

SEVENTEEN YEARS WITH JARS: A CONCLUSION AND A SMALL OVERVIEW ABOUT PLANS

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There were more than 348 natural history collections and 179 medical collections in Germany compared with 68 natural history collections in France (Charon 2014). More than half of these have parts of the collections stored in fluids, and thus they will all use jars and will all face similar problems (e.g., regularly needing new jars and effective methods for sealing them).

After 17 years of working with jars, moving wet collections, realizing the KUR-Projekt (Neuhaus et al. 2012), and conducting many workshops, I would like to give a short overview about future ideas and plans and a brief conclusion of my point of view.

In most of the wet collections I have visited or worked with, such as the ones of the Museum für Naturkunde (MfN), the majority of the jars used are glass stopper jars (e.g., the Spider wet collection at the MfN shown in Fig. 1). However, such collections also contain a wide variety of other types of glass and plastic containers with a range of closures, including glass plates, plastic snap or screw-on lids, and jars sealed with Picein, an asphaltum–rubber compound (Simmons 2014). Some closures and containers are efficient and durable for the long-term preservation of specimens, and in the past 10 years, both soda glass with twist-off lids and borosilicate glass jars have been used. Yet the question always arises related to the management of these collections: which are the best? Is it preferable to actually use borosilicate glass jars, reputed to be effective but expensive, or is it enough to consider soda–lime twist-off glass jars, which are less expensive?

To answer the question, it does not seem sufficient to consider only the price and availability of these containers. Other factors are important, including the need to ensure a proper seal, consideration of the jar contents, and the need for institutions to share resources. For more than 100 years, collection assistants, curators, and collection managers have been dealing with jars and have developed a large pool of knowledge and experience. While there are existing networks to share this knowledge, such as the Society for the Preservation of Natural History Collections (SPNHC) wiki (<https://spnhc.biowikifarm.net/wiki>) or the Natural Sciences Collections Association (NatSCA) and Global Conservation Forum lists, they are not exclusively dedicated to issues related to fluid collections.

The day-to-day management of a fluid collection requires special expertise and attention to detail. The people in charge of the conservation of these collections have their own knowledge and experience to draw on, but it is difficult to find this information in books or articles. Most of the time, this knowledge is exchanged with colleagues in the museum or sometimes with well-known colleagues in the field working in other museums around the world. Beyond this small group, it is difficult at the moment to share one's own knowledge or to write articles detailing these facts. It is only in recent years that we have come to understand what this technical knowledge represents and what we could lose if this knowledge base is not maintained. The challenges of managing fluid collections highlight the need for



Figure 1. Photograph of the Spider wet collection at the MfN (©MfN–Anja Friederichs).

shared solutions to shared problems such as those encountered with jars. It is often difficult or expensive to obtain new jars of good quality. Strengthening communication within the community could help to find solutions to this problem. Other questions about the care of fluid collections could also be further discussed and shared, such as how to recognize the weaknesses of certain jars before they are too damaged, how to make a proper seal, or how to open historical jars without damaging them.

The so-called KUR-Projekt (Neuhaus et al. 2012) was a good starting point for the MfN to address all of these issues. More broadly, within the MfN and across Europe, there were different workshops (e.g., *Proper sealing in fluid collections* at the 2016 SPNHC annual meeting; Fig. 2); symposia; Synthesys activities, such as the Synthesys Network Activity C on collection standards (Collins et al. 2016); SPNHC meetings with a large number of participants, including some from the MfN; and, finally, the Paris pfc2018 meeting, with the specific theme of the preservation of natural history wet collections (the focus of this special issue of *Collection Forum*). In addition to digitizing collections, the main focus is on implementation of standards and preservation of wet collections, such as utilizing QR codes, sampling DNA from different wet specimens, and broadening the accessibility of the collection for other scientific fields, such as education, medicine, and art. There should also be a closer cooperation with medical historical collections because these share many tasks with natural history collections (e.g., jars, sealing/sealants, labels). For the past couple of years, in-house wikis and projects based on a wiki have represented the beginning of knowledge transfer. The transfer works in both directions—museum knowledge is made available to the collection staff, and the museum adopts knowledge and ideas from the outside. The same works for the SPNHC wiki.

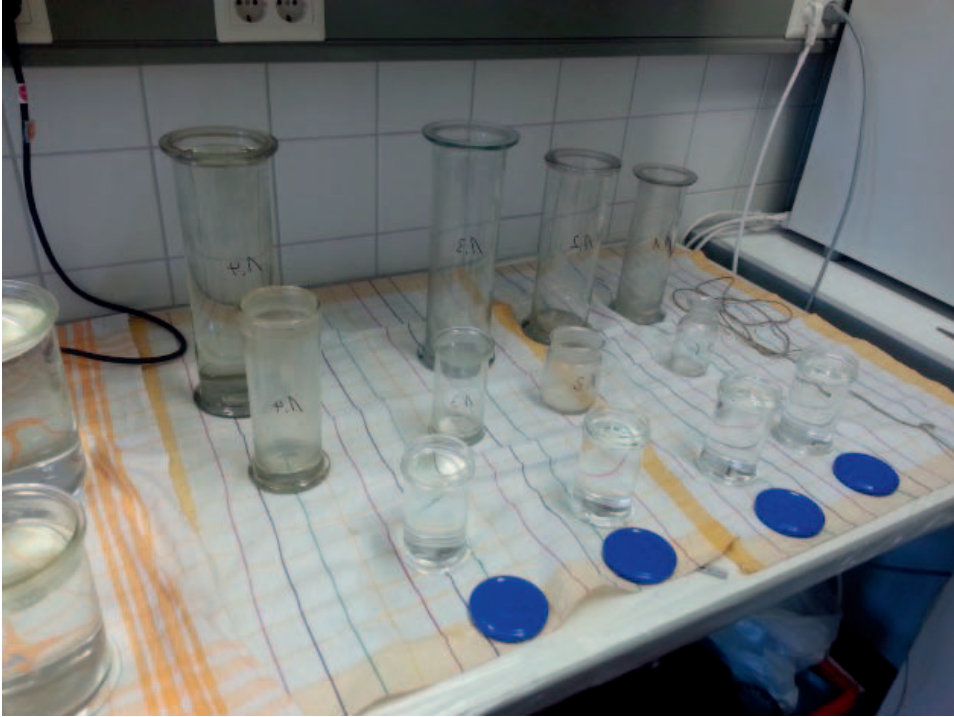


Figure 2. Photograph from the Proper Sealing workshop at the MfN (© MfN–Anja Friederichs).

Looking ahead, the MfN is supported by a total of 660 million euros from the Federal Government and the State of Berlin to develop a science campus together with the Humboldt University Berlin. At the same time, we will digitize all of our objects in order to make them accessible for research worldwide. During the process of digitization, it could be possible to implement new methods and standards for wet collections and to inventory all jars to collect information, including the age of the jar, the condition, sealants, sealing method, fluid, and labels (age, quality, kind of label). We hope to achieve a comprehensive overview that would provide a good basis for future planning.

All in all, there are many reasons to promote exchange, transfer, and cooperation as well as the provision of our knowledge within our own museum, in Germany, in Europe, and worldwide.

ZUSAMMENFASSUNG

Unzählige Sammlungen in Deutschland und Frankreich, aber auch europaweit und weltweit beherbergen Flüssigpräparate, alle mit mehr oder weniger ähnlichen Anforderungen und Pflegeaufwand. Dazu kommen neben Unterbringung und Personal Fragen wie Gläserbeschaffung, geeignete Materialien und Flüssigkeiten sowie das Wissen um Langzeitlagerung. Neben der Zugänglichkeit und dem Austausch von Wissen, auch überlaufende Konservierungsforschung und damit verbundene Projekte, sollten eine deutlich engere Vernetzung zwischen technischem Sammlungspersonal angestrebt werden. Zum einen über die bestehenden Netzwerke wie die von SPNHC, NatSca, Global Conserva-

tion Forum lists etc. als auch neu entstehende in Deutschland und Europa und den unterschiedlichsten Sammlungstypen.

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