

Immersion Lecture: Macroecology - Theory, Methods, Lenses

Time of Event:

Monday, August 31, 2015 - 13:00 to 13:45

Video:

In this first of two lectures on macroecology, Dr. Brian McGill presents an overview of macroecology and defines the field in relation to other subdisciplines of ecology. He defines the macro in macroecology as meaning that the focus is at a larger scale than other ecological fields, and that scale difference can be spatial, temporal or taxonomic. He highlights the emphasis on diversity, and elaborates the various measures of diversity and how they are used analytically. Richness, evenness, and abundance form the core of classical measures of diversity of species and continue to be the most common measurement. He also highlights additional measures of beta diversity, which is change in diversity over space or time, and is often used to measure community or ecosystem composition. He also notes other measures of diversity in the ecosystem, including functional and taxonomic diversity.

Reading List

McGill, B.J. 2010. Species abundance distributions. In: A.E. Magurran and B.J. McGill (eds.), *Biological diversity: Frontiers in measurement and assessment*, Chap. 9. Oxford: Oxford University Press.

Neokola, J.C. and Brown, J.H. 2007. The wealth of species: Ecological communities, complex systems and the legacy of Frank Preston. *Ecology Letters*, 10(3), 188-196.



[Brian McGill](#) [1] is a Professor in the School of Biology and Ecology with a joint appointment with the Climate Change Institute at the University of Maine. He received his BA in Mathematics from Harvard (1988) and his PhD in Ecology and Evolutionary Biology from the University of Arizona (2003). Prior to coming to the University of Maine in 2010, he was an Assistant Professor at McGill University and the University of Arizona. His research focuses on understanding the patterns and processes controlling the distribution abundance of organisms at medium to large scales, to lead to more predictive theories of how distribution and abundance will change under anthropogenic global change, especially climate change and land cover change. He also works on ecoinformatics as a methodology to perform experiments at larger scales, using large census data sets and remote sensing databases.

Event type:

Immersion Speaker

Event Attendance:

Private Working Group

Source URL:

<https://www.sesync.org/events-announcements/fri-2016-02-12-1525/immersion-lecture-macroecology-%E2%80%93-theory-methods-lenses>

Links

[1] <http://www.brianmcgill.org/>