# 2023 Oxford University Museum of Natural History Undergraduate Bursary Scheme

## Project: Reconstructing a ~550 million year-old animal community

### Project summary

Fossils from the late Ediacaran Period (~574-540 million years ago) cover the most ancient record of animal life in the fossil record, but the animals which lived at this time were strange and possess long-extinct body plans. Understanding how the diversity of modern animal life was assembled from these bizarre beginnings is a major outstanding research question.

Oxford University Museum of Natural History hosts a collection of largely unstudied material from the Flinders Ranges in South Australia, which records this transition. Fossils are preserved in their life position, making it possible to understand the whole palaeocommunities in which they lived. This project will involve cataloguing and identifying these ancient animals and reconstructing the ancient seafloor.

### Project details

In order to accomplish this project, the student will:

* Conduct a literature review of late Ediacaran life to use as search images
* Identify fossil specimens on sandstone slabs
* Take high-quality photographs and reflectance transformation images of specimens
* Ascertain whether individual sandstone slabs can be pieced together to reconstruct larger tracts of seafloor
* Compile information on the diversity of different taxa, and compare this to other published datasets
* Identify specimens for further scientific study

### Selection criteria

#### Essential

* Enthusiastic about fossils and/or nature more generally
* Ability to work at repetitive tasks
* Ability to work independently or as part of a wider research group
* Attention to detail

#### Desirable

* Knowledge of animal diversity and/or palaeontology
* Interest in museum collections and cataloguing
* Interest in photography

### Outcomes for the intern

* Identification of new fossil material of significant research interest
* Experience in working in palaeobiological collections
* Skills in specimen-handling and photography
* Experience in interpretation of morphology in different groups