipal museum to the city of Dortmund in collaboration with the Naturwissenschaftlicher Verein. Finally, in 1912 the urban administration bought an adequate house in the Viktoriastraße to realize Weinert's vision. He became the first director of the institution. From now on, the history of the museum's palaeontological collection is part of the history of the museum itself.

The museum was very popular and wealthy citizens who were interested in natural history bought exhibits and donated them to the institution. A skeleton of *Ursus spelaeus* was composed from bones of different adult individuals from a cave near Trieste (Italy) and was a highlight of the exhibition (Fig. 16.2).

22 years later, in 1934, the house in the Viktoriastraße was eventually too small, and the museum moved into a bigger building in the Balkenstraße.

World War II was completely fatal for the entire city of Dortmund. As it was a major place of industrial production, it became a target of several British and



Fig. 16.2 Historic photograph of the former exhibition rooms in the Viktoriastraße (1912) with the mounted skeleton of *Ursus spelaeus*. The martial posture of the bear was typical for museum presentations in these days



Fig. 16.3 Examples for typical WWII damages in the collection: two fritted specimens of *Dactylioceras* sp. (*below*) from the Upper Jurassic of Eichstätt (registration no. 3508 and 3510). All further information and the original labels got lost. For comparison an unaffected specimen of *Perisphinctes* sp. (*above*) from the same area (no. 9181) that shows the characteristic colours of the rocks coming from this Lagerstätte

American air raids. The museum was struck also, and up to 90% of the collection got lost. Today, there are still some samples in the palaeontological collection that show distinct fire damages (Fig. 16.3). Furthermore, many information on the specimens, both destroyed and extant, got lost together with inventory registers and corresponding files. Thanks to the zealous contribution of the citizens, the municipal administration and the society, the re-opening was possible soon after the war.

In 1953, the building in the Balkenstraße became too small again. At this time, several alternatives were in discussion. However, it took over two decades until a new concept was finally concluded: a brand new building should be erected in the north of the city.

From 1974 to 1979, a number of giant ammonites (*Lewesiceras mantelli* and *Mesopuzoia mobergi* from Turonian strata) with weights up to 280 kg were found during the building of a metropolitan railway (partially underground). They came to the museum and are among the most spectacular objects for the visitors until today.

In the late 1970s, the museum organized palaeontological excavations in the Messel pit near Darmstadt. Several Eocene specimens (mainly fish and plant remains) were recovered and prepared. One highlight of the collection is a complete individual of *Propalaeotherium hassiacum* (Fig. 16.1) discovered in 1978.

For arrangement of the permanent exhibition in the new building the collection was extended by several objects. The main focus was on display quality and uniqueness, not on the scientific importance – a point of view that originates from the very first days of the collection in 1887 when education and public presentation were the motor to the foundation of the society.

On May 24th 1980, the building at the Fredenbaumpark in the north of Dortmund opened its doors to the public. The geological and palaeontological exhibition was located on the upper floor, whereas the biological exhibition and the aquarium were on the ground floor. The ground plot of the building shows an interlocking of different octagonal figures that resemble mineral structures.

According to the didactic concept, which was status quo until 2014, visitors could pass through Earth's history from the Precambrian to the Quaternary. They could learn something about the evolution of life based on fossils, dioramas, and life scenes. In a central atrium, there were original-sized reconstructions of *Iguanodon* and *Styracosaurus*—in the way their habitus was supposed to have looked like in the 1980s. An overview of the history of the museum until 2012 can be found in Museum für Naturkunde (1987, 2012).

During the production of this book chapter, the museum is once again in an intensive stage of re-construction. After 35 years the building technology, electricity and the didactic concept had become outmoded. Consequently, the house has been closed in September 2014 for visitors. The new concept focuses on accessibility for all people, regardless if disabled or not. The scientific focus will be on the local geological situation. Following the working title “lift to the past”, the exhibition concentrates on those stratigraphic units that can be found below ground under the museum: Quaternary, Cretaceous, and Carboniferous. The geology will be complemented with excursions to space (evolution of the solar system) and mineralogy.

Most of the palaeontological specimens that will be visible in the new exhibition come from the existing collection and the former exhibition. An example are the Fossil tree discs from the Petrified Forest in Arizona (*Araucaria*; Triassic) and other locations (Fig. 16.4).

Some outstanding new acquisitions were made. For example a private collection of plants and invertebrates from Hagen-Vorhalle (Upper Carboniferous) could be purchased in 2016, including one insect (Palaeodictyoptera) and one arachnid (Trigonotarbida). Furthermore, one of the six known Carboniferous Eurypterids from the Ruhr area came to the museum in 2017. The most prominent object in the new exhibition will be the mounted skeleton of a female *Mammuthus primigenius* from the North Sea area.

Fig. 16.4 Twelve disks of petrified wood in the atrium of the museum. Most of them come from the Petrified Forest in Arizona. In 2017, they were the first objects built-in for the new permanent exhibition



16.3 Research

From the beginning, the palaeontological collection in Dortmund was an instrument for didactics and educational work. Several specimens were acquired for exhibition, both permanent and special shows. Until some years ago, the museum's staff was very small in number and research nearly impossible. An exception to this worth mentioning are the studies of a former museum's director on gold deposits of the Rhenish Slate Mountains.

The "new generation" of scientists at the museum endeavours to establish a sound basis for more research to be done in the near future. This includes the setup of a digital database and consequent inventory of numberless specimens.

Close co-operations are promoted with local nature conservation societies and citizen scientists. Since 1967, a scientific journal ("Dortmunder Beiträge zur

Landeskunde”) is published by the museum. This journal includes articles from professional as well as from citizen scientists on regional flora, fauna, geology and palaeontology.

16.4 Educational Work

Educational work plays a prominent role since the foundation of the museum. Some years before the current renovation, educational programmes had been modernised and new programmes established. Lastly, more than 500 courses, workshops and guided tours have been performed each year. After the re-opening of the museum, these programmes will be up-dated and adapted to the new permanent exhibition again.

In the course “nature experience“, pre-school children visit the museum for ten subsequent weeks and learn about birds, insects, dinosaurs, minerals and coal mining, among others. Groups of children and teenagers of all ages can choose among a wide variety of courses and guided tours on such diverse topics as human evolution, freshwater ecology, biology, ecology and evolution of specific animal taxa such as bats or dinosaurs, the formation of stone coal or life during the Pleistocene. Very popular is also the possibility for children to celebrate one’s birthday in the museum. During public holidays, special programmes for children lasting several days are offered.

A group of private mineral and fossil collectors meets regularly in the museum and organises public talks on geological, palaeontological and mineralogical topics.

References

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