

INCP Newsletter



International
Network for
Conservation
Paleobiology

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We Now Offer Travel and Training Grants!

The International Network for Conservation Paleobiology (INCP) is pleased to re-open the call for travel and training grants for students and early career researchers. The goal is to facilitate participation in events such as conferences, workshops, and meetings that are related to conservation, management, restoration and/or which are attended by conservation practitioners, resource managers, or other decision-makers.

We will offer awards of up to up to \$500 per applicant, to be used toward the cost of registration, travel, and/or accommodation during the event.

The deadline for the current call is November 30, 2026 (11:59 pm Pacific Time).

See here for more information:

<https://conservationpaleorcn.org/awards-and-student-grants/>



Conservation Paleobiology Research Highlight

By Thayara Carrasco, University of São Paulo, Brazil

Long-term changes in functional diversity and its implications for mammalian conservation and ecological restoration in a grassland ecosystem

How can information from animals that lived thousands or even millions of years ago help us address current conservation challenges? Well, one thing is clear: fossils are already dead, and therefore conservation does not apply to them. However, they provide great models to investigate a number of questions, such as how biodiversity responds to climate change, which animal traits are related to extinction vulnerability, and what natural environments and their fauna were like prior to human impacts. While studying current biodiversity allows scientists to understand its ecology in great detail, paleontology adds a very important variable: the perspective of time. And it was in the context of Conservation Paleobiology that we conducted our research, recently published in *Functional Ecology*, in a South American grassland environment.

South America, until about 10,000 years ago, was home to several species of large mammals (the megafauna), which coexisted with the mammals we know today. Something similar to what can (still) be seen in Africa. Given the key ecological roles performed by megafauna, including their capacity to influence vegetation, it has been suggested that livestock could be important for replacing lost mammals and their roles in ecosystems nowadays, particularly in grasslands. After all, it would be amazing if activities that benefit human populations could also contribute to the surrounding ecosystem. However, when considering the traits of both extinct and domesticated fauna, we found that livestock species are not suitable to replace the ecological functions of the megafauna.

The megafauna exhibited a much greater diversity of characteristics and ecological functions, which unfortunately cannot be replaced by just a few species.

Conversely, we found that a deer introduced from Asia may be fulfilling some of these lost ecological functions and may not pose a threat to living mammals, despite being included in population-control programs.

Finally, we also found that large mammals are at greater risk of extinction, a pattern that followed the megafauna extinction itself. Thus, our efforts should be directed toward these species, particularly those possessing unique characteristics and functions. Natural environments would greatly benefit from the creation and expansion of protected areas, while seeking a balance between the conservation of wildlife and economic interests.

“We found that livestock species are not suitable to replace the ecological functions of the megafauna.”



Image caption: *Paleoart showing extinct grassland megafauna and modern livestock side by side, by Julio Lacerda.*

For more information, see: Carrasco, T. S., Pimiento, C., Quental, T. B., & Godoy, P. L. (2026). Long-term changes in functional diversity and its implications for mammalian conservation and ecological restoration in a grassland ecosystem. *Functional Ecology*, 40, 2379–2391.

<https://doi.org/10.1111/1365-2435.70378>

Paleo Proxy Spotlight – Coprolites

By Arnaud Rebillard, Museum für Naturkunde Berlin and Humboldt University, Berlin, Germany

What are coprolites?

Coprolites are fossilised faeces. They are considered as trace fossils and belong to a group called “bromalite”, gathering the different fossilised digestive remains (e.g. regurgitalites, cololites etc.). Despite their unusual nature, they are extremely informative fossils. Indeed, the material, once ingested by an animal, may be preserved inside, providing a glimpse of what it ate. The oldest known coprolites, produced by invertebrates date back to the Cambrian period (Kimmig and Bicknell, 2026), and they can be found throughout the Phanerozoic, extending to deposits, dating only to a few thousand years (Shillito et al., 2020). The content is sometimes so well preserved they can be considered as small Lagerstätte!

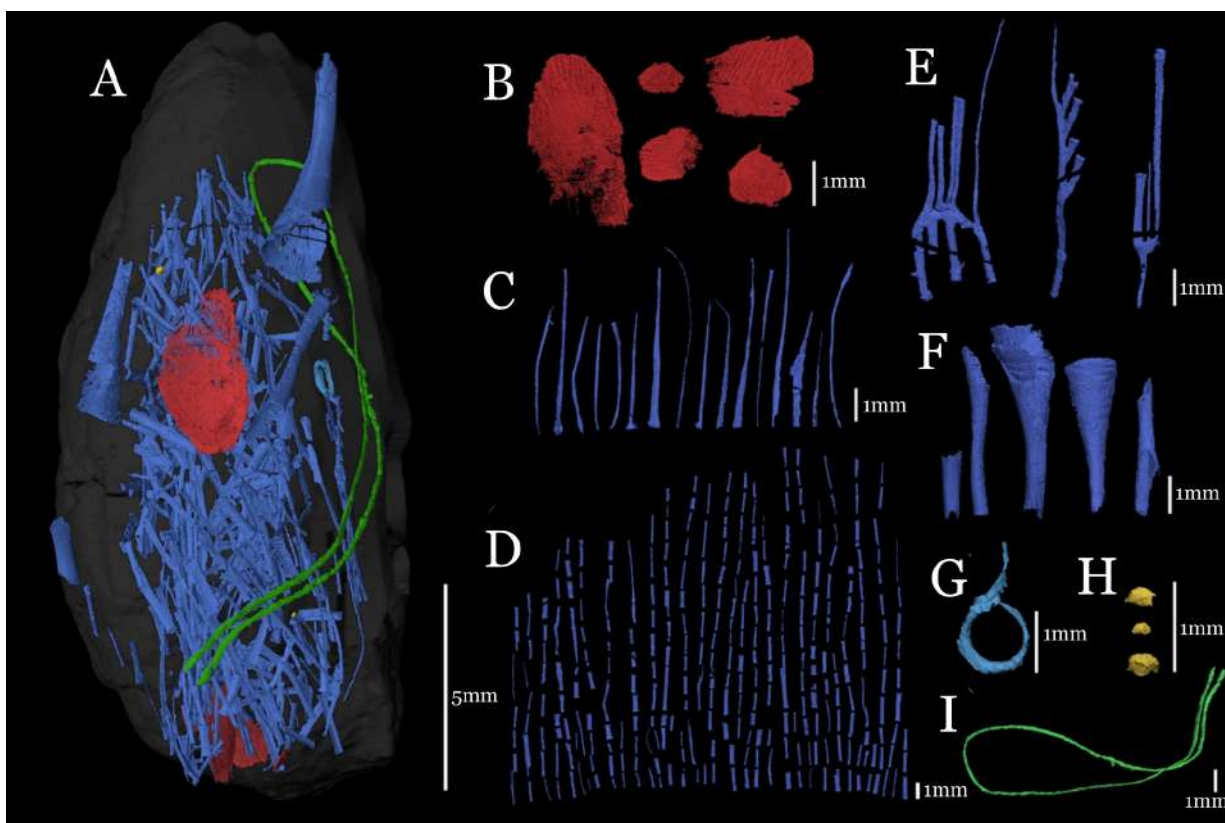


Figure A: Digital 3D rendering of a Middle to Late Devonian coprolite and its content (*Sula* fossil site, Nenets Autonomous Okrug, Arkhangelsk Region, RF). **A:** Semi transparent coprolite showing the content in-situ; **B:** porolepiform scale fragments. **C-F:** fleurantiid-like dipnoan: **C:** elongated lepidotrichia. **D:** short lepidotrichia. **E:** lepidotrichia attached to a common base. **F:** supraneural fragments. **G:** possible poorly preserved dipnoan vertebra. **H:** acanthodian scales. **I:** vascular plant remain. (Modified from Rebillard et al., 2026).

Paleo Proxy Spotlight Continued

The faeces constitutes a confined environment in which these remains are trapped and may get preserved through the fossilisation processes. These inform us on the behaviour of the producer and on the environment itself. Indeed, all the inclusions recovered within a single coprolite shows that they existed at the exact same time period, giving us extraordinarily precise evidence of ecological co-occurrences. These extremely well-preserved inclusions can even be used to describe new taxa. Recently, a new genus and species of Early Permian ray-finned fish was described, partly thanks to an exceptionally well preserved maxilla found within a coprolite (Gonçalves et al., 2026). Remains that would not necessarily have been preserved in the sediment could be recovered within coprolites.

How can coprolites be used as a paleo-proxy?

Coprolites can be used as proxies for biological and ecological parameters. They can provide information on taxonomic affinities, contribute to biochronological correlations and even help delimit biogeographic regions (Hunt and Lucas, 2021). Their shape and architecture (type of spiralled organisation or absence of it) can provide clues about their producers. Also, since they represent the end point of digestion, they offer valuable insights into the evolution of feeding, diet and digestion, as well as important clues for reconstructing trophic networks.

Since faeces are produced by both carnivorous and herbivorous animals, living both on land or in aquatic environments, coprolites are excellent and unique proxies, used in studies that focus on specific environments and/or groups of animals, living at a specific period of time or spanning several eras (Qvarnström et al., 2024; Rebillard et al., 2026).

Varied food remains can be found within the coprolites. Bones, teeth, arthropods, plant remains, microfossils and even parasites can be preserved inside (Dentzien-Dias et al., 2013; Bajdek et al., 2016; Qvarnström et al., 2021; Rebillard et al., 2026). Coprolite can be considered as micro-environment of exceptional preservation potential (Lagerstätte type): it was shown that, protected inside the faecal matrix, hard and soft tissue inclusions can be perfectly preserved, making coprolites extremely precious tools. CT scans and synchrotron microtomography now allow us to recover with high details and in 3 dimensions these inclusions, non destructively (Figure A) (Qvarnström et al., 2016; Qvarnström et al., 2017)



Image caption: Example of a coprolite, probably from a Hyena, found in Spain. Image credit: Wikipedia.

Paleo Proxy Spotlight Continued

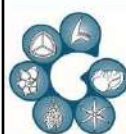
Why does coprolite analysis matter?

Coprolite study allows us to link biological, ecological and environmental evidence to investigate past ecosystems. These fossilised faeces can document evolutions of feeding strategies, diet and digestive processes over time, and reconstruct past food webs. They can also give insights on biochronology, and biogeographic reconstructions, making them crucial to collect on the field and analyse thoroughly to exploit their full potential. Their preservational potential makes them even more precious, as fragile fossil material can be retrieved from within, with very limited physical damage, as they are safely protected in the coprolite matrix. These true time capsules are proving to be extraordinarily informative, and the rapid development of imaging technologies will certainly offer new opportunities to unlock the information preserved within them.

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Some Upcoming Meetings of Interest



The
Micropalaeontological
Society

TMS Annual General Meeting in 2026

REGISTRATION

Conference fee includes access to all scientific sessions and workshops, conference materials, coffee breaks, lunches, icebreaker party. Conference dinner and the post-conference trip are **optional** so they are paid during registration.

How to Register?

- 1st step:** Submit your abstract using the abstract submission link.
- 2nd step:** Pay the conference registration fee via the TMS website.
- 3rd step:** If you are an ECR, apply for a travel grant by 30th September 2026.

ABSTRACT SUBMISSION

Abstract submission is open until **30th
September, 2026.**

Find application link on our website!

IMPORTANT!

The abstract volume will be available online in advance of the meeting.
If you have any questions, do not hesitate to e-mail the TMS Events Secretary at
events@tmsoc.org

Postcard from the Field

In this feature of our newsletter, we showcase members' research in the field, lab, or other settings. Please submit your "postcards" with approximately 100 words of text to us at incp@conservationpaleorcn.org



Greetings from Vilnius, Lithuania by Dr. Darja Dankina

From 29 June to 5 July 2026, Vilnius welcomed the 23rd International Conference of the European Association of Vertebrate Palaeontologists (EAVP) — the first EAVP meeting in Lithuania and the largest palaeontological conference held in the country so far.

More than 160 researchers from over 25 countries and five continents gathered at the Nature Research Centre and Vilnius University to share new discoveries, exchange ideas, and build international collaborations. The scientific programme included 142 presentations, seven workshops, field trips, and a PalaeoArt exhibition.

The meeting covered a broad range of topics, from vertebrate evolution and palaeoecology to new analytical methods, collections, science communication, and the reconstruction of ancient environments. The workshops also offered opportunities to explore professional development, interdisciplinary approaches, and new ways of communicating palaeontological research.

Beyond the scientific programme, the conference was a wonderful opportunity to meet colleagues from around the world, discover Lithuania's palaeontological heritage, and share the vibrant research community based in Vilnius. The PalaeoArt exhibition was a particularly inspiring reminder of how science and creativity can come together to help us visualise and communicate the deep past.

It was a memorable week of science, workshops, field trips, palaeoart, and new connections — and a great opportunity to showcase Lithuania's research community to an international audience.



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Follow us on social media!

Don't forget to participate in the ongoing science communication competition (see social media for details).



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[@cnsrvpaleonetwk.bsky.social](https://cnsrvpaleonetwk.bsky.social)



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[@inconservationpaleo](https://www.instagram.com/inconservationpaleo)

Invite Your Colleagues to Join our Network!

If you know people who might be interested in our network, please invite them to join. You can use the link below to extend your invitation on behalf of our network.

By joining the network, you become a member of our Community of Practice. The membership does not impose any obligations, but enables participants to engage fully in network activities. Members will be able to:

1. Participate in the mailing list
2. Nominate and self-nominate for committees and panels
3. Submit announcements for publication in the INCP Newsletter
4. Apply to participate in the network activities
5. View webinars and submit proposals for webinar modules

To join please go to our website and select "Join the Network"

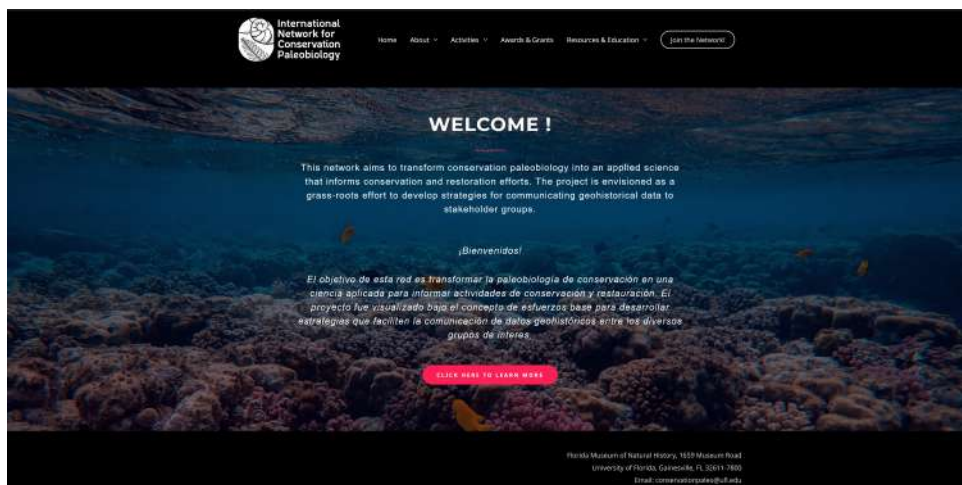
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