

Chapter 21

DARMSTADT: The Zoological Collection at the Department of Biology/TU Darmstadt

History and Present State of the Zoological Collection

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Abstract As the main part of the zoological collection at the Department of Biology/TU Darmstadt had been destroyed during World War II, a rebeginning started in the 1950s and 1960s. After a slow expansion during the following 25 years, the collection has experienced a permanent and substantial increase since 1988. Nowadays, it consists of more than 1500 vertebrate preparations, mainly European birds and mammals, completed by more than 20,000 invertebrate preparations, mainly arthropods and molluscs. Scientific models and a large bird egg collection are further parts of it. Several vertebrate exhibits are shown in display cases, but a large part is stored in a shelf system and in steel lockers. The collection plays an important role for the education of bachelor students, but it also offers traineeships for apprentices in taxidermy profession and for interested pupils.

Keywords TU Darmstadt • Zoological collection • Vertebrate and invertebrate preparations • Scientific models • Egg collection • Exhibition

Today, the zoological collection with exhibition and taxidermy is a central institution at the Department of Biology of the Technische Universität Darmstadt. The old Institute for Zoology with the collection was located in the loft of the university's main building before it was moved to a casern building, also under the roof, in 1940. In World War II, the main air raid on Darmstadt was in the night of the 11/12 September 1944, when over 70 % of the buildings were totally destroyed, including the Institute for Zoology (Information from: W. E. Ankel, 1945: *Das Zoologische Institut Darmstadt. Nekrolog, der Erinnerung an Margit Gaydoul, unseren Lehrling, gewidmet*). After the war, most of the Darmstadt Institutes were rebuilt. So, although the collection includes some older exhibits (nineteenth

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century), it is relatively young, especially in comparison with other zoological collections. Huge parts of the collections are dated in the 1950s and 1960s of the twentieth century when the Institute for Zoology of the Technische Hochschule Darmstadt (the renaming in Technische Universität Darmstadt took place in 1997) was located in the Roßdörfer Straße 140.

In 1976, the Institute for Zoology with the collection moved into the current location, a new building at the campus “Botanical Garden”, Schnittspahnstraße 10, 64287 Darmstadt, Building B2/03, first floor. After the move, the collection expanded only partially, especially in the part of invertebrates and models. But also skeletons, skulls and mounted birds and mammals were purchased or made by Bernd Amelunxen, the employed taxidermist from 1974 to 1987. In the middle of the 1980s, a small exhibition for supporting the zoology studies was established.

Since 1988, with the employment of the current taxidermist and collection manager, Berend Koch, the collection expanded permanently, especially the bird and mammal collections. In addition, the workshop of the Department of Biology designed and produced seven modern large display cases between 1998 and 2014 (Figs. 21.1 and 21.2). Together with eight commercially produced display cases (Figs. 21.3 and 21.4), it is a worth seeing exhibition. With the substantial renovation 2010/2011, the attractiveness of the exhibition was obviously heightened. With the displayed exhibits of the zoological collection, our students and the interested public as well have the possibility for a fascinating view into biodiversity. The exhibition is also a very useful support for the biology studies’ module “Biodiversity and Phylogeny”, showing not only animals but giving also information about the natural range of the displayed species in Europe and worldwide.

The collection room (42 m²) and the taxidermy laboratory (29 m²) with an included office cabin were also substantially renovated in 2010. After installation of a mobile shelving system, the collection can be used more effectively and the service is much easier. Materials for the practical courses are stored in steel lockers on the ground floor.

Today, the collection consists of about 25,000 exhibits, including ca. 1500 vertebrate preparations and a bird egg collection with ca. 7000 items. The main focus is on European birds (full mounts, study skins, skulls/skeletons) and mammals (full mounts, study skins, skulls/skeletons), but also wet preparations of reptiles, amphibians and fishes. The invertebrates are mainly dry or wet preserved arthropods and molluscs. Apart from the local insect fauna, we have small collections from alpine and Mediterranean regions. A collection of scientific models completes the educational aspect.

The main part of the collections (vertebrates, wet preparations, microscopic preparations) has been digitally recorded and has been transferred to a database.

Because of the departments’ main focus “Synthetic Biology”, internally the collection is mainly used for education in the bachelor studies but we promote some extern research projects on taxonomy and biodiversity from time to time. It is also possible for museums or institutions to get items out of the collection for research, educational purposes or special exhibitions temporary as a loan.

The zoological collection and especially the taxidermy play an important role in the public relation of the Department of Biology.



Fig. 21.1 Shorebird Mounts

Independent on the lack of infrastructural circumstances like constant temperature and humidity, the quality of conservation of the exhibits is the most important component of a collection. To be up to date with conservation techniques or to develop new ones, e.g. new methods for micro mammal taxidermy, is essential. It is always the goal to improve the quality of the mounts (gold medals in World and European Taxidermy Championships). To share this knowledge and to keep the future of the collection quality in mind, traineeships are offered for apprentices in taxidermy profession and also for interested pupils. Presentations about taxidermy are offered for whole school classes.



Fig. 21.2 Owl Mounts



Fig. 21.3 Finch Mounts

Fig. 21.4 Canid Mounts

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