



CALL FOR APPLICATIONS FOR HARRIS CENTER RESEARCH SCHOLARSHIPS

The Whitney R. Harris World Ecology Center has limited funds available to provide research scholarships in biology and conservation. These scholarships include the Jane and Stanley Birge Tropical Research Scholarship, The Christensen Fund Research Scholarships in Plant Conservation (see separate guidelines), Henry B. Cowhey Scholarship in Tropical Conservation, John Denver Memorial Scholarship in Tropical Ecology, Stephen M. Doyle Memorial Fellowships, Leo and Kay Drey Scholarship, Jorie Butler Kent Scholarship, Jane Harris Scholarship in Tropical Botany, Mallinckrodt Graduate Fellowship in Tropical Ecology, Goldie Millstone Scholarship, Mary Osborne Scholarship, Parker-Gentry Tropical Research Fellowship (see separate guidelines), Peter H. Raven World Ecology Research Scholarship, Stokes Family Scholarship in Tropical Conservation and Harris Center Research Scholarships.

Graduate students enrolled at the University of Missouri-St. Louis, who are conducting or planning to conduct research for the M.S. or Ph.D. degrees in population biology, ecology, evolution, systematics, behavior, behavioral ecology, biogeography, conservation biology, conservation policy, politics or socioeconomics of conservation, and sustainable development, are eligible to apply for funding. Priority will be given to students beginning their research careers and to those who have not previously received Harris Center funding. Awards will normally range from \$1,000-\$4,000.

Successful applicants will have demonstrated that the proposed project will enhance their graduate program. Students applying to the Harris Center for funds **must** demonstrate that they are or will be seeking funds elsewhere, as funding from the Harris Center will probably not cover all costs associated with their research. Specifically, Harris Center research grants will **not** support tuition, stipends, books or conference attendance. Most Harris Center grants are restricted to UM-St. Louis graduate students intending to conduct field studies in the geographically defined tropics (between the Tropics of Cancer and Capricorn). Exceptions (*e.g.*, tropical organisms that pass a portion of the year outside of the tropics) will be considered on a case-by-case basis. However, limited funds are also available for fieldwork that is to be undertaken in other parts of the world.

Up to one-half of the budget may be used to support laboratory analyses directly associated with the fieldwork. Laboratory expenses are limited to chemical supplies. Harris Center funds will **not** cover the cost of glassware and general laboratory equipment. Only in exceptional circumstances will funds be made available for analyses conducted by commercial laboratories. Any questions regarding eligibility and budget should be directed to the Harris Center Executive Director.

Please submit eight copies of completed proposals by the competition deadline to the Executive Director, Whitney R. Harris World Ecology Center. Send one electronic version to osbornepl@umsl.edu. Proposal guidelines are available from the Harris Center Office or can be downloaded from the Harris Center web site: <http://hwec.umsl.edu/>

Fall 2009 Competition deadline: 5 p.m. on Monday, November 2, 2009. Awards will be announced by Monday, December 7, 2009 (students who received support in the 2009 Spring competition are not eligible for awards in this competition).

Spring 2010 Competition deadline: 5 p.m. on Friday, February 26, 2010. Awards will be announced by Monday, March 29, 2010 (students who receive support in the 2009 Fall competition will not be eligible for awards in this competition).

THE PARKER-GENTRY TROPICAL RESEARCH FELLOWSHIP

Two of the most knowledgeable and dedicated field biologists, Ted Parker and Al Gentry, died in a tragic plane accident in Ecuador on August 3, 1993. At the time of the accident, Ted and Al were surveying possible boundaries for a new forest reserve in Ecuador as members of Conservation International's Rapid Assessment Program (RAP). The death of these two outstanding biologists created a tremendous hole in tropical research and biodiversity conservation. To recognize and honor their commitment to educating Latin American scientists, the Whitney R. Harris World Ecology Center at the University of Missouri-St. Louis is offering the *Parker-Gentry Tropical Research Fellowship* to support the field research of a Latin American graduate student. Funds for this special fellowship have been made available through the generous contributions of friends of the Whitney R. Harris World Ecology Center.

Ted Parker, senior scientist at Conservation International, was widely recognized as the most knowledgeable Neotropical ornithologist. His contribution to our understanding of the region's avifauna went far beyond his tremendous skills at identifying birds by sight and sound. Ted was a great natural historian and an impassioned spokesperson for conservation of the flora and fauna of the region. Ted's concerns for conservation were instrumental in his vision and development of the Rapid Assessment Program of Conservation International.

Al Gentry, senior curator at the Missouri Botanical Garden, was unmatched in his ability to identify Neotropical plants and his contributions to herbaria and the botanical and ecological literature were immense. His book, *A Field Guide to Woody Plants of Northwest South America*, an invaluable source of information for students of the region's flora, will likely remain the single most important volume of the region's flora for many years to come.

Both Ted and Al were magnets for students of tropical biology. Each of them recognized the importance of educating the next generation and each gave freely of their time and knowledge and they were usually accompanied on their pioneering field trips to South and Central America by local scientists. **The intent of the *Parker-Gentry Tropical Research Fellowship* is to provide opportunities for Latin American students of tropical biology and conservation to conduct field-based research leading to an advanced degree.** Conditions for eligibility are current enrollment in the graduate program in Biology at the University of Missouri-St. Louis and citizenship of a Latin American country. Latin American students have been targeted in recognition of Ted and Al's research in and fondness for Neotropical countries. Research monies from the *Parker-Gentry Tropical Research Fellowship* are to be used for expenses associated with field research in the Neotropics. Appropriate topics include biogeography, conservation biology, ecology, faunal surveys, floristics, natural history and systematics. Topics not considered appropriate are agroecology, agroforestry, ethnobotany, forestry, marine biology, molecular biology, reforestation and sustainable development. Priority will be given to proposals of high scientific merit that encapsulate the research interests of Ted Parker and Al Gentry.

The Neotropics harbor much of the world's biodiversity, yet our understanding of the biota and complexity of tropical ecosystems is still very incomplete. Ted and Al's research form much of the core of what we know about the Neotropics today. Given the knowledge that still needs to be gathered and the urgency with which we must work in order to conserve the region's diverse ecosystems before they disappear forever, the *Parker-Gentry Tropical Research Fellowship* will be instrumental in fostering the next generation of tropical biologists.

Applicants for the Parker-Gentry Fellowship need not submit a separate application for Harris Center Research Scholarships. Applicants not awarded the Parker-Gentry Fellowship will, automatically, be considered for other Harris Center Research Scholarships.

CALL FOR APPLICATIONS FOR THE CHRISTENSEN FUND RESEARCH AWARDS

The Whitney R. Harris World Ecology Center has funds available to support research through The Christensen Fund Program in Plant Conservation. These research awards are available to all UM-St. Louis graduate students who are conducting or planning to conduct research in plant conservation for the M.S. or Ph.D. degrees in some part of the New or Old World tropics. Awards will normally range from \$2,000-\$4,000.

Proposals should address broadly-defined plant conservation research questions focused on the tropical countries of South and Central America, Mexico, sub-Saharan Africa, Madagascar, tropical Asia, Malesia, the Caribbean and Pacific islands (excluding Hawaii as a sole research site). Appropriate research topics include plant systematics, plant biogeography, plant ecology, and plant-animal interactions. Projects should have relevance to plant conservation including plant habitat conservation. These research awards will **not** support tuition, stipends, books or conference travel and only in exceptional circumstances will funds be made available for analyses conducted by commercial laboratories. Any questions regarding eligibility and budget should be directed to the Harris Center Executive Director.

Applicants for the Christensen Fund Research Awards need not submit a separate application for Harris Center Research Scholarships. Applicants not awarded a Christensen Fund Research Award will, automatically, be considered for other Harris Center Research Scholarships.

GUIDELINES FOR APPLICATIONS FOR HARRIS CENTER RESEARCH SCHOLARSHIPS

Proposal format

Copies of previously funded proposals are available from the Harris Center office (Research 233) for review by applicants. Please note that the guidelines have changed over the years and applicants should not directly model their proposals on those funded in previous years but should follow the current guidelines as detailed below.

Each application should consist of the following components:

Title Page (title page available at end of document or from Harris Center's web page)

The title page includes the name of the applicant, graduate program, project title, project duration, location of field work, total funding requested, a summary of no more than 300 words, history of Harris Center funding, list of pending proposals, and **signature of advisor indicating that the proposal has been reviewed**. The project title should be concise and informative.

Research Proposal

The narrative of the research proposal should not exceed more than **four single-spaced pages** (not counting supporting figures and tables, bibliography, budget information and 2-page curriculum vitae). Font size should be not less than 12 point and at least 1-inch margins are required. The following headings and sub-headings provide a suggested format for the proposal:

Objectives

Project Description

Introduction

Methods

Significance

Budget

Budget Justification

Budget

An itemized budget should be presented with each item clearly justified. Provide details on budget requests to other agencies here, including name of the agency/agencies, submission date, budget requested and the award announcement date.

Curriculum Vitae

A two page curriculum vitae should be attached to the proposal.

Ancillary information

Proposals that involve research on humans or other vertebrates must conform to human and vertebrate animal welfare policies at UM-St. Louis. Guidelines of these policies may be obtained from the Office of Research Administration. Appropriate permits for collecting biological specimens must be obtained or in the process of being obtained prior to accessing funds awarded by the Harris Center.

Proposal checklist

A good proposal should address the following questions:

1. Do the title and project summary match the purpose and scope of the project?
2. Does the Introduction explicitly indicate the validity of the concept to be investigated and lead into the project description?
3. Is previous work adequately used to frame the question to be answered by the project?
4. Are the methods appropriate to the research question or hypothesis proposed?
5. Is the significance of the work apparent, both to someone in your research area **as well as someone outside your discipline area?**
6. Is the budget well justified and appropriate for funding by the Harris Center?
7. Did your **colleagues and advisor have ample time to review** your proposal before submission?
8. Have appropriate protocol forms been reviewed by the UM-St. Louis Animal Care Committee? (Research monies from the Harris Center will be withheld until all necessary protocols are approved.)
9. Have appropriate permits to collect biological specimens been obtained or sought from appropriate authorities in all countries where research is to be carried out? (Research monies from the Harris Center will be withheld until all necessary permits are obtained.)

Proposal evaluation criteria

Your proposal will be evaluated on its academic merit, probability of success, and appropriate geographical focus. In addition, preference will be given to students beginning their research careers, projects that have not previously received Harris Center research funding, and students who have demonstrated efforts to seek external research money. All things being equal, consideration will be given to students who are active in Harris Center programs. Students with previous Harris Center support must have on record a final report of previous Harris Center research and provide a summary of this research and clearly demonstrate why additional funds are necessary from the Harris Center and can not be obtained elsewhere (see Item 7 on Title Page).

Reviewers will rate each proposal on academic merit and probability of success from poor (5) to excellent (1) and only proposals in categories 1 and 2 are likely to receive support.

Application for Harris Center Research Scholarships

Whitney R. Harris World Ecology Center at the University of Missouri-St. Louis

1. Name of applicant:
2. Graduate program:
3. Project title:
4. Project duration:
5. Location of fieldwork:
6. Total budget:

What other sources have you or do you intend to apply to for the research outlined here? When are proposals due? Please attach a copy of the budget seeking funds from all external agencies.

7. Amount requested from Harris Center:
If you have received previous funding from the Harris Center, please provide: project title; award amount and date award was received. Please attach a summary of results of prior Harris Center research and explain clearly why additional funds are now necessary from the Harris Center and why these cannot be obtained elsewhere (summary should not exceed 1 single-spaced page).
8. Abstract

Do not exceed this space.

If this proposal is funded, I would be happy to have it shown to applicants developing proposals for Harris Center Research Scholarships in subsequent years. If you agree to this, please sign below.

I have reviewed the attached research proposal requesting funding from the Harris Center.

Applicant's Advisor: _____

GUIDELINES FOR REVIEW OF HARRIS CENTER RESEARCH SCHOLARSHIPS

Scholarships available

Jane and Stanley Birge Tropical Research Scholarship, The Christensen Fund Research Scholarships in Plant Conservation (see separate guidelines), Henry B. Cowhey Scholarship in Tropical Conservation, John Denver Memorial Scholarship in Tropical Ecology, Stephen M. Doyle Memorial Fellowship, Leo and Kay Drey Scholarship, Jorie Butler Kent Scholarship, Jane Harris Scholarship in Tropical Botany, Mallinckrodt Graduate Fellowship in Tropical Ecology, Goldie Millstone Scholarship, Mary Osborne Scholarship, Parker-Gentry Tropical Research Fellowship (see separate guidelines), Peter H. Raven World Ecology Research Scholarship, Stokes Family Scholarship in Tropical Conservation and Harris Center Research Scholarships.

Geographical constraints

Harris Center Research Scholarships

Harris Center scholarships are restricted to UM-St. Louis graduate students and most awards support projects that intend to conduct field studies in the geographically defined tropics (between the Tropics of Cancer and Capricorn) in South America, Central America, Mexico, Africa and Madagascar, tropical Asia (including some developing countries in southern Asia), Malesia, tropical Australia, the Caribbean and Pacific islands (including Hawaii). Funds are also available for research with a geographical focus in other regions of the world.

Parker-Gentry Fellowship

The Parker-Gentry Fellowship is restricted to UM-St. Louis graduate students from Latin America intending to conduct field studies in Latin America. Proposal must contain a significant field based component. Appropriate topics include biogeography, conservation biology, ecology, faunal surveys, floristics, natural history and systematics. Topics not considered appropriate are agroecology, agroforestry, ethnobotany, forestry, marine biology, molecular biology, reforestation and sustainable development.

The Christensen Fund Research Awards

The Christensen Fund Research Awards are open to all UM-St. Louis graduate students who are conducting or planning to conduct research in applied plant conservation for the M.S. or Ph.D. degrees in some part of the New or Old World tropics. Proposals should address broadly-defined plant conservation research questions focused on the tropical countries of South and Central America, Mexico, sub-Saharan Africa, Madagascar, tropical Asia, Malesia, the Caribbean and Pacific islands (excluding Hawaii as a sole research site). Appropriate research topics include plant systematics, plant biogeography, plant ecology, plant conservation (including plant habitat conservation) and plant-animal interactions.

Harris Center Scholarship Committee Appointment

The Harris Center Scholarship Committee is appointed by the Harris Center Executive Committee. The committee consists of up to six Harris Center Faculty Associates, the Manager, Graduate Studies, Missouri Botanical Garden (or nominee) and two senior UM-St. Louis graduate students (at least one will be an international student, neither will be an applicant in the current round). The Harris Center Executive Director will be an *ex officio*, non-voting member.

Proposal review

Copies of all proposals will be circulated to members of the Harris Center Scholarship Committee. Proposals will be separated into discipline areas by the Harris Center Executive Director. Each proposal will be reviewed in detail by three members of the scholarship committee and they will rank the proposal, write detailed comments as feedback to the applicants, and report to the full Harris Center Scholarship Committee. Copies of

all proposal reviews will be made available to members of the Scholarship Committee prior to its meeting. Ideally, each proposal will be reviewed by two members of the scholarship committee familiar with the discipline area and one from outside the discipline area. Proposals will be allocated to reviewers by the Harris Center Executive Director in consultation with members of the Scholarship Committee. Advisors will not be one of the three reviewers of proposals submitted by their graduate students (see below). When expertise is lacking, views on the merits of particular research proposals may be solicited from suitably qualified individuals who are not members of the Scholarship Committee. Members of the Scholarship Committee will have access to all proposals but may choose to rely on the comments of the three reviewers. The final decision on the award of scholarship funds will rest with members of the Scholarship Committee. The Harris Center Director and Executive Director will, with the exception of the Parker-Gentry Fellowship, determine which named scholarship is awarded to each of the successful applicants.

Parker-Gentry Fellowship competition

Applications for the Parker-Gentry Fellowship will be considered by the Harris Center Scholarship Committee but the views of individuals as specified by the founding donor may be sought and considered. The award of this fellowship will be made first and unsuccessful applications will be re-considered for Harris Center Research Scholarship awards. The recipient of the Parker-Gentry Fellowship will not be eligible for further funding in the current round of Harris Center scholarship awards.

Proposals from M.S. and Ph.D. students

The Harris Center Scholarship Committee should rank proposals from M.S. and Ph.D. students separately. A formula that splits funds between the M.S. and Ph.D. competitions based on the number of applicants and funding requested will be applied. This formula will be developed by the Harris Center Executive Director prior to consideration of proposals but should act only to guide award decisions. **Scientific merit and probability of success will remain the over-riding criteria in the award of all Harris Center scholarships.**

Student feedback

Detailed student feedback will be prepared by the three reviewers and, if necessary, added to by members of the Harris Center Scholarship Committee. Written reviews should be prepared by all reviewers and may be edited to remove repetition. Reviews should cover the following:

- Scientific merit
- Importance of funding to beginning research project and graduate career
- Relevance of research to Harris Center mission
- Contributions from previous Harris Center support
- Effort to obtain funds from other sources
- Contributions to the Harris Center by Student Associate

Role of advisors

Advisors serving on the Harris Center Scholarship Committee will not remain in the room when proposals from their graduate students are being discussed and should not vote on proposals submitted by their graduate students. Advisors will not serve as specialist reviewers of proposals submitted by their graduate students.