Interdisciplinary PhD project – Geosciences – Evolutionary Biology (INSU-INEE)

Institutions: UMR 8198 Evo-Eco-Paleo, CNRS/Lille University; CEREGE, Aix-en-Provence; UMR 7516, CNRS/Strasbourg University
Primary lab attachment: UMR 8198 Evo-Eco-Paleo, CNRS/Lille University
Doctoral school: Lille University ED104 Sciences de la matière, du rayonnement et de l'environnement (SMRE) – branch: Geosciences Ecology Paleontology Oceanography

Project title: Reconstructing Plio-Pleistocene hydrosystems in the Omo-Turkana Basin with integrative studies of sedimentology and freshwater mollusks
Project: EnviroMolSed (CNRS 80|PRIME project)
Promotorships: Dr. Bert Van Bocxlaer (CR CNRS; HDR in 2020), Dr. Alexis Nutz (MC AMU; HDR 2021); Dr. Mathieu Schuster (DR CNRS).
Email contact: bert.van-bocxlaer|at|univ-lille.fr, nutz|at|cerege.fr, mschuster|at|unistras.fr
Start date and duration: 1 October 2020 for 3 years.

Vacancy description
We are pleased to announce a PhD fellowship for a highly motivated, enthusiastic and independent person with a keen interest in the paleontology of freshwater mollusks and their application to paleoenvironmental reconstruction through the integration of taphonomy and sedimentary geology. Background knowledge of evolutionary biology, morphometrics, ecological data analysis, facies analysis, sequence stratigraphy and enthusiasm to participate to fieldwork in Africa are plus-points.

Project description
Freshwater mollusks are common in lakes, rivers and wetlands and, hence, they record living conditions in continental hydrosystems. They leave abundant fossil remains in the deposits of various basins in the East African Rift, but despite their unique potential to reconstruct paleoenvironments, including those in which hominids evolved, they remain underutilized compared to terrestrial vertebrates. We propose a trans-disciplinary PhD project on the sedimentology, taphonomy and paleontology of late Cenozoic mollusk assemblages of the Omo-Turkana Basin to reconstruct hydrosystems of the basin in space and time. Although the basin harbored various paleolakes, it is unclear whether changes in aquatic communities coincide with major lacustrine transgressions and regressions, and how environmental change affected biotic communities. We propose to study freshwater mollusk communities over time from stratigraphically constrained shell beds together with depositional facies and basin-scale sequence analysis.

Setting and requirements
The project is funded by the CNRS 80|PRIME initiative and will be developed in an inter-institutional collaboration between the UMR 8198 Evo-Eco-Paleo of the CNRS and Lille University, the European Centre for Research and Teaching in Environmental Geosciences (CEREGE) in Aix-en-Provence and the Institute for Earth Physics (UMR 7516) of the CNRS and Strasbourg University. Furthermore, this project is embedded in an ongoing GDR on the East African Rift that brings together a larger research consortium. Lille University is the diploma-granting institution for this PhD project, so that the successful candidate will be subscribed to a doctoral school of Lille University. Master students that are graduating over the summer are welcome to apply. More information on studying at Lille University can be found on the Lille University webpage: https://www.univ-lille.fr/home/international-student/.
Profile of the candidate
- Master’s degree in a relevant field (geosciences, paleontology or paleobiology or equivalent)
- Eager to acquire new competences and knowledge
- Fluent in English, knowledge of French is a plus-point
- Ability to work in an interdisciplinary and collaborative environment (independency, reliability, integrity)
- Ability to write clear scientific reports and disseminate results
- Have good non-academic attributes (e.g. maturity, open-mindedness, respectfulness)

Interested?
This vacancy will be published at the beginning of May on the CNRS employment portal and will be available for 21 days. Only applications through the employment portal are eligible. In the meantime feel free to contact the abovementioned promotors for informal inquiries about the project. Feel free to contact Bert Van Bocxlaer (bert.van-bocxlaer[at]univ-lille.fr) to receive detailed application instructions from the moment they become available.