

Poster Abstract

Student

Effects of Land-Use on Endemic and Disjunct Beetles in Black Belt Prairie Fragments

Thomas P. Franzem, Paige F. B. Ferguson Biological Sciences, The University of Alabama
Tuscaloosa, AL 35487. tfranzem@crimson.ua.edu

Historic accounts of the Black Belt Region in Mississippi and Alabama indicate at least 140,000 hectares of prairies were present in the 1830's. Due to urban growth and agricultural development, less than 1% of these prairies remain. These prairies are an ecologically unique and rare habitat. There is a dearth of knowledge about insect fauna in Black Belt prairie fragments, however, several Longhorn beetles have been recorded in prairie remnants that have a disjunct distribution from their known range in the Great Plains and mid-west. Furthermore, Black Belt prairies host at least two endemic beetles, a Ground beetle and a May beetle. Two main ways humans change ecosystems are through changing biotic community composition and changing habitats; we will investigate components of these changes in the Black Belt. We will estimate relationships between distributions of disjunct and endemic beetles and habitat features to draw conclusions about the impact of different land-use practices on beetles. An additional goal is to estimate relationships between beetle and invasive fire ant distributions to investigate the utility of invasive fire ants as a biodiversity indicator. The results of this study will help land-managers conserve and restore prairie fragments, document the beetle fauna in Black Belt prairies, and contribute to the search for biodiversity indicators.