Chapter 4
National and International Collection Networks

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Abstract In the last few years, the number of networks of scientific collections, which by definition include zoological collections, has increased enormously. The resulting increased visibility of these collections' holdings has made it possible to considerably improve not only awareness and appreciation of them but also their usability and use as scientific resources.

This article provides a brief overview of the most important zoological and natural history collection networks and focuses especially on university collections, which represent an important part of scientific infrastructures for research and teaching.

Keywords Scientific infrastructure • Research • Teaching • University collections

4.1 Introduction

In the last 20 years, the awareness and the perception of research museums and scientific collections in the scientific community have fundamentally changed, largely due to the increasing use of the Internet. At the same time, new technical developments have significantly facilitated the establishment of networks.

These developments made it possible to present publicly inaccessible or practically unknown collections on the Internet and thereby to the scientific community. Initially, this took the form of simple contact information or collection descriptions with representative illustrations. Later, web-based databases and repositories appeared and made interregional cooperation possible. These were followed by portals and information systems covering certain regions or kinds of collections. Noteworthy examples include ZEFOD, Zentralregister botanischer und zoologischer Forschungssammlungen in Deutschland,[1] the central register of botanical and zoological research collections in Germany; the Information System

[1] http://zefod.genres.de (Retrieved on 27 July 2015).

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on Collections and Museums at Universities in Germany[2]; and GBIF—the Global Biodiversity Information Facility.[3] The visibility of the collections and their holdings has made it possible to not only considerably increase awareness of them but to improve their usability and use as scientific resources as well.

Documentation on the Internet shows that, in Germany, a large share of zoological collections is held at universities. The database of the Coordination Centre for Scientific University Collections in Germany alone lists 49 collections with zoological holdings, including three forest zoology collections.[4] The first university collections, like the zoological collection of the Friedrich-Alexander-Universität Erlangen-Nürnberg, were already established in the eighteenth century (Herrmann and Weidemann 2007). No one knows how many objects are actually being kept at universities, but we do know that among them are a large number of type specimens, underscoring the importance of academic collections. Even though many objects and even entire collections have been integrated into other holdings, including nonuniversity holdings, or have been transferred to organisations with a different organisational form, such as in the case of the Berlin Museum für Naturkunde (Museum of Natural History),[5] today academic collections continue to represent an important scientific infrastructure for research and teaching.[6] The realisation that academic collections must be retained as decentralised infrastructure, with respect for their diversity and specific local characteristics, has triggered an enormous variety of activities, especially in the last few years.[7] For this reason, one section of this article is dedicated to university collections.

[2]http://www.universitaetssammlungen.de, English version: http://www.universitaetssammlungen.de/?setLocale=en (Retrieved on 27 July 2015).

[3]http://www.gbif.org (Retrieved on 27 July 2015).

[4]http://portal.wissenschaftliche-sammlungen.de (Retrieved on 27 July 2015).

[5]Shortly before its 200th anniversary on 1 January 2009, the Museum für Naturkunde Berlin was transformed into a public foundation and admitted to the Leibniz Gemeinschaft. The museum is the successor to three museums established in 1810 when the Berlin University on Unter den Linden was founded: the Anatomical-Zootomical Museum, the Mineralogical Museum (from 1814) and the Zoological Museum.

[6]See the web portal Wissenschaftliche Sammlungen, http://portal.wissenschaftliche-sammlungen.de (Retrieved on 27 July 2015).

[7]See news on that website of the Coordination Centre for Scientific University Collections in Germany (in German): http://wissenschaftliche-sammlungen.de/de/nachrichten/aktuelles (Retrieved on 27 July 2015).

4.2 Networks of University Collections

At the turn of the twenty-first century, many different actors and stakeholders came together to cooperatively develop concepts and strategies and to expand the use of university collections. Initially, interest in these collections as academic cultural heritage predominated; later, more emphasis was put on scientific aspects.

The first network in Europe was Universeum—Academic Heritage and European Universities: Responsibility and Public Access.[8] Universeum was founded at the Martin Luther University Halle-Wittenberg in April 2000. Twelve of the oldest and most renowned European universities were involved in the project.[9] The network members "discussed and passed the Declaration of Halle which, for the very first time, defined the common aim to facilitate the access of a broader public to the—often hidden—treasures of the old European academic institutions" (Bremer 2001): "Universities must acknowledge their wide cultural roles. Academic collections and museums provide special opportunities for experiencing and participating in the life of the university. These collections serve as active resources for teaching and research as well as unique and irreplaceable historical records. In particular, the collections of the oldest European universities provide windows for the public on the role of the university in helping to define and interpret our cultural identity. By valuing and promoting this shared academic heritage, our institutions demonstrate a commitment to the continued use of these resources by a broad public".[10] Today, the network Universeum—European Academic Heritage Network has 120 members from 21 countries, and it is "concerned with academic heritage in its broad sense, tangible and intangible. It aims at the preservation, study, access and promotion of university collections, museums, archives, libraries, botanical gardens, astronomical observatories, etc".[11] The activities of its working groups are central to this effort, namely, Recent Heritage of Science (2012) and Databases and Portals (2015).[12]

While Universeum has concentrated on the European region, the International Committee for University Museums and Collections (UMAC),[13] a committee of the International Council of Museums (ICOM),[14] is active worldwide: "UMAC was founded in 2001 to preserve and provide access to a significant part of national and

[8]Now Universeum—European Academic Heritage Network, see: http://universeum.it (Retrieved on 27 July 2015).

[9]University of Amsterdam, Humboldt University of Berlin, Bologna University, University of Cambridge, University of Groningen, Martin Luther University of Halle-Wittenberg, University of Leipzig, Royal College of Surgeons of England, University of Oxford, University of Pavia, Uppsala University, Utrecht University.

[10]Declaration of Halle, 16 April 2000.

[11]http://universeum.it (Retrieved on 27 July 2015).

[12]See http://universeum.it/working_groups.html (Retrieved on 27 July 2015).

[13]http://icom.museum (Retrieved on 27 July 2015).

[14]http://umac.icom.museum (Retrieved on 27 July 2015).

international heritage with its many unique and unusual collections".[15] Like Universeum, the network meets once a year to exchange expertise in the field.

A nationwide movement addressing the concerns of collections has existed in Germany since 2010. It has its origins in the symposium "University Museums and Collections in Academic Practice. Tasks—Concepts—Perspectives" held that year at Humboldt-Universität zu Berlin,[16] which triggered developments that have had a measurable impact upon the work in and with university collections in recent years. The network represents several million objects that are currently spread throughout over 900 collections at 85 universities.[17] Collection representatives, custodians and coordinators are represented in the network, where they work together to develop strategies to ensure the continued existence of academic collections and to more actively use collections in research, teaching and education. This community meets once a year for a conference at which current developments, projects and questions important to collections are presented and discussed.[18]

The network is managed, maintained and supported by the Coordination Centre for Scientific University Collections in Germany,[19] which was established by the Federal Ministry of Education and Research in 2012 following a recommendation by the German Council of Science and Humanities on scientific collections as research infrastructures.[20] The goal is to further develop university collections as decentralised research infrastructures as well as the establishment of a sustainable interdisciplinary and cross-site network.

In addition, local networks currently exist at some traditional German universities with a large number of collections. These networks take the form of working groups and strive to strengthen professionalisation of the work with and in collections and to enable the permanent use of and access to them.

The Society for University Collections (Gesellschaft für Universitätssammlungen e.V.), founded in 2012, is dedicated to fostering and promoting university collections and represents the common interests of such collections to decision-makers in science and research policy, external sponsors and the general public.[21]

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[15]See the brochure about UMAC at http://publicus.culture.hu-berlin.de/umac/pdf/UMACFlyer.pdf (Retrieved on 27 July 2015).

[16]Universitätsmuseen und –sammlungen im Hochschulalltag. Aufgaben – Konzepte – Perspektiven, http://universitaetsmuseen.hu-berlin.de (Retrieved on 27 July 2015).

[17]See key figures: http://portal.wissenschaftliche-sammlungen.de/kennzahlen/1/global (as of July 2015).

[18]http://wissenschaftliche-sammlungen.de/de/netzwerk/netzwerk-universitaetssammlungen (Retrieved on 27 July 2015).

[19]http://wissenschaftliche-sammlungen.de (Retrieved on 27 July 2015).

[20]The German Council of Science and Humanities, Recommendations on Scientific Collections as Research Infrastructures, Drs. 10464-11, Berlin 28 January 2011, available at http://www.wissenschaftsrat.de/download/archiv/10464-11.pdf (German) and http://www.wissenschaftsrat.de/download/archiv/10464-11-11_engl.pdf (English) (Retrieved on 27 July 2015).

[21]http://gesellschaft-universitaetssammlungen.de (Retrieved on 15 September 2016).

4.3 Network of Scientific Collections

The network Scientific Collections International (SciColl), which was launched and established between 2011 and 2013, goes far beyond the interests and concerns of natural science collections. SciColl is "a global consortium devoted to promoting the use and impact of object-based scientific collections across disciplines, including archaeology, biology, biomedicine, earth and space sciences, technology and others".[22] A central tenet of the network is "that the next generation of interdisciplinary research needs access to collections across traditional disciplinary boundaries"[23]: "we will facilitate a new generation of interdisciplinary research that relies on collections in different fields".[24]

4.4 Networks of Natural History Collections

There is a variety of networks of natural history collections. In addition, a great number of natural science organisations and societies have special working groups that address the topic of collections, for example, the German Ornithologists' Society's (Deutsche Ornithologen-Gesellschaft e.V.) working group on ornithological collections[25] and the curators' working group of the Society for Biological Systematics (Gesellschaft für Biologische Systematik—GfBS),[26] as well as digital networks like the DNA Bank Network, whose main goal is to improve access to well-documented genetic resources for biodiversity research,[27] resources which are also important for zoological collections. As it is not possible to cover all existing organisations in this short article, only the most relevant networks established to promote and support natural history collections will be listed.

Two networks at the national level should be mentioned: The German Natural History Research Collections Consortium (Deutsche Naturwissenschaftliche Forschungssammlungen—DFNS)[28] comprises more than 100 million objects in natural history collections. The association promotes cooperation and coordination between its member institutions.[29] The Humboldt Ring is an association of six natural history institutes and collections in Germany[30]: Its "primary strategic goal is

[22] http://scicoll.org/about.html (Retrieved on 27 July 2015).

[23] http://scicoll.org/research.html (Retrieved on 27 July 2015).

[24] http://scicoll.org/about.html (Retrieved on 27 July 2015).

[25] http://www.do-g.de/fachgruppen (Retrieved on 27 July 2015).

[26] http://www.gfbs-home.de (Retrieved on 27 July 2015).

[27] http://www.dnabank-network.org (Retrieved on 27 July 2015).

[28] Deutsche Naturwissenschaftliche Forschungssammlungen (DNFS), http://www.dnfs.de (Retrieved on 27 July 2015).

[29] http://www.dnfs.de/seite/mitglieder (Retrieved on 27 July 2015).

[30] http://humboldt-ring.de/index.php/de/mitglieder (Retrieved on 27 July 2015).

raising recognition of the national and international significance of the Humboldt Ring, while at the same time retaining federal autonomy [. . .] primary substantive goal is to promote and expand innovative, integrative research, including the necessary research infrastructure in biodiversity and Earth system research".[31]

At the European level, the collections are represented by the Consortium of European Taxonomic Facilities (CETAF), a consortium of scientific institutions—natural history and zoological museums, research institutes and botanical gardens—in Europe. The aim is "to promote training, research and understanding in systematic biology and palaeobiology, and facilitate access to information (collections) and the expertise of its member institutions across Europe".[32]

The Biological Collection Access Service for Europe (BioCASE) "is a transnational network of biological collections of all kinds. BioCASE enables widespread unified access to distributed and heterogeneous European collection and observational databases using open-source, system-independent software and open data standards and protocols".[33]

The Society for the Preservation of Natural History Collections (SPNHC) was founded in 1985 and "is an international society whose mission is to improve the preservation, conservation and management of natural history collections to ensure their continuing value to society".[34] Today the network has more than 600 members around the world.

The International Committee for Museums and Collections of Natural History (NATHIST), a committee of the International Council of Museums (ICOM), is also active worldwide. It is "concerned with the conservation of biological diversity in museum collections as well as in the natural environment, the scientific study of the world's natural heritage and the education of the wider public through museum displays, conferences, field trips, etc".[35] The interests and concerns of natural history collections are also additionally represented in the Natural History Collections Working Group of the ICOM Committee for Conservation (ICOM-CC). It "promotes the discussion and dissemination of information on ethical and technical issues concerning the acquisition, preservation and conservation of natural history objects and collections".[36]

[31] http://humboldt-ring.de/index.php/de/ziele (Retrieved on 27 July 2015).

[32] http://www.cetaf.org/about-us/what-cetaf (Retrieved on 27 July 2015).

[33] http://www.biocase.org (Retrieved on 27 July 2015).

[34] http://www.spnhc.org (Retrieved on 27 July 2015).

[35] http://icom.museum/the-committees/international-committees/international-committee/international-committee-for-museums-and-collections-of-natural-history (Retrieved on 27 July 2015).

[36] http://www.icom-cc.org/33/working-groups/natural-history-collections (Retrieved on 27 July 2015).

4.5 Networks Open to All Types of Collections

The largest network that is open to all types of collections is the International Council of Museums (ICOM), which now has 35,000 members, 118 national committees, 30 international committees, 5 regional alliances and 20 affiliated organisations.[37] Today it has a presence in 136 countries and territories. ICOM Europe is one of its five regional alliances.[38] Europe also hosts the Network of European Museum Organisations (NEMO).[39] It was founded "as an independent network of national museum organisations representing the museum community of the member states of the Council of Europe".[40]

The largest national committee of the International Council of Museums by membership is the German committee, with over 5000 members, making it the largest organisation of museums and museum specialists in Germany.[41]

The German Museums Association (DMB), founded in 1917, is the oldest association representing the interests of all museums.[42] The DMB's central working organs are its special interest groups and working groups. One of its special interest groups is concerned with natural science museums.

4.6 Closing Remarks

All of these networks, large and small, virtual and physical, not only contribute to increasing awareness and appreciation of collections but also to a considerable improvement in scientific infrastructures.

The work that they do could hardly be carried out by individuals or single collections; such work requires alliances of organisations that allow many different actors to contribute their expertise. Such networks are essential to the professionalisation of collections work. The more we are able to successfully intermesh existing infrastructures to create a sustainable, superregional network that cuts across disciplinary and geographical boundaries, the better we will be able to utilise the potential of scientific collections for research, teaching and education.

[37] http://icom.museum/icom-network (Retrieved on 27 July 2015).

[38] http://www.icom-europe.org (Retrieved on 27 July 2015).

[39] http://www.ne-mo.org (Retrieved on 27 July 2015).

[40] http://www.ne-mo.org/about-us.html (Retrieved on 27 July 2015).

[41] http://www.icom-deutschland.de (Retrieved on 27 July 2015).

[42] Deutscher Museumsbund, http://www.museumsbund.de (Retrieved on 27 July 2015).

References

Bremer T (2001) Foreword. In: Bremer T, Wegener P (Coordinators) Alligators and astrolabes. Treasures of University Collections in Europe, Halle

Herrmann K, Weidemann B (2007) Zoologische Sammlung. In: Andraschke U, Ruisinger MM (eds) Die Sammlungen der Universität Erlangen-Nürnberg, catalogue for the exhibition Ausgepackt. Die Sammlungen der Universität Erlangen-Nürnberg, Stadtmuseum Erlangen, Nuremberg, pp 213–222