

# PhD position in Palaeobiology and Palaeoecology of early arthropods – University of Geneva

**Expected start:** April 2027, or upon mutual agreement

**Contract length:** 4 years

**Supervision:** Harriet B Drage (UNIGE)

**Workplace:** Department of Earth Sciences, University of Geneva

A major goal of palaeontology is having accurate and well-informed reconstructions of the ecologies of ancient animals. This is key to our understanding of the broad-scale development of life on Earth and global ecosystems. Arthropods are the most abundant and diverse group of animals throughout Earth's history, comprising >80% of described species, living across the globe, and displaying a broad range of morphologies that may represent the earliest adaptations to key ecological niches. **RECO-ECO is an ERC-funded project** focusing on testing the ecologies of the Earth's earliest arthropods. This interdisciplinary research will bring together palaeobiology, ecology, geology, and fluid dynamics to test the potential ecological adaptations of different arthropod morphologies that may have allowed them to dominate life in Earth's oceans. We will develop comprehensive and innovative methods to directly test palaeoecological hypotheses using both fluid dynamics simulations and experiments, which will be applicable across the study of life on Earth.

<https://cordis.europa.eu/project/id/101219676>

## Your responsibilities

We are pleased to announce a fully funded PhD position within the RECO-ECO ERC project focusing on testing the hydrodynamic adaptations of juvenile trilobite morphologies, and their impact on dispersal in the Cambrian and Ordovician oceans. The PhD student will: (1) Work with the PI in developing comprehensive computational and experimental fluid dynamics methods, then use these to test ecological hypotheses and contrast this to fossil record data. (2) Simulate dispersal of these animals in water, and assess their dispersal capabilities. (3) Use the resulting data for broad-scale biogeographic analyses integrating continental plate and ocean current models to determine whether their ecological adaptations facilitated arthropod dispersal in Earth's early oceans.

The PhD student will be supervised by Dr Drage, and will closely collaborate with several international colleagues, primarily Prof. Minter (University of Portsmouth, UK) and Dr Pates (UCL, UK). The student will be based at the University of Geneva, Department of Earth Sciences, and is funded as part of an ERC Starting Grant. Part of the role will involve teaching assistance, supervising Bachelors or Masters students, and helping within the department.

The PI is strongly committed to furthering equality, diversity and inclusion, and to developing a respectful and fair work culture with equal access to opportunities, development, and support. Applications from under-represented groups and women are strongly encouraged. The position is open to all nationalities.

## **Your qualifications**

- Masters degree in Palaeontology, Earth Sciences, Evolutionary Biology, Ecology, or related field
- Excellent written and spoken English
- Experience in ecology and quantitative palaeo/biology desired, while an interest in physics (fluid dynamics) is highly beneficial
- Experience with statistical analysis, coding (R or Python), and digital modelling strongly preferred
- Willingness to travel (minimum to UK for experimental work), enthusiasm for both experimental work and computational analyses, and enjoy developing new methods

## **What the position offers you**

You will join a new lab at the University of Geneva on a particularly interdisciplinary project with strongly established international collaborations. As a result, you will travel internationally to collaborators' labs to learn different approaches and develop your own research network. You will receive one-on-one training in a variety of research skills, including fluid dynamics methods, quantitative palaeontological analysis, field work, and scientific publishing. You will develop strong skills in handling datasets, biogeographic analysis, digital modelling, fluid dynamics, and coding (R, Python). This will equip you with a multidisciplinary skillset that will provide a strong foundation for positions in earth system sciences and biology. You will also have the opportunity to learn a multitude of other skills, including in project management, writing and editing, presenting, open science practises, etc., which are highly transferable to roles within and outside academia.

The Department at the University of Geneva is diverse and engaging, covering a wide range of research topics in the earth sciences and biology. The student will belong to the Doctoral Program in Earth Surface Processes and Paleobiosphere (<https://earth-processes.cuso.ch>), which provides many opportunities for professional and personal development in research and transferable skills, including funded meetings, field courses and workshops. The position is fully funded, and the salary is highly competitive internationally.

## **Application**

**Deadline: 16/10/2026**

To apply, please send the documents below as a single PDF file, in English, with the subject line "*PhD application\_[yourlastname]*" to **harriet.drage@unige.ch**:

- Detailed CV including any research experience and publications
- Statement describing your research interests and motivation for the project (maximum 2 pages)
- Academic transcripts from your degree/s (in English or French)
- Contact information for 2 professional references

