

The 7th International Palaeontological Congress



Recent advances in dinosaur eggs and reproduction

In recent years, there has been a notable increase in publications focusing on dinosaur reproduction and development. These studies have considerably expanded on the traditional palaeontological research framework to include macroevolutionary questions about dinosaurs, such as reproductive behaviour, taxonomic diversity, population dynamics, palaeoecology, as well as physiological and reproductive factors driving ecological success. This has led to major methodological developments in the field: advances in microscopy and computed tomography that allow visualization of eggshells and embryos with an incredible level of detail; quantitative techniques to trace the evolution of such traits in a phylogenetic comparative framework; descriptions of complete ontogenetic series using new, exceptionally preserved juvenile dinosaur specimens; and investigations of preserved fossil biomolecules in eggs to reconstruct palaeoenvironments and nesting strategies, just to name a few. We believe these important discoveries deserve to be showcased, in relation to other disciplines within the palaeontological community, in a dedicated symposium at IPC7.

This symposium aims to give an integrative overview of the latest discoveries, methodologies, and exciting new hypotheses regarding reproductive strategies in dinosaurs including birds. With this goal in mind, we have assembled a group of speakers and poster presenters who represent the diversity and complexity of the field in various aspects, showcasing:

- Different fields of expertise associated with dinosaur reproduction— microscopy/spectroscopy, X-ray computed tomography, bone histology, and skeletochronology, phylogenetic comparative methods, palaeoenvironmental reconstruction, archaeology, and palaeophysiological/ecological inference;
- Different levels of professional experience—graduate students, postdoctoral and early-career researchers, and tenured faculty members;
- Diverse geographical perspectives, representing five continents with an exceptional fossil record of dinosaur eggs and juvenile specimens (Africa, Asia, Europe, North America, and South America).

The symposium will include a discussion panel between participants, with several presentations featuring guidelines for new interdisciplinary approaches that will engage audience members and give them a primer on new techniques. In this context, and if appropriate within the time and space constraints of the conference, we would also like to offer a workshop on phylogenetic comparative analysis of

reproductive traits that will be open to all conference participants. We hope this will encourage further discussions and collaborations between attendees and facilitate the dissemination of the latest advances in dinosaur eggs, ontogeny, and nesting strategies into other research settings.

Conveners:

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If you are interested in this symposium, please contact the conveners.