



2008 George Mercer Award

Jonathan Chase

The Mercer Award is given for an outstanding ecological research paper published within the past two years by a younger researcher. The lead author of the paper must be 40 years of age or younger at the time of publication. If the award is given for a paper with multiple authors, all authors will receive a certificate, and those authors who are 40 years of age or younger at the time of publication will share the monetary prize. Nominees may be from any country and need not be ESA members. This year's recipient is Jonathan Chase for his 2007 paper entitled "Drought mediates the importance of stochastic community assembly" (*PNAS* 104(44):17430-17434).

Many have hypothesized that the real world is likely to exist on a spectrum ranging from dominance of neutral processes to dominance of niche processes. But Dr. Chase took this hypothesis further than anyone else has. He set up a clever experiment and got decisive results showing that this is true. Using experimental manipulation, this paper shows that the outcome of community assembly depends on the degree of environmental stress (drought), with high-stress communities having one assembly end point with fairly little scatter, while the low-stress communities show much more variation in assembly outcomes. This paper is possibly the most clear-headed and useful contribution to the debate to date.

On one level, this paper addresses neutral theory about community assembly. On a more general level, it is a model of how to do ecology. It reports the results of a true experiment but also speaks about large-scale community questions that are more often addressed by observational studies. It is also clearly informed by and speaks to theoretical ecology.

There have been repeated calls that, to be a rigorous and predictive science, ecology must make conditional predictions. In this way the complexity of the natural world can be addressed while still achieving generality. Yet, for 30 years, this agenda remains essentially undeveloped. Dr. Chase's contribution is an unusually elegant example of doing conditional ecology. Future ecologists will look back on it as a pivotal paper in launching the hard work of building a conditional ecology.