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One step beyond: building a new and shared natural history publication space

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ABSTRACT

Scientific journals published by natural history museums represent a unique tool bridging research, education, and public engagement. With its transition to an online-first model, the “Bollettino del Museo Regionale di Scienze Naturali di Torino” renews its mission: to become an inclusive and flexible platform. It aims to welcome contributions from young naturalists and researchers from emerging countries, with no restrictions on article length, ranging from taxonomic revisions to articles on museology and science communication. The journal will continue to enhance natural history collections as irreplaceable resources for studying biodiversity, climate change, and anthropogenic ecosystems and environments, while also lowering barriers to scientific publication through multilingual policies and dedicated support.

Keywords: biodiversity, conservation, early-career researchers, emerging countries, natural history collections, natural history museums, science communication, scientific publishing, taxonomy.

Hey you, don't watch that, watch this!

Madness, “One step beyond” (1979)

The enduring value of a natural history museum journal

In the ever-evolving “ecosystem” of scientific publishing, journals associated with natural history museums always occupy a distinctive and irreplaceable cultural space: they are not merely places to publish specialized data or personal opinions, but rather they are the chronicles of institutions that stand at the intersection of research, education, and public engagement. They are the voice of these institutions, which are enormously underrated but represent key points for nature conservation. The fragility of these institutions, especially in Italy, has been highlighted in recent years (Andreone et al., 2014), underscoring the need for a strong and vibrant scientific voice.

Therefore, I am personally delighted to announce a renewed phase for the present journal, the “Bollettino del Museo Regionale di Scienze Naturali di Torino” (from here onward, “Bollettino”), marked by a new two-column format, digital submission, and adoption of an “online first” publication system, which will hopefully accelerate the dissemination of accepted manuscripts. The “Bollettino” has survived in recent years, marked by critical aspects for our mother institution, the Museo Regionale di Scienze

Naturali, and literally “crossed the desert”. Now, this metamorphosis marks a crucial moment, as this technical evolution, however, is the vehicle for a more profound cultural ambition: to reaffirm and expand the role of the “Bollettino” as a truly inclusive, accessible, and diverse platform for the natural history community. The “Bollettino” already has a fairly long history: it began its publication in 1983 with a paper by Parenti (1983), and in several ways, it took the legacy of former historical and renowned journals, the “Bollettino di Zoologia e Anatomia Comparata” (which stopped its publication in 1922) and the “Bollettino dell’Istituto e Museo di Zoologia dell’Università di Torino” (from 1943 to 1963). In these journals, we find contributions of true giants of natural sciences, such as Lorenzo Camerano, Tommaso Salvadori, and Enrico Tortonese. These, and other eminent scientists and naturalists, published results of their research (e.g., Camerano, 1886; Salvadori & Festa, 1913; Tortonese, 1940). Today, the renewed, digital “Bollettino” looks at the future without forgetting the past, a “leitmotiv” that feeds the activities of natural history museums.

Natural history museums, including sometimes independent herbaria, are commonly regarded as true bastions of knowledge, conservation, and

education (Bakker et al., 2020). Within their walls, they house relevant scientific collections that narrate and help understand the story of the Earth's evolution, adaptation, biodiversity and geodiversity, also including anthropology. These collections include a wide array of elements and materials called "voucher specimens" (Huber, 1998), among which are fossils, minerals, preserved animals, plants, and fungi, as well as human artifacts, photographs, acoustic recordings, and tissue samples, each of which helps to paint a picture of our past and offers useful tools for understanding the present and interpreting the future. And journals published by museums are just their scientific voice: publishing them means giving real superpowers to the institutions.

The strength of diversity

Here, I report my personal "two cents": the strength of a museum journal like this lies precisely in its breadth and receptive capacity. In an age of hyper-specialization, where scientific approaches and analyses can become more and more fragmented, the "Bollettino" – with its scientific naiveté and heterogeneity – instead offers a space for synthesis and dialogue. This should be intended as a true forum where, for example, a detailed monographic revision of a beetle genus can sit alongside a reflective opinion piece on the challenges of curating a mineralogical collection or an evaluation of a new didactic pathway designed for school groups.

This variety represents the greatest asset and peculiarity of the "Bollettino": it allows us to fulfil the core mission of natural history museums: to valorize collections not as static archives, but as resources for dynamic ideas and propositions for understanding the planet (Fischer, 2015). Natural history collections document biodiversity across space and time, providing crucial baseline data for understanding extinction risks, tracking biological invasions, and assessing the impacts of climate change.

The "Bollettino", in its current incarnation, will continue to prioritize contributions that shed light on natural history collections, whether through taxonomic studies, faunal surveys, or historical analyses of specimens (Andreone et al., 2023). At the same time, it will adequately publish works that explore how collections are interpreted and brought to life through exhibition design, educational programs, and outreach initiatives. Recent contributions on the use of artificial replicas in museum

displays (Andreone & De Francesco, 2025) and on communicating biodiversity loss (Andreone & Gippoliti, 2025) further exemplify this direction.

A shared and accessible space

To make this vision a true reality, we are embedding principles of openness and inclusion directly into the journal's new core policies. First and foremost, the "Bollettino" aims to be a genuine incubator for new talents. In particular, a special invitation is extended to young naturalists and early-career researchers. Wherever they are based, the "Bollettino" will be a welcoming and constructive venue for their first forays into scientific publication. Mentoring the next generation of naturalists (particularly taxonomists) is one of the most important responsibilities and one of the main tasks of natural history museums. In this sense, the review process is designed to be supportive, providing valuable feedback to help authors refine their work.

Crucially, the commitment to inclusion extends far beyond European borders. We are particularly eager to receive and support contributions from researchers based in emerging countries. This has already been one of the main features of the "Bollettino" since its first appearance in the early 80s of the last century. Indeed, the "Bollettino" has consistently focused on local realities, promoting the publication of natural history notes based in Piedmont and Italy (e.g., Isaia, 2001; Grano & Di Giuseppe, 2021). Special attention was also paid to international research. Examples of these themes are the publication of entomological papers (Bordoni, 2001); several contributions by J.M. Cei focused on the herpetofauna of S. America (Ceï & Scrocchi, 1991), including descriptions of new species (Ceï & Videla, 2003); and those by myself and collaborators about Madagascar (Andreone, 1993). Thus, the approach of the "Bollettino" has been, since the beginning, very "glocal": the importance was to stress the values of nature and biodiversity beyond "our" corner and the need to support worldwide approaches to understand the planet.

It is a well-known fact that local researchers often possess invaluable knowledge and perspectives that are essential for accurate scientific understanding and effective conservation. Too often, however, they face barriers to publishing in international journals. The renewed "Bollettino" is dedicated to lowering these barriers. To facilitate this, the "Bollettino" accepts manuscripts in the major European languages

(Italian, English, French, Spanish, and German), with abstracts required in both English and Italian. This multilingual policy recognizes that scientific excellence is not confined to any single language and researchers should be able to express themselves in the language in which they think most clearly.

People behind the collections

Curators and collection managers working in museums usually wear many hats, being responsible for the continued preservation of collections and their delivery and exposure to the world, as well as being global diversity scholars and policymakers, bringing together fundamental and critical expertise. They are the ones to ensure the care, cataloging, conservation of, and access to collections and often manage a team of equally skilled collection technicians and students.

These professionals collectively steward and curate collection data, also ensuring adherence to FAIR (Findable, Accessible, Interoperable and Reusable) principles (Wilkinson et al., 2016). This digital evolution naturally leads to the concept of the Extended Specimen, a modern approach that goes beyond the physical voucher to include all associated data, such as genetic sequences, photographs, field notes, and ecological metadata, thereby creating a richer, interconnected digital record of the specimen. Their work also involves scientific research aimed at discovering and documenting new species, to better understand existing ones and to study natural phenomena. As Minelli (2013) correctly argued, natural history collections are developing as a “virtual museum” – a dynamic and responsible archive of global biodiversity that extends far beyond the physical specimens themselves, encompassing data, knowledge, and historical context. Curators and collection managers are also people’s educators, who are committed to disseminating scientific knowledge to the general public through exhibitions, conferences, and publications.

They are also the main experts of taxonomy and nomenclature, which serve as the basis to describe and name new species and eventually reassess the known ones (Gippoliti et al., 2024). The “Bollettino” encourages contributions that highlight the role of these professionals and the challenges they face.

Flexibility in format and depth

To accommodate this diversity of authors and subjects, the “Bollettino” offers a flexible approach to publication formats. While we continue to welcome standard full-length research articles and short notes following conventional article structure, we place special emphasis on two other categories. We actively encourage the submission of personal, qualitative reflections based on extensive field or curatorial experience. These opinion pieces, which do not require abstracts, offer a space for seasoned experts and passionate field biologists alike to share perspectives on major themes in natural history, conservation practices, or the human stories behind scientific discovery.

Furthermore, we recognize that some research projects, particularly comprehensive taxonomic revisions or detailed regional surveys, require more space than a standard journal article can provide. The “Bollettino” is therefore open to considering longer monographic works. Authors with a significant body of work that would benefit from publication as a cohesive whole are encouraged to contact the editorial team to discuss the possibility. Crucially, our acceptance of diverse contributions is not constrained by arbitrary length limits, provided the material justifies the space.

For prospective authors, a careful reading of the “Bollettino”’s updated guidelines is essential. They provide detailed information on manuscript structure, from the required abstracts to the formatting of references, tables, and figures. We have also updated our policies on research ethics, authorship criteria, and data availability, aligning them with international best practices.

Notably, we require that all specimens from newly described taxa be deposited in recognized public collections, with accession numbers clearly cited, reinforcing the link between publication and the tangible heritage of museum collections. Specimens are the permanent, verifiable evidence of biodiversity; they allow future generations of researchers to re-examine, re-interpret, and build upon our work. In an era of rapidly advancing molecular techniques and debates about “photographic taxonomy”, the role of physical specimens in recognized institutions has never been more important (Rocha et al., 2014).

At the same time, it is also important that collections are digitized, a procedure that helps increase their exposure, allows greater accessibility,

and shows the value of the collection, making them more accessible to the wider scientific community. Such a modern approach is the “extended specimen approach”, a new method that goes beyond the physical specimen to include the historical information stored in the collection, linking to new research metadata and digital data, such as images, and adding value to voucher specimens. The “Bollettino” welcomes contributions that explore these new frontiers in collection management and data accessibility.

A call to contribute with papers

The relaunch of the “Bollettino” is also a true call for papers. An invitation to established researchers to continue choosing our journal for their finest work. An invitation to young naturalists to take their first confident steps into the world of scholarly publishing. An invitation to colleagues in emerging countries to share their vital research and perspectives with a wider audience. And an invitation to educators, curators, and science communicators to enrich our pages with insights on how we can all make natural history more accessible and engaging.

With its “online first” publication, its commitment to inclusivity, and its flexible, author-centric approach, the “Bollettino” is poised to enter a new chapter. It will remain a journal of record for the natural heritage of the Piedmont region and beyond, but it will also become an ever more vibrant crossroads for the global community dedicated to understanding, preserving, and sharing the wonders of the natural world. By promoting the exchange of knowledge, ideas, and best practices between museum professionals, researchers, and enthusiasts, the journal will contribute to a deeper understanding and greater appreciation of natural history and its impact on society.

The challenges facing biodiversity are unprecedented – from climate change and habitat loss to invasive species and emerging diseases. Meeting these challenges requires not only rigorous science but also effective communication, international collaboration, and the training of new generations of naturalists. The “Bollettino” aspires to contribute to all of these sustainable developing goals.

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RIASSUNTO

Un passo avanti: costruire uno spazio nuovo e condiviso per le pubblicazioni di storia naturale.

Le riviste scientifiche pubblicate dai musei di storia naturale rappresentano uno strumento unico che collega ricerca, educazione e impegno pubblico. Con la transizione al modello “online first”, il “Bollettino del Museo Regionale di Scienze Naturali di Torino” rinnova la sua missione: diventare una piattaforma inclusiva e flessibile. Un nuovo obiettivo è accogliere contributi di giovani naturalisti e ricercatori dei paesi emergenti, senza restrizioni sulla lunghezza degli articoli, spaziando dalle revisioni tassonomiche ad articoli di museologia e comunicazione scientifica. La rivista continuerà a valorizzare le collezioni di storia naturale come risorse insostituibili per lo studio della biodiversità, dei cambiamenti climatici e degli impatti antropici sull’ambiente, abbattendo al contempo le barriere alla pubblicazione scientifica attraverso politiche multilingue e un supporto dedicato.

Parole chiave: biodiversità, collezioni naturalistiche, comunicazione scientifica, conservazione, giovani ricercatori, musei di storia naturale, paesi emergenti, pubblicazione scientifica, tassonomia.

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