

Graduate Research Opportunity (2)
Assessing Vertebrate Biodiversity in Puerto Rico and the USVI
USDA Forest Service International Institute of Tropical Forestry (IITF)

Posted: January 22, 2010.

Position available: For MS or PhD graduate students. The successful applicant will have a strong interest in ecology, statistical analyses and modeling, GIS and remote sensing analyses, aquatic ecosystems, biodiversity and conservation.

Background: The structure and function of Puerto Rico and the US Virgin Islands' freshwater, estuarine, and near shore marine environments are affected by surrounding and upstream terrestrial ecosystems. Conservation areas often encompass both terrestrial and aquatic resources. Government policy decisions and on-the-ground conservation management often consider a complex and inter-dependant landscape matrix. Resource managers, government agencies, and conservation organizations need accurate, fine-scale scientific information on the distribution of species and habitats within this matrix in order to develop conservation management plans.

To goal of this project is to create a comprehensive set of databases on Puerto Rico and the US Virgin Islands' freshwater and marine resources – including habitat description and mapping, species distributions and conservation status, and protected areas and conservation priorities – combined with Puerto Rico and USVI terrestrial GAP databases, to conduct integrated analyses of gaps in conservation protection for the U.S. Territories in the Caribbean, address management needs, and test research hypotheses related to biodiversity and ecosystem structure and function.

The students will compile information on species distributions and habitat requirements, map landscape characteristics, develop models of species distributions using inductive and deductive modeling approaches, and develop a Masters or PhD thesis based on this information.

The students will work with Dr. William Gould (US Forest Service) with the research team in the IITF GIS and Remote Sensing Laboratory in Río Piedras, Puerto Rico.

Candidates should have the following skills:

- Educational background in ecology, environmental studies, or related disciplinary areas;
- Proficiency and experience in GIS software and analyses;
- Motivation to work independently; and
- Excellent computing and writing skills, motivation to publish in peer-reviewed journals.

Candidates should ideally be current students, accepted applicants, or planning to apply to the UPR-Río Piedras Graduate School but other circumstances will be considered.

Applicants should submit the following to William Gould at wgould@fs.fed.us:

- Cover letter summarizing research interests and academic and professional background
- Resume/CV
- Copies of transcripts (unofficial transcripts acceptable)
- GRE scores, if available
- Names and contact information for three references (no letters needed at this time)