Global change frames most of our today scientific activity in ecology and evolution for both bad and good reasons. One good reason is that the pace of change is so abrupt that we are faced with a myriad of natural experiments in which populations of living organisms have to cope with novel environmental conditions that put them at risk of extinction or provide them with new opportunities, depending on whether they are able to move and/or adapt. The lesser horseshoe bat is, on the one hand, the European bat species which regression following land use change is best documented and, on the other hand, a species which distribution is predicted to expand northwards due to global warming. Indeed, the species started to move northwards in some regions located along the northern edge of its European distribution, but not in others.

Comparing two metapopulations, one that is expanding and one that is not expanding, and building on long-term and large-scale observational studies, we study the drivers of population size changes in the lesser horseshoe bat by combining non-invasive population genetic and population dynamic approaches. More specifically, we explore how climate and land cover drive gene diversity and demography in the lesser horseshoe bat with the aim to better understand under which circumstances the species is likely to benefit from global warming in a region from where it almost disappeared during the last decades.

Cet exposé sera présenté en français.