In this short introduction to the discipline of ecology, Dr. Brian McGill lays out the history of ecology in terms of key theories and research areas. He describes the different scales at which ecologists study populations of species, relationships among species in a specific ecological community, the dynamics of populations, and interactions of populations within communities and with the abiotic environment. He then discusses the contemporary shift in ecology toward modeling relationships, and notes that models can be limited in terms of how precise, realistic or generalizable they are, depending on approaches and assumptions. He summarizes the field by noting that the core historical subdisciplines of ecology are physiological, behavioral, population, community, and ecosystem ecology, and he discusses newly emerging subdisciplines of evolutionary, landscape, macro, and global ecology.

### Immersion Speaker

Brian McGill 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:

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