

Chapter 18

EICHSTÄTT: The Jura-Museum Eichstätt



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18.1 General Information

The present collection was founded in 1844 as a teaching and research collection of the Bishop's Seminary in Eichstätt (Heiler 2014, Kölbl-Ebert 2016). Since 1970, it is curated by staff of The Bavarian Natural History Collections (*Staatliche Naturwissenschaftliche Sammlungen Bayerns*, SNSB). It is constantly enriched by palaeontological excavations in the Solnhofen limestone region of Bavaria (Germany; see Viohl & Zapp 2006, Ebert et al. 2015). The collection encompasses some 100,000 objects (zoological, entomological, botanical, mineralogical and palaeontological specimens as well as historical teaching aids). Its main focus, however, are the fossils of the Solnhofen limestone, for which it is the worldwide largest research collection with some 20,000 specimens. The collection is especially rich in fossil fishes (ca. 6500 specimens) (Fig. 18.1). There has been no damage through World Wars I and II.

Curatorship by personnel of the SNSB ensures professional standards for housing, ordering, documentation and accessibility (Kölbl-Ebert 2014). The collection personnel also includes a preparator. Financial grants by the *Volkswagenstiftung* (I/84 636) and the *Deutsche Forschungsgemeinschaft* (Ko 1682/5-1) have enabled the collection to increase staff at least temporarily and for specific tasks, and to purchase necessary equipment including a modern microscope and camera, which is available to guest-scientists. Most recently, the collection is promoted via specialist internet portals to increase visibility for the scientific community (e.g. <http://www.gbif.org/dataset/44c26867-9738-4ac5-9213-f612b0ef3197>; see also Ebert et al. 2017).

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Fig. 18.1 *Macrosemimimus fegerti*, JME-ETT3956, from Ettling (MarktPförring, Bavaria) (© Jura-Museum Eichstätt)



Fig. 18.2 The Eichstätt specimen of *Archaeopteryx lithographica*, JME-SOS3570a (© Jura-Museum Eichstätt)



18.2 Research

The collection is available as a research tool and many international guest scientists work regularly in the collections of the Bishop's Seminary Eichstätt—on the Eichstätt specimen of *Archaeopteryx lithographica* (Fig. 18.2), the dinosaur *Juravenator starki* Göhlich & Chiappe 2006, pterosaurs, lizards, sphenodontids and turtles, fish diversity, fossil crustaceans, insects or squids—all from the Upper Jurassic time period. During the last decade, more than a hundred geoscientific publications by guest scientists and collection personnel appeared using material of the Eichstätt collection (see the annual reports of the museum included in the SNSB reports at <http://www.snsb.mwn.de/index.php/de/jahresbericht>. The list of publications is fully given in the annual reports in ARCHAEOPTERYX, i.e. the house journal of the Jura-Museum Eichstätt.)

Currently, the collection houses 73 holotypes and seven neotypes, several more are in print or in preparation. Historical hand catalogues exist for part of the fossils and for the zoological specimens. Some 15,000 fossils of the Solnhofen limestone have been documented in an electronic inventory, 6500 of them—all fossil fishes—

being fully digitized. (For detailed information see: <http://ides.snsb.info/>; Ebert et al. 2017, Triebel et al. 2014.)

The collection is also frequently used as locus for various conferences and workshops, Eichstätt being rather attractive as a conference venue due to the beautiful location, the comparatively cheap accommodation and the logistic aid, which the Bishop's Seminary has to offer. The conferences include the Archaeopteryx Conference "The Beginning of Birds" (1984), The fourth International Symposium on Lithographic Limestone and Plattenkalk (2005), the annual meeting of the International Commission on the History of Geological Sciences (INHIGEO) "Geology and Religion" (2007; see Kölbl-Ebert 2009), The fourth Symposium on Mesozoic and Cenozoic Decapod Crustaceans (2010) and The first Workshop on Fossil Fishes of the Solnhofen Archipelago (2012). Specialist groups interested in the collection are welcome to organize their meetings in Eichstätt.

18.3 Educational Work

The Jura-Museum Eichstätt (Fig. 18.3) is the public window of the Eichstätt Natural History Collection. The museum currently welcomes around 50,000 visitors per year (ca. 19,000 of them school children). It was founded in 1976 as a taxonomically arranged permanent exhibition (700 m²). In the 1990s, special exhibitions (90 m²) once or twice a year were added as well as a few computer installations.



Fig. 18.3 The main hall of the Jura-Museum Eichstätt (© Jura-Museum Eichstätt)

Since 2006, refurbishments of the permanent exhibition have brought ecological, evolutionary and biomechanical topics into the museum (Kölbl-Ebert 2007, 2010, 2011). The exhibitions thus currently address the evolution of birds and comparison with other flying animals (pterosaurs, bats, insects), the ecology of the Upper Jurassic Solnhofen Archipelago, biomechanics of fossil fishes, convergent evolution of fishes, squids and ichthyosaurs, the Ettlting excavation as an example for research at the Eichstätt collection, reefs in the Jurassic and comparison with reefs throughout Earth's history, "living fossils" (gars, horseshoe crabs, nautilus) and modern coral reefs in the aquarium. Models, interactive elements and media stations help to understand the fossils. Museum texts are bilingual (German and English).

Around 550–600 guided tours per year, dedicated to specific topics, where visitors are engaged in dialogue and are allowed to touch selected objects, are run by about a dozen freelance museum guides, who have been trained by the museum personnel. The museum offers various activities and fieldtrips, lectures and workshops (see <http://www.jura-museum.de>).

Thanks to two EU-funded museum education projects (Natural Europe (ICT PSP programme); Geovillages (Grundtvig Adult Educational European Project)), the museum also provides innovative educational features such as e-learning pathways for teachers (<http://www.natural-europe.eu/educational/>), electronic media in the exhibition and a free-download audio drama on its website featuring cutting edge palaeontology wrapped in a thrilling time travel story (Kölbl-Ebert & Matterstock 2013).

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