

Name of Institution: Purdue University

Title of Proposal: Fellowship Program in Multidisciplinary Ecology

ABSTRACT

Humans have profound impacts on natural ecological systems, which in turn determine human health and well-being by providing the resources upon which civilization depends. Understanding the interactions of ecological and human systems is a scientific priority, requiring an approach to ecology that is multidisciplinary and that blends basic and applied research. The national need for enhanced understanding of issues such as species conservation, release of genetically modified organisms, the evolution of resistance by parasites and pathogens, and the link between ecological damage and risk assessment requires that the brightest students from diverse backgrounds be recruited into ecology. To address the national needs for diversity and multidisciplinary training in ecology, we request 8 fellowships, 6 from the Department of Education's Graduate Assistance in Areas of National Need (GAANN) Program and 2 from Purdue University. Fellows will be: 1) recruited, with a special emphasis on underrepresented groups; 2) mentored and trained in an integrated program that includes instruction in pedagogical and research methods, supervised teaching in numerous formats, and the conduct of ecologically significant research; and 3) assisted in job placement. Real-time and follow-up evaluations will be used to improve the program in an adaptive fashion. Through this program, Purdue University will increase the number of Ph.D. students trained to address cutting-edge problems in ecology and enhance substantially the diversity of ecology as a profession. The training faculty in ecology at Purdue are outstanding researchers and mentors, with exceptional research, instructional, and other support facilities.