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Gaël Raoul* (gael.raoul@cefe.cnrs.fr), 1919, route de Mende, campus du CNRS, 34293 Montpellier, France. *Dynamics of some populations structured by a space variable and a phenotypic trait.*

The spatial structure of populations plays a major role in many recent ecological problems. We will consider two such problems: - Impact of climate change on a species (work with M. Alfaro and H. Berestycki). A simple question that one can ask is whether a species submitted to a climate change will either move its range towards the poles, or stay at the same location and evolve to sustain higher temperatures. In the case of asexual population and for a simple environment, we describe the dynamics of the species, based on a parabolic model with a nonlocal competition term. - Invasion of a species with an evolving dispersion (work with N. Berestycki and C. Mouhot). One of the phenotypes that is susceptible to evolve greatly during an invasion is the dispersion : the more motile individuals will typically be more likely to reach the edge of the invasion front. This leads to accelerating fronts, that typically keep accelerating during the entire invasion process. We provide a description of this dynamics, based on a parabolic model with a nonlocal competition term and a careful analysis of a branching Brownian motion. (Received January 08, 2015)