**5月7日  Spencer Barrett： The evolutionary transition from outcross to selfing: new approaches to an old problem**

**讲座题目**：**The evolutionary transition from outcross to selfing: new approaches to an old problem**

**主讲人**：Spencer Barrett 教授.

**主持人**：陈小勇 教授

**开始时间**：2016-5-7（周六）上午10:00

**讲座地址**：闵行校区教师之家三楼报告厅

**主办单位**：生态与环境科学学院 科技处

**报告人简介：**Spencer Barrett is a professor of Department of Ecology & Evolutionary Biology, University of Toronto, Canada. His researches focus on Ecology and evolution of plants with a particular focus on the evolution of mating systems, the ecology and genetics of invasions, and issues in conservation biology.

**报告摘要**：The evolution of self-fertilization from outcrossing has occurred on numerous occasions in flowering plants. In today’s presentation he will address four questions on this topic using theoretical approaches involving forward population genetic simulations and empirical studies of the evolutionary breakdown of tristyly to predominant selfing in the annual, Neotropical herb – *Eichhornia paniculata* (Pontederiaceae), where there is good evidence of multiple independent transitions to selfing. The specific questions addressed are: 1) Can molecular genomic data be used to distinguish the two primary mechanisms to explain the evolution of selfing – Fisher’s automatic selection hypothesis and Darwin’s reproductive assurance hypothesis? 2) What are the genomic consequences of the transition from outcrossing to selfing, and how does high rates of selfing influence the efficacy of natural selection across the genome? 3) How does variation in gene regulation change following the transition to selfing? 4) What is the genetic architecture of independent transitions to selfing within a species as revealed by mapping studies, and specifically are different mating system modifiers involved. The results that he present provide several new insights into the most important mating system transition in flowering plants.