

Modeling patch scale expansion of arctic shrubs

A graduate research assistantship is available for a student pursuing a PhD focusing on shrub expansion in the Alaskan arctic. The funded project involves mapping and modeling patch-scale expansion of arctic shrubs. The approach taken in this study is to utilize historic and contemporary aerial photographs of sites in the National Petroleum Reserve to categorized rates and patterns of shrub expansion. Grid-based spatial modeling of shrub expansion will be used in this study.

Candidates for this position should have some experience with the interpretation of aerial photographs, GIS and modeling. The ideal candidate will have some computer programming background. The intention is for this funded research to form the core of the student's dissertation research and allow for some latitude in the development of questions and methods appropriate to the expansion of arctic shrubs.

The Texas A&M Geography Department has a strong biogeography program that focuses on plant ecology and human/environment interactions. The Department also has strengths in Geographic Information Science and Remote Sensing. Opportunities exist to take classes in ecology, biogeography, GIS, and remote sensing, both in the Geography Department and around campus. Students seeking training in biogeography and plant ecology will find an extensive network of faculty on the A&M campus in a variety of supporting programs (e.g. Ecosystem Science and Management, Entomology, Wildlife & Fisheries Science). Texas A&M also has a large group of faculty interested in Arctic and Antarctic issues (<http://psp.tamu.edu>). For more information about the Geography program at Texas A&M, please visit the Geography Department website (<http://geography.tamu.edu>).

Support includes tuition and an annual stipend, and will begin in Fall 2009.

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