

UNIVERSITY: LILLE , Faculty of Sciences and Technologies

Scientific field : « Science de la Terre et de l'Univers, Terre – Enveloppes fluides »

Title of the thesis: "Predicting Overheating Effects on Marine animals at a Macroecological Scale (body-size, dispersal, network): a palaeontological approach.

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Laboratory: UMR 8198 CNRS - Evo-Eco-Paleo

Related research project (international/national/regional): /

Expected/obtained funding: /

ABSTRACT (about half a page)

Climate change seriously threatens biodiversity and the functioning of ecosystems, thus making the understanding and forecast of its potential impacts a societal priority. In this context, studying its possible consequences on species dispersal abilities becomes a crucial endeavour. In marine systems, the dispersal of ectotherms is often associated with the duration of mobile larval stages. However, temperature increase is likely to accelerate ontogeny, and thus reduce dispersion capacities. Building on this, the critical question we want to answer is to understand climate change effects on the dispersal abilities of marine species in order to predict at a macroecological scale the future vicariance of such species and its associated demographical, functional and evolutionary risks. We will tackle this question using a pluridisciplinary approach integrating eco-evolutionary models and paleontological data analyses.

Requested skills: Training in evolutionary paleontology, basic knowledge in quantitative analyses and morphometrics.

Key-Words : paleobiogeography, dispersal, paleoecology, body size, global warming, resilience, extinction.

Planned recruitment date : 09/2021

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Additional remarks/comments : /