

Program

Sunday, October 23rd

19:00-23:00 Welcoming reception and cocktail at the Museo Nacional de Ciencias Naturales (MNCN).

Monday, October 24th

09:00-10:00 Meeting with the press and morning coffee at the MNCN's Biodiversity area.

MNCN auditorium

10:00-10:15	Welcoming address by Eloísa del Pino, President, Spanish National Research Council (CSIC).
10:15-11:15	Rafael Zardoya, Director, MNCN: "250 years of the Museo Nacional de Ciencias Naturales".
11:15-11:30	Announcement: Alexander Kellner, Director, National Museum of Brazil, Rio de Janeiro: "Re-
	opening of the National Museum of Brazil".
11:30-12:00	Coffee Break.
12:00-13:15	Round table: "The international dimension of natural history museums" - Michelle J. Price,
	Consortium of European Taxonomic Facilities (CETAF); Harris Lewin, Earth BioGenome Project
	(EBP); Edwin Van Huis, Distributed System of Scientific Collections (DiSSCo). Moderator: Isabel
	Sanmartín, Real Jardín Botánico (RJB-CSIC).
13:15-13:30	Official photo.
13:30-15:30	Lunch in the MNCN Biodiversity Gallery.
15:30-16:00	Shuttle transportation to the FBBVA headquarters at the Marqués de Salamanca Palace.

Marqués de Salamanca Palace

16:00-17:00	Invited lecture: Edwin Van Huis, Naturalis Biodiversity Center, Leiden: "Naturalis: (re)inventing
	natural history museums".
17:00-17:30	Coffee Break.
17:30-18:30	Invited lecture: Kirk Johnson, National Museum of Natural History, Washington DC: "The
	Smithsonian's Museum of Natural History: the role and opportunities of a national museum".
18:30-20:00	Round table: "Natural history museums and the environmental crisis" - Lisa Månsson,
	Naturhistoriska riksmuseet, Stockholm; Johannes Vogel, Museum für Naturkunde, Berlin; Peter
	Kjærgaard, Natural History Museum Denmark, Copenhagen; Gonzalo Giribet, Museum of
	Comparative Zoology, Harvard University, Cambridge. Moderator: Salvador Carranza, Director,
	Instituto de Biología Evolutiva (CSIC-UPF), Barcelona.
20:15-23:00	Reception dinner.

Tuesday, October 25th

09:00-10:30 Guided visit to the MNCN's archive, library and exhibits.

10:30-11:00 *Coffee break.*

MNCN auditorium

11:00-12:00 Round table: "Managing natural history museums" - Doug Gurr, Natural History Museum, London; Bruno David, Muséum national d'Histoire naturelle, Paris; Lisa Guggenheim, American Museum of Natural History. Moderator: Gonzalo Giribet, Museum of Comparative Zoology, Harvard University, Cambridge, USA.

12:00-13:00 Round table: "Communicating Natural Science" - Katrin Vohland, Naturhistorisches Museum, Vienna; Brigitte Franzen, Senckenberg Naturmuseum Frankfurt; Koen Martens, Royal Belgian Institute of Natural Sciences, Brussels. Moderator: Luis Quevedo, Fundación Española de Ciencia y Tecnología (FECYT).

13: 00-13:15 Closing remarks and farewell.

16:00 (Optional) Guided visit to El Prado Art Museum (Theme: Nature and Art in El Prado).

Round tables

The international dimension of natural history museums

The present and future of natural history museums rely on establishing robust international networks that implement multidisciplinary and collaborative research to face the unprecedented global threats disturbing the planet. In the Internet era, there are many opportunities to foster interconnectivity between museums, and it is envisioned that major museums could ultimately work as a single internationally distributed research infrastructure. This approach implies developing community standards and good practices, accomplishing a massive digitalization of scientific collections (specimens and their metadata), implementing open science policies, as well as coordinating permit applications (Nagoya Protocol), sampling, sequencing of reference genomes, output services, etc.

Managing natural history museums

Natural history museums are in charge of preserving scientific collections as heritage for future generations, and preserved specimens are the necessary reference for any comparative research in natural sciences. Furthermore, natural history museums need to share discoveries and scientific knowledge, inspire curiosity, and educate the general public. This comprehensive mission makes the managing of these unique institutions a challenging task. Many centenary natural history museums show deep tradition and inertia that constrain their management. Some are public institutions, whereas others are private, having both funding systems pros and cons. All heavily depend on attracting patrons and members. There is controversy on whether museums should be run by scientists, museologists, or treated as corporations that require either a board of trustees or chief executive officers to make major corporate decisions, manage business operations and resources, and ensure best results for stakeholders.

Natural history museums and the environmental crisis

The increasing human impact on the Earth's environment is accelerating a drastic degradation of ecosystems to a point that could imperil the survival of our species. There is an urgent need to boost international agreements and initiatives, which need to be based on scientific evidence. Identifying main drivers and tipping points at a global scale is required in order to mitigate climate change, habitat degradation, loss of biodiversity, environmental contamination, invasive species dissemination, etc. In this regard, natural history museums as repositories of the natural heritage and holding collections of historical and modern samples, can help determine historical levels of species richness and distributions in the recent past and their change until the present. Moreover, fossils as well as ice and sediment cores preserved in collections can provide information on the Earth's climate cycles and biota turnovers. As genomic techniques improve, the possibility of accessing the DNA of collection specimens from currently extinct species becomes more feasible.

Communicating Natural Science

Natural history museums are a hub to connect researchers with the general public. There is a high demand for making research discoveries accessible to non-scientists in an appealing and engaging manner. Outreach now should go beyond exhibitions: continuous activities to entertain while educating need to be programed; constant presence in traditional, digital and social media is required to maintain the attention of the citizens into the problems derived from the environmental crisis or to discredit and fight against fake news and pseudoscience. Strong collaboration between artists, journalists, educators, and scientists seems to be the most efficient way to improve natural science communication. The accelerated rate of species extinction and the limited number of taxonomy experts in the museums prompts for enhancing the role of citizen science in e.g., describing new species and monitoring the presence and spread of potential invasive species.