

Ecologist to Describe a New Approach to Protecting Biodiversity in a Changing Climate

To protect biodiversity from impending climate change requires a two-fold approach: saving individual threatened species but perhaps even more importantly, conserving geological settings such as sand dunes, shale barrens and limestone rivers, says an ecologist with the nonprofit The Nature Conservancy.

“Conserving geophysical settings offers an approach to conservation that protects diversity under both current and future climates,” says Mark Anderson, regional director of conservation science, The Nature Conservancy, Eastern U.S. Conservation Region.

“Focusing on specific physical settings may actually be the key to conserving the most species.”

Anderson will expand on this conservation approach in a talk, “Climate, Geology and Biodiversity: Why Protecting Places is Critical to Conserving Species,” on Friday, Oct. 23, at 4 p.m. in 112 Walker Building. The talk, a Geography Coffee Hour, is open to the public.

Prioritizing geologic settings represents a shift for the conservation community that has long supported and been engaged in species protection. But Anderson said that the shift is more a progression than a rejection of the individual species approach as the goal is still the protection of species.

“We’ve always known there is a close association between where species—and especially rare species—are and their physical settings, but that relationship is much stronger than we realized,” Anderson said.

Research is ongoing about which geologic settings need protection, but the criteria include current species, size of the place, level of disturbance and connectivity to other identified places.

Also being studied are the roles of resilience and adaptation so as to better understand how to make the physical, chemical and biological systems at geologic sites as resilient as possible, Anderson said.

“This is taking seriously what we need to do to conserve the most biodiversity we can under a rapidly changing climate,” Anderson said.

Anderson’s talk is being sponsored by the Penn State Earth & Environmental Systems Institute (EESI) and the Department of Geography.

For those unable to attend Anderson’s talk, it will be live streamed at <http://e-education.mediasite.com/mediasite/Catalog/catalogs/default.aspx>.