Recent trends in Movement Ecology: a quantitative review of tools, topics and research gaps

## Abstract (153 words - “about 150 words” for Frontiers in Ecology and the Environment)

Movement is fundamental to life, shaping population dynamics, biodiversity patterns and ecosystem structure, and its study recently experienced a technological boom, providing massive tracking data globally, at ever finer spatio-temporal resolutions. We reviewed the field of Movement Ecology using a text mining approach on > 8000 papers, and assessed all components of the Movement Ecology Framework (MEF), a keystone integrative paradigm introduced in 2008. In the past decade, the publication rate has increased considerably, with major technological changes, such as an increased use of GPS devices, accelerometers and video cameras, and a convergence towards the R software. However, research largely focuses on the same questions than before the MEF, primarily investigating the effect of environmental factors on movement, and still neglects underlying movement processes. We call on researchers to transform Movement Ecology from technology- to interdisciplinarity-driven, and explore key movement processes like navigation, or evolutionary, physiological and life-history consequences of movement.