

STRATEGIC PLAN 2015-2019



Statement from the Director

The Center has grown tremendously over its first 25 years. We have trained numerous students from the St. Louis region, from across the country, and indeed, from all over the world. All of our alumni have excelled academically, while some have taken important positions in government, education, and NGOs where they are having a positive influence on biodiversity protection. These accomplishments could not have taken place without the strong support of the University, the Missouri Botanical Garden and the Saint Louis Zoo, and community members who have provided tremendous backing since the Center's inception. This five-year plan was written with the goal of enhancing these achievements far into the future. The plan itself represents a major contribution of time and effort from our partners, collaborators, current students and alums, community members, and Julianne Stone, our facilitator. On behalf of the Harris Center, I thank them all for their invaluable contribution.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert J. Marquis".

Robert J. Marquis, Director

Vision

To grow as a global leader in ecological research and training for biodiversity conservation

Mission

The Harris World Ecology Center (HWEC), through a unique set of partnerships, promotes research and training in basic ecology and biodiversity conservation across the globe, and increases public awareness and interest in issues relating to global natural resource conservation.

Executive Summary

In the next five years, the Whitney R. Harris World Center should become the most recognized center for academic and community service excellence on the UMSL campus and in the UM system. It should further enhance its already strong reputation in the community, as well as across the nation and internationally. It should draw more undergraduate students, and continue to attract graduate students from around the globe. The number of scholarships and fellowships currently available should be doubled. Two professorships, one each with the Missouri Botanical Garden and the Saint Louis Zoo, should be added, as well as two permanent rotating postdoctoral positions. Finally, course opportunities should be expanded to train students in areas such as public policy and implementation so that these students can be more effective conservationists who are prepared to meet the many new challenges they will face as they graduate.

What is the HWEC?

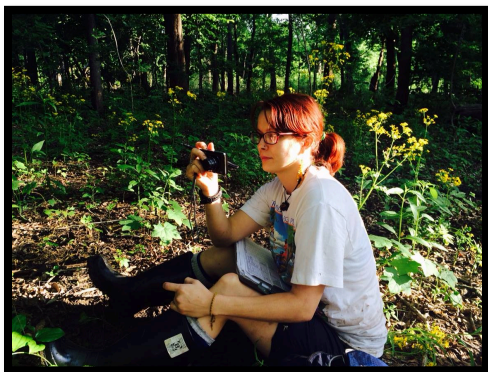
The HWEC was established in 1990 as a means to secure financial support for the research and training of graduate students studying in the areas of tropical ecology and conservation. The original name, the International Center for Tropical Ecology, embodied this focus on tropical research and support of students from tropical countries, at that time who were mostly from Latin America. Our partner from the outset was the Missouri Botanical Garden (MOBOT), but soon joint training and research efforts were begun with the Saint Louis Zoo (STLZOO). In 2006, following a major donation from Whitney R. Harris, the Center name was changed to the Whitney R. Harris World Ecology Center, and efforts were made to expand the scope of the Center to be both more local and more global. The Center has always been and continues to be housed within the Department of Biology at the University of Missouri-St. Louis. The HWEC is a globally unique institution. It is a partnership between three institutions each internationally recognized in their own right for their efforts in biodiversity conservation and training.



Harris Center Accomplishments in Brief

- Endowments total \$4.86 million
- 13 endowed scholarships, and 4 non-endowed named scholarships
- 4 fellowships in plant conservation, and one fellowship in animal conservation
- 260+ students have graduated since 1990, 30 with support from the STL Zoo, and 93 with support from MOBOT
- Students have come from 37 countries and have conducted research in 44 countries
- The HWEC has cooperative agreements with educational institutions in Argentina, Brazil, Madagascar and Mexico
- The World Ecology Medal has been awarded to 19 global leaders in conservation

The mission of the HWEC has two main components. The first is to support the research and training of graduate and undergraduate students in ecology, evolution, and conservation, and the second is to provide community outreach in the area of biodiversity education. The longterm vision is to reverse the trend of biodiversity loss through community education, research, and the training of students who then take on decision-making positions in regions and countries where biodiversity is threatened. Our constituents are current, past, and prospective undergraduate and graduate students, our scientific partners, our local partner organizations, and community members from the St. Louis region. We encourage research locally, regionally and internationally, as well as the training of both local and international students.



In addition to support for research, the Harris Center provides training in conservation implementation via undergraduate and graduate certificate programs. Students are placed with local, national, and international conservation NGOs and government agencies. These placements give students the opportunity to apply their knowledge and education to conservation projects underway. Local agencies include the Missouri Department of Conservation, The Missouri Department of Natural Resources, The Nature Conservancy, the

Sierra Club, the Audubon Center at Riverlands, Bellefontaine Cemetery, the City of St. Louis, the Saint Louis Zoo, and the Missouri Botanical Garden.

Personnel and Administrative Structure

Staff includes a Director (summer salary) and full-time administrative assistant.

The administrative structure consists of five standing committees:

- Harris Leadership Council advises the Director and raises funds; it meets three times per year
- Harris Executive Board meets twice per year to approve the budget and to select students for Christensen fellowships
- Scholarship Committee meets twice per year to review and fund scholarship proposals
- Harris Scientific Board provides scientific expertise and advice on Center activities
- Harris Advisory Board nominates and approves candidates for the World Ecology Medal

There has been a community education component to the mission of the HWEC from the outset. This effort started with the World Ecology Day, which has since developed into the annual Whitney and Anna Harris Conservation Forum (20 in total), and the Jane and Whitney Harris Lecture (21 in total), an annual public lecture given by a leader in biodiversity conservation. The Forum is traditionally held at the STLZoo in the fall, and the Lecture at MOBOT in the spring. Recent attendance to each has been 150-300 persons. The Saint Louis Academy of Sciences has helped with advertising for these events.

Five-year Strategic Planning Process

The planning process involved an initial series of meetings during March-May 2014 involving University officials, University faculty and students, representatives of current and potential partners, and members of the Harris Leadership Council. Specifically the Director and Harris representatives met with representatives from University Marketing on March 19, and with University Development on April 2. On April 25, the Director met with the Executive Committee, on May 9 with the Biology faculty, followed by a meeting with current and past graduate student associates of the Harris Center. The main planning session occurred all day May 16 and involved the Director, the Harris Leadership Council, representatives of current and

potential partners, the Executive Committee, and representatives from the Biology faculty and Harris associated graduate students. Julie Stone, the Director of the Local Government Partnership, a collaborative effort between University of Missouri-St. Louis Public Policy Administration Program, East-West Gateway Council of Governments, University of Missouri Extension and the Public Policy Research Center, facilitated the last three meetings.

Subsequent to these meetings, the Director drafted a plan that included five goals. Objectives were outlined to meet each of these goals. The plan was presented to the Harris Leadership Council members at their September 2014 meeting. A committee was assigned to each of the five goals that would then review the stated objectives and strategies, modify as needed, and to define metrics and timelines for completing each of the objectives. The newly modified plan was presented to the Leadership Council on January 30, 2015, approved at the next meeting of Leadership Council on May 15, 2015. Metrics and timelines are provided in a separate document, and notes from the five goal committees are given in the Appendix.

Values



Our vision and future goals are guided by the following principles:

- Human welfare depends on maintenance of ecosystem services provided by the Earth's biodiversity;
- Non-human species have an intrinsic value unto themselves;
- An international effort is required to reduce the pervasive, negative impacts of humans on the Earth's biota and abiotic environment;
- Conservation can only be achieved through ethically-based, sound science;
- Protection of biodiversity requires the conservation education of people of all backgrounds and ethnicities.

Goals

The focus in the next five years should be on three particular themes: (1) increasing the visibility of the HWEC, (2) taking advantage of current ties with partners to leverage more funding, more collaborations, and attract high quality students, postdocs and faculty, and (3) increase the effectiveness of the Center's conservation education, both for students and the local

community. The three themes are inter-related, in that improving one will bolster the other two.

Goal 1: Make the HWEC more effective by revising and updating the internal structure (Appendix 1)

The current structure of the Center consists of five standing committees, one of which has a well-defined mission and meets regularly (Scholarship Committee), two of which meet regularly (Leadership Council and Executive Committee) but could be more effective and active in their contribution, and two of which (Scientific Board and Advisory Board) meet irregularly and have a mission that is ill-defined and have no rules for membership transition.

Relevant Comments from Strategy Sessions: Efforts of volunteers, the Director, and Center associates could be more effective if the internal structure is better defined. The administrative staff should be able to expand as needed. Transparency in all budgetary items is essential.

Objective 1. Review and revise, as appropriate, the committee structure and committee duties.

- *Strategy:* Establish a committee to review the current structure, goals, composition, and duties of all standing committees

Goal 2: Develop a marketing strategy to more effectively communicate the successes of the Center to its constituents, and the opportunities represented by the Center for collaboration, research, and education (Appendix 2)

The HWEC does not have a defined marketing strategy, and has not efficiently used the marketing resources available.

Relevant Comments from Strategy Sessions: The successes of the Harris Center are well known internationally but are less known locally and underappreciated when known. The Center does an excellent job of producing relevant, thought-provoking, and educational community events. However, funding is limiting and more could be done to publicize these events, given that they are two of the main outreach activities of the Center. In addition, an annual community project could both educate the community and bring more attention to the Center.

Objective 1. Develop an effective social media strategy

- *Strategy A:* Hire an administrative assistant adept in social media
- *Strategy B:* Produce an electronic newsletter three times per year
- *Strategy C:* Develop a website independent in format; prioritize information presented

- *Strategy D:* Leadership Council members meet annually with UMSL and UM System officials to promote the HWEC
- *Strategy E:* Cultivate relationships with University marketing, professional media (NPR, STL Post-Dispatch), and MOBOT and STL Zoo PR departments to advertise Center events and successes
- *Strategy F:* Develop promotional video
- *Strategy G:* Collaborate with local STEM efforts (e.g., SCOPE)

Objective 2. Increase recruitment of undergraduate and graduate students to the Department of Biology.

- *Strategy:* Establish a Student Recruitment Committee

Goal 3: Strengthen current partnerships and seek out new partners (Appendix 3).

The two current partners (Missouri Botanical Garden and the Saint Louis Zoo) are both strong supporters of the HWEC. Each partner provides valuable resources (space, and research and stipend support, and access to the herbarium and library in the case of MOBOT), share in undergraduate and graduate training, have joint research projects with Harris associated faculty, and has a shared endowed professorship with Biology-HWEC. The HWEC should continue to strengthen these long-lasting partnerships, but also explore new ones, such as those underway with the Audubon Center at Riverlands, Bellefontaine Cemetery, and the City of St. Louis.

Relevant Comments from Strategy Sessions: The HWEC represents a unique partnership between a university, zoo, and botanical garden, all internationally known. Success has derived by linking efforts between UMSL and the Zoo, and between UMSL and MOBOT. However, the potential benefits of collaboration between all three are as yet unexplored but hold great promise.

Objective 1. Jointly seek funding with the STLZOO and MOBOT for more shared professorships, graduate fellowships, undergraduate scholarships, and research support.

- *Strategy:* Meet annually with each partner to develop new joint efforts

Objective 2. As resources and opportunities present themselves, encourage collaboration with non-partners, particularly through joint research proposals and student internships.

- *Strategy:* Use Leadership Council members, Biology faculty, and community members to seek new opportunities

Objective 3. Seek ways to make shared agreements with international partners more effective

- *Strategy:* Use the Scientific Board to advise on ways to gain funding for joint research and research training opportunities with international partners

Objective 4. Seek out new possible partners

- *Strategy:* Define criteria for partner status and approval process for adding partners

Goal 4: Formulate a strategy for fund-raising and determining funding priorities

Currently, there is no overall strategy for fund raising linked to HWEC priorities. The World Ecology Gala at which the World Ecology Medal presentation is made, is the main source of donations for the Center, and the one source of funding over which the Center has the most control. The procedure for choosing medal winners has traditionally been the responsibility of a few longtime, committed supporters of the HWEC rather than a broad-based well defined selection process. Also, the organizing committee of the gala itself is in transition. Grants and foundation support represent other key revenue sources. The Center has had success in attracting national (NSF MOSTEP) and international funding (Christensen Foundation), both of which have been valuable in meeting the mission of the HWEC. The strength of the Center's partnerships with the Saint Louis Zoo and the Missouri Botanical Garden is demonstrated by active, ongoing collaborative research and training and additional external funding to continue support for these programs is critical. A list of funding priorities, updated as needed by the Director, is available, but a larger constituency is needed to revise the list.

Relevant Comments from Strategy Sessions: The Department of Biology faculty has been enhanced in the last three years with new hires, especially in areas of research expertise relevant to the HWEC. This new energy and expertise must be channeled with a well-defined funding strategy linked to HWEC priorities. The M.S. program in particular needs an influx of funding given that many students from tropical countries only seek an M.S. degree. The strategy must be developed, aligned with and supported by University Development and joint projects with partners (St. Louis Zoo and the Missouri Botanical Garden) and collaborators (e.g., The Nature Conservancy). The HWEC must leverage existing collaborations to seek funding in the form of NSF IGERT and PIRE projects, and from foundations, such as the MacArthur Foundation and corporate foundations. The demonstrated collaborative efforts are exactly what many funding agencies and foundations seek.

Objective 1. Increase return on World Ecology Gala events

- *Strategy A:* Reformulate Advisory Board
- *Strategy B:* Formalize nomination process for World Ecology Award
- *Strategy C:* Plan at least two Galas in advance

Objective 2. Maintain, update, and prioritize the list of projects for which funding is sought.

- *Strategy:* Publish list in Leadership Council meeting agendas and newsletters

Objective 3. Develop priority-based (e.g., Masters degree program, scholarship support for joint research between ecology and molecular biology) fund-raising strategies related to foundations, grant programs and other revenue sources with University Development, partners, and collaborators.

- *Strategy A:* Tap HWEC committees, partners and the Scientific Board to identify possible funding sources
- *Strategy B:* Leadership Council members meet annually with UMSL and UM System officials to promote the HWEC

Goal 5: Increase training and career opportunities for graduate students (Appendix 5)

The Center will produce graduates who are trained in critical thinking and current scientific approaches and who effectively translate scientific understanding into conservation impact.

The Center will achieve this through financial support; through acting as a hub between current students, alumni, faculty and affiliates, which in turn will further local conservation efforts; and through supporting the integration of natural history, scientific skills and translational skills into the UMSL biology curriculum.

Relevant Comments from Strategy Sessions: There is a continual need to provide updated learning opportunities to graduate students so that they can compete for jobs, publish, and be effective at translating science into policy. Current students, however, rarely are in contact or even know alumni, and alumni often are not in contact with the Center, or help recruit new students or come back to UMSL to help train current students. Nor are alumni in contact with each other, thus losing an opportunity for mutual benefit in the form of research collaboration, shared conservation initiatives, and career enhancement.

Objective 1. Support field ecology and natural history to inspire and inform conservation.

- *Strategy A:* Continue to support membership in the Organization for Tropical Studies (OTS)
- *Strategy B:* Continue to support student attendance expenses at OTS courses and explore sustainable funding sources for this, such as the creation of a new endowment
- *Strategy C:* Work with Missouri Botanical Garden and Saint Louis Zoo affiliates to support current or design new field courses; possibility of alternating-year field courses in plants/animals

Objective 2. Support student training in the disciplines of ecology, evolution and systematics necessary for scientific understanding.

- *Strategy A:* Work with students to fund and plan one workshop each year which addresses skills essential to success in graduate studies and to future scientific development (depending on student interest, e.g., data analysis, scientific writing, writing and managing grants, techniques)
- *Strategy B:* Work across UMSL departments and in consultation with students to enhance course offerings in these skills
- *Strategy C:* Support students in participating in outside workshops and conferences

Objective 3. Support student training in the translation/linking of scientific understanding to conservation impact.

- *Strategy A:* Partner with the Biology Graduate Student Association to fund and plan one workshop each year that addresses skills essential to translational ecology (e.g., science communication, environmental law, implementing policy change)
- *Strategy B:* Support student internships to serve as a pipeline for translating scientific research to affect policy, management, industry and education, including identifying and soliciting HWEC alumni as conservation certificate internship hosts, and funding student involvement
- *Strategy C:* Work across UMSL departments and in consultation with students and affiliates to enhance conservation certificate course offerings in these skills

Objective 4. Act as a hub between current students, alumni, faculty and affiliates.

- *Strategy A:* Maintain a current database of HWEC-affiliated alumni, faculty and affiliates, and what they can offer students, including a publicly available online version
- *Strategy B:* Facilitate connections between current students and people in the database
- *Strategy C:* Work with students to plan and implement a HWEC alumni symposium, with invited talks, student meetings, and student career preparation

Objective 5. Foster the initiation and growth of the Conservation Academy in concert with the STLZoo.

- *Strategy:* Recruit graduate students to help organize and participate in the Conservation Academy as students, instructors and teaching assistants

Objective 6. Recruit two two-year conservation-oriented HWEC-affiliated postdoctoral scholars.

- *Strategy A:* Secure funding, preferably in the form of an endowment
- *Strategy B:* Design postdoctoral positions to fully integrate with HWEC activities (e.g., teaching Conservation Certificate courses or workshops and working with affiliates)

May 20, 2015