



EDITORIAL NOTE

Scientific collections - *quo vadis?*

ALEXANDER W.A. KELLNER

I believe that only very few people would dispute that collections are a very important aspect of society. For centuries, objects of different kinds have gained a central status in human culture, being employed for a wide variety of functions, ranging from arousing admiration to an unequivocal demonstration of power and knowledge. Since the establishment of the *Wunderkammern* – better known as cabinets of curiosities – there has been a genuine interest in specimens that might lead us to a better understanding of the world around us. For some, this is sort of how science began (e.g., Ball 2024).

However, there has been growing concern about the fate of scientific collections (e.g., Kellner 2024). On the one hand, few would dispute that current collections are insufficient to provide the necessary information for various issues, such as species distribution (e.g., Santos et al. 2024), which are important for conservation purposes (e.g., Correa et al. 2024). Improvements have been made, including new ways of handling collections with the advancement of technology (e.g., Blackburn et al. 2024), as well as the type of information that specimens can provide (e.g., Vaught 2019). Not to mention the realization that collections housed in museums or similar institutions can always be re-examined in light of new technologies or evidence, leading to surprising new discoveries (e.g., Ceríaco & Passos 2023).

On the other hand, the fact is that not enough funds have become available to meet the needs that collections demand. Particularly with regards to natural history and anthropology museums, which hold a quite diverse typology of objects (e.g., Serejo et al. 2025), there is an ever-increasing need for resources to address the issues of preservation and conservation of these items for future generations. Space is an important part of the equation not only for providing safe storage for specimens, but also for the need for considerable facilities that can foster the development of scientific activities, in which the collections play a central role (e.g., Martins & Kellner 2024).

Among the challenges faced by collections, security stands out due to the illegal trafficking of cultural goods (e.g., Kellner 2023), a topic that has recently reached the headlines after the recent theft of eight jewels from the French crown, reigniting discussions about security measures in museums (La Hamaide & Stargardt 2025). To further complicate the situation, some in the financial world consider collections as assets that should be included in the financial reports of the institutions that hold them, which constitutes another complex problem with its own implications (e.g., Carnegie et al.

2022). If this “economic logic” is applied to collections, I fear that sooner or later no institution will be able to meet the challenges of preserving objects so valuable to humanity.

There is no denying that, in current times, concern is even greater due to ongoing wars, which are leading to an unprecedented arms race. I believe no one is under any illusion about the fact that this situation will further drain the resources of already indebted states, leaving them depleted for social and cultural issues, directly impacting matters related to the preservation and security of scientific, cultural and historical collections.

Brazil is no exception. Despite advances in matters regarding security and prevention regarding fire after the tragedy at the Museu Nacional/UFRJ (e.g., Zamudio et al. 2018), with the announcement of public resources for some institutions to develop fire safety and prevention projects (e.g., Mazui 2018), there is still a long way to go. Among the proposals under consideration, two bills are being analyzed in Congress, relating to collections. One of them is PL 1060/2025, which establishes September 2nd as the National Day for Awareness of the Preservation of Scientific, Cultural, and Historical Collections. This date was chosen because, on that day in 2018, the palace that housed the Museu Nacional/UFRJ was consumed by a fire, resulting in the loss of approximately 85% of its natural history and anthropology collection, estimated at 20 million specimens. The second bill, a bit older, is PL 1993/2024, which establishes the National Policy for Scientific Biological Collections. Both are awaiting decisions and contributions from the various congressional committees through which they need to be approved. Let us see what the future holds.

REFERENCES

- BALL P. 2024. Curiosity: How science became interested in everything. University of Chicago Press, 2024.
- BLACKBURN DC ET AL. 2024. Increasing the impact of vertebrate scientific collections through 3D imaging: The openVertebrate (oVert) Thematic Collections Network. *BioScience* 74: 169-186. DOI 10.1093/biosci/biad120.
- CARNEGIE GD, FERRI PP, PARKER LD, SIDAWAYS SI & TSAHURIDU EE. 2022. Accounting as technical, social and moral practice: the monetary valuation of public cultural, heritage and scientific collections in financial reports. *Australian Accounting Review* 32(4): 460-472. DOI 10.1111/auar.12371.
- CERÍACO LMP & PASSOS P. 2023. Historical natural history collections allow the description of a new and presumably extinct species of dwarf gecko (Squamata: Gekkonidae: *Lygodactylus* Gray, 1864) from Fernando de Noronha Island, Brazil. *An Acad Bras Cienc* 95: e20230222. DOI 10.1590/0001-37652023020230222.
- CORREA DL, MACIEL LAM, LISBOA LSS, MARTORANO LG & RODRIGUES LRR. 2024. Local trade, spatial occurrence and conservation of *Hypostomus soniae* (siluriformes, loricariidae), an ornamental fish endemic to the tapajos river, Brazil. *An Acad Bras Cienc* 96: e20230866. DOI 10.1590/0001-3765202420230866.
- KELLNER AWA. 2023. Cultural objects at risk - the responsibility of reviewers and editors. *An Acad Bras Cienc* 95: e2023951. DOI 10.1590/0001-37652023951.
- KELLNER AWA. 2024. Biological collections in danger? *An Acad Bras Cienc* 96: e2024961. DOI 10.1590/0001-376520242024961.
- LA HAMAIDE S & STARGARDTER 2025. Thieves rob priceless jewels from Paris' Louvre in brazen heist. Reuters October 19th. Available at: <https://www.reuters.com/world/europe/thieves-steal-jewels-louvre-paris-media-reports-2025-10-19/>, access on: 01/12/2025.
- MARTINS SM & KELLNER AWA. 2024. Um novo lugar para sonhar. In: Museu Nacional: Passado, Presente e Futuro. Série Livros Digital, 29, Museu Nacional, Rio de Janeiro, p. 145-162. ISBN 9786557290187, Available at: https://museunacional.ufrj.br/destaques/docs/livro-mn/mn_passadopresentefuturo.pdf.
- MAZUI G. 2018. BNDES anuncia edital de R\$ 25 milhões para projetos de segurança e prevenção contra incêndio de museus. Available at: <https://g1.globo.com/politica/noticia/2018/09/04/bndes-anuncia-edital-de-r-25-milhoes-para-projetos-de-seguranca-e-prevencao-contra-incendio-de-museus.ghtml>. Accessed 02/11/2025.

SANTOS BS, MARQUES MP & CERÍACO LMP. 2024. Lack of country-wide systematic herpetology collections in Portugal jeopardizes future research and conservation. *An Acad Bras Cienc* 96: e20230622. DOI 10.1590/0001-3765202420230622.

SEREJO CS ET AL. 2025. An overview of natural history collections, post-disaster recovery, and digitization progress at the Museu Nacional/UFRJ, Brazil. *Biol J Linn Soc* 146(3): blaf126. DOI 10.1093/biolinnean/blaf126.

VAUGHT J. 2019. Biobanking and beyond: the importance of scientific collections. *Biopreservation and biobanking* 17: 1-1. DOI 10.1089/bio.2019.29048.

ZAMUDIO KR ET AL. 2018. Lack of science support fails Brazil. *Science* 361(6409): 1322-1323. DOI: 10.1126/science.aav3296.

How to cite

KELLNER AWA. 2025. Scientific collections - *quo vadis?* *An Acad Bras Cienc* 97: e20259704. DOI 10.1590/0001-3765202520259704.

ALEXANDER W.A. KELLNER

<https://orcid.org/0000-0001-7174-9447>

Universidade Federal do Rio de Janeiro, Museu Nacional, Laboratório de Sistemática e Tafonomia de Vertebrados Fósseis, Departamento de Geologia e Paleontologia, Quinta da Boa Vista, s/n, São Cristóvão, 20940-040 Rio de Janeiro, RJ, Brazil

E-mail: kellner@mn.ufrj.br

