Natural Resources and Environmental Issues

Volume 12 *University Education in Natural Resources* Article 45

1-1-2004

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Recommended Citation
Force, Jo Ellen; Waits, Lisette; Bosque-Perez, Nilsa; Eigenbrode, Sanford; McDaniel, Paul; Wulfhorst, J. D.; Boll, Jan; Finegan, Bryan; Harvey, Celia; and Somarriba, Eduardo (2004) "Integrative model of graduate education in biodiversity conservation and sustainable production in fragmented landscapes," *Natural Resources and Environmental Issues*: Vol. 12, Article 45.
Available at: http://digitalcommons.usu.edu/nrei/vol12/iss1/45

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This article is available in Natural Resources and Environmental Issues: http://digitalcommons.usu.edu/nrei/vol12/iss1/45

An Integrative Model of Graduate Education in Biodiversity Conservation and Sustainable Production in Fragmented Landscapes

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To achieve biodiversity conservation and sustainable production in anthropogenically fragmented landscapes, scientists need to be trained in a holistic fashion that emphasizes integration and interdisciplinary collaboration. Traditional graduate programs in natural resources, conservation biology and agricultural sciences usually fall short of this goal as they train scientists with research knowledge and skills in narrowly defined disciplines. Rarely, if ever, is integration across disciplines facilitated, valued, or emphasized in either coursework or research activities. We present a NSF Integrative Graduate Education Research Training (IGERT) funded experiment in graduate education that designs and evaluates an integrative educational model with an emphasis on developing interdisciplinary research knowledge and skills in the biological/ecological, physical and social sciences. This educational program involves faculty and students from seven departments and two colleges at the University of Idaho and several research areas at the Tropical Agricultural Research and Higher Education Center (CATIE) in Turrialba, Costa Rica. Nineteen doctoral students have been recruited and are working in five interdisciplinary teams to address research questions in biodiversity conservation and sustainable production in temperate and tropical ecosystems in Idaho and Costa Rica. Team members represent conservation genetics, forest ecology, agroecology, entomology, soil science, water quality, aquatic ecology, GIS, sociology and economics. As we approach the halfway mark of this five-year project, recruitment of doctoral fellows, the structure of the academic program and the interdisciplinary teams, the challenges we've faced and the successes of this new graduate program will be highlighted.

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