
George Mercer Award: Jennifer R. Gremer and D. Lawrence Venable

(2014) **Bet hedging in desert winter annual plants: optimal germination strategies in a variable environment.** *Ecology Letters* 17:380–387. DOI:10.1111/ele.12241

The Mercer Award recognizes an outstanding and recently published ecological research paper by young scientists. Unpredictable fluctuation in environmental conditions is a ubiquitous challenge for all forms of life. “Bet-hedging” names a strategy for dealing with environmental variation by adopting physical characteristics that are not best suited to average conditions, but allow survival in a wide variety of conditions, sacrificing short-term success to minimize risk



Jennifer Gremer



Larry Venable

over time. In a synthesis of 30 years of data, with multiple modeling approaches, Jennifer Gremer and D. Lawrence Venable, both at the University of Arizona at the time of the study (Dr. Gremer has since moved to the University of California, Davis), present definitive evidence that delayed seed germination acts as a bet-hedging strategy in winter annual plants of the Sonoran Desert. Their elegant paper provides a test of an age-old problem, in an iconic system. As predicted, species that face more risk exhibit stronger bet-hedging. This paper is a model of how to test general, qualitative theoretical predictions by making them quantitative. It provides a convincing example in a classic system, while at the same time inspiring new questions concerning the evolution of life history strategies.