Program Audit Committee Center Review
Whitney R. Harris World Ecology Center
Department of Biology
University of Missouri-St. Louis

1. Overview and Mission

The Whitney R. Harris World Ecology Center is a unit within the Department of Biology that provides a focal point for the graduate program in Ecology, Evolution and Systematics. The Center was established in 1990 as the International Center for Tropical Ecology in cooperation with the Missouri Botanical Garden to promote research and education focused on ecology, sytematics and conservation of tropical ecosystems. UM-St. Louis and the Saint Louis Zoo signed a cooperative memorandum of understanding in January 1995.

In 2006, the Center's name was changed to the Whitney R. Harris World Ecology Center. The Center now strives to promote and support research and education in biology and biodiversity conservation throughout the world, and to increase public awareness and interest in issues relating to global natural resource conservation and sustainable development. Its mission is:

1. to promote graduate and undergraduate research and education in conservation biology, ecology, systematics, and sustainable development;
2. to promote multidisciplinary approaches to solving ecological problems;
3. to nurture partnerships with the Missouri Botanical Garden and the Saint Louis Zoo;
4. to establish active links with colleagues and institutions in countries throughout the world which will enhance scientific exchange and promote research and education;
5. to promote an awareness within the St. Louis community of the importance of biodiversity conservation and the pursuit of environmentally sustainable practices.

The goals and activities of the Center reflect the University's mission in the areas of teaching, research and community outreach through its active participation in graduate and undergraduate education, its promotion of research productivity, and its outreach efforts to the St. Louis community. Moreover, the Center directly contributes to the University's commitment to "internationalize" the campus and curriculum by promoting course offerings with an international perspective, by increasing the University's stature and visibility in the international community, and by recruiting international graduate students. The Center strives to facilitate research and the training of the next generation of scientists who will face the challenge of solving ecological problems.

The Whitney R. Harris World Ecology Center meets the *UM Collected Rules* Chapter 50 criteria in the following ways:

1. It has a separately identifiable budget.
2. The Center has positions of Director (currently vacant with a search underway, see Attachment 1) and Executive Director.
3. Center Associates include faculty in the Departments of Biology, Anthropology, Business Administration, Economics, History, Political Science and research faculty at the Missouri Botanical Garden and the Saint Louis Zoo (see Attachment 2).
4. The Center provides a focal point for multidisciplinary research and public outreach in ecology and biodiversity conservation.

2. University Involvement

The day-to-day administration of the Center is carried out by the Executive Director (Dr. Patrick Osborne) and a half-time Administrative Assistant (Ms. Patricia Hinton).

The Center Director and Executive Director report to the Chair, Department of Biology. The Center's Executive Committee meets at least once a semester to set policy, approve the Center's annual budget and devise mechanisms for allocation of funds. The Executive Committee has representation from the Missouri Botanical Garden and the Saint Louis Zoo. The Center is currently undergoing a five-year review.

The Center provides significant opportunities for student involvement by providing financial support for student research, internships, tuition scholarships for courses run by the Organization for Tropical Studies and through public lectures and events.

3. Budget

The University provides support for the Center's half-time Administrative Assistant (salary and benefits: $16,795 in FY 2007) and partial support for the Executive Director's salary and benefits ($51,743 in FY 2007). The balance of the Executive Director's salary and benefits is paid through Center accounts. The University provides $3,000 E&E to the Center. In addition to administering the Center, the Executive Director teaches two courses each year and administers the Certificate in Conservation Biology and Graduate Certificate in Tropical Biology and Conservation.

Each year the Whitney R. Harris World Ecology Center receives income from a variety of sources: annual distributions from endowments, restricted and unrestricted gifts, grants from foundations and organizations, contracts and interest earnings (Table 1). Income from endowments usually provides between 35-50% of the budget.

Table 1: Distribution income from endowed accounts and income from all sources (*e.g.*, unrestricted gifts, grants, interest earnings). Total indicates available assets accrued in each Financial Year (FY).

	FY2007	**FY2006**	**FY2005**
Income from Endowments	$114,774	$107,112	$101,898
Unrestricted gifts	$178,827	$91,319	$34,094
Total available income	**$293,601**	**$198,431**	**$135,992**

The Center has a suite with three offices, meeting room and small store room. The Center utilizes the Millennium Student Center Century Rooms for meetings of the Center's Council. A full budget for Financial Years 2006 and 2007 is provided as Attachment 3.

4. Outcomes

Teaching and Research

The Center supports graduate education through the award of fellowships, research scholarships, internship awards, training course awards, travel awards and sponsorship of a visiting scientist program.

Fellowships

The Christensen Fund Fellowship Program in Plant Conservation promotes plant conservation in tropical Central and South America, sub-Saharan Africa, Madagascar, Southeast Asia, Malesia and the island nations of the tropical Pacific. Through this program, the Center funds five fellowships (stipend, tuition waiver, recruitment and repatriation travel) and a visiting scientist program.

Research Scholarships

The Center, through two annual competitions, awards research scholarships to graduate students carrying out research in tropical ecology, conservation, and sustainable development (see Attachment 4). The annual budget for this activity is $40,000.

Student Recruitment

The Center provides funds to assist in graduate recruitment through the production of advertisement materials (posters, brochures, fliers and web site) and through providing funds to bring prospective students to St. Louis to meet with faculty and graduate students.

Other Financial Support

The Center provides approximately $4,000 per year in training course awards (Organization for Tropical Studies and Tropical Biology Association) and around $4,000 to facilitate graduate student attendance at scientific meetings and conferences. The Center also funds internships for students enrolled in the Graduate Certificate in Tropical Biology and Conservation.

Partnerships

The Center has strong and effective partnerships with the Missouri Botanical Garden and the Saint Louis Zoo. The Missouri Botanical Garden provides desk space to our graduate students working in plant systematics, 24-hour access to the herbarium and library at the Garden and significant financial support to graduate students as fellowships, assistantships, research grants, research grant supplements and internship scholarships as well as internship opportunities. This link with the Garden is strengthened through the E. Desmond Lee Chair in Botanical Studies (Professor E. Kellogg).

The Saint Louis Zoo provides fellowship funding to Center graduate students through its Wildcare Institute. Our link with the Zoo is strengthened through the E. Desmond Lee Chair in Zoological Studies (Professor P. Parker).

The University of Missouri-St. Louis is a member of the Organization for Tropical Studies (OTS). The Center and Department of Biology is an active participant in OTS and the Center usually supports 1-2 students each year who participate in the rigorous field courses run by OTS.

The Whitney R. Harris World Ecology Center has signed memoranda of understanding with CEIBA Biological Station, Guyana; Laboratorio de Investigaciones Ecológicas de las Yungas at Universidad Nacional de Tucumán, Argentina; Faculté des Sciences, University of Antananarivo, Madagascar; and Universidade Federal de Uberlândia (Brazil). The Center also works closely with local (*e.g.*, The Nature Conservancy-Missouri Chapter, Missouri Department of Conservation) and international organizations through an internship program and collaborative outreach events.

Graduate Certificate in Tropical Biology and Conservation

The Center administers the Graduate Certificate in Tropical Ecology and Conservation. This program is a collaboration between a number of departmental units on campus including Biology, Anthropology, Political Science, History, Economics, Sociology and Social Work. Students from within Biology primarily enroll in this Graduate Certificate, but the program has served students from Political Science and Science Education at UM-St. Louis and students from Saint Louis University.

More than 80 students have completed the Certificate since its inception 15 years ago. International students from Australia, Belize, Bhutan, Brazil, Cameroon, Chile, Colombia, Costa Rica, Democratic Republic of Congo, Ecuador, Guatemala, Indonesia, Kenya, Luxembourg, Madagascar, Malawi, Mexico, Papua New Guinea, Peru, Spain, Venezuela and Zambia have completed internships. Internships have been conducted in Argentina, Bolivia, Brazil, Costa Rica, Ecuador, Germany, Guatemala, Kenya, Mexico, Peru, Puerto Rico, Spain as well as in Missouri, Louisiana, New York, Utah, and Washington, DC. Internships have been conducted with international non-governmental conservation groups (*e.g.*, Charles Darwin Research Station, Conservation International, The Nature Conservancy, World Wildlife Fund), multinational institutions (*e.g.*, The World Bank), federal agencies (*e.g.*, Bureau of Land Management, Smithsonian Institution, US Army Corps of Engineers), and private organizations (*e.g.*, Costa Rica's National Institute of Biodiversity, Missouri Botanical Garden, Saint Louis Zoo).

Undergraduate Certificate in Conservation Biology

The Center administers the Undergraduate Certificate in Conservation Biology for the Department of Biology. The Certificate in Conservation Biology is a multidisciplinary program of study integrating theoretical and applied topics associated with conservation biology. Over the last five years students have interned with organizations such as Audubon Society, Department of Biology (UM-St. Louis), Illinois Department of Natural Resources, Litzsinger Road Ecology Center, Missouri Botanical Garden, Missouri Department of Conservation, Saint Louis Zoo, Shaw Nature Reserve, Sophia M. Sachs Butterfly House, US Army Corps of Engineers, US Fish and Wildlife Service and World Bird Sanctuary.

Thomas F. George Undergraduate Ecology Research Scholarship

In 2007 a small endowment was established to support undergraduate participation in research and the first competition for funds was held in February 2008.

Travel Awards

The Whitney R. Harris World Ecology Center provides travel support to undergraduate students working as research assistants to graduate students and also supports travel costs for undergraduate students participating in field courses.

Outreach

World Ecology Award

The World Ecology Award, established in 1991, was first presented to John Denver. Subsequent recipients of this award are: Captain Jacques Cousteau (1992), Prince Sadruddin Aga Khan (1993), Dr. Paul Ehrlich (1994), President José Figueres (1995), Dr. Richard Leakey (1997), Dr. Jane Goodall (1999), Ted Turner (2000), Dr. Gro Harlem Brundtland (2001), Harrison Ford (2002), Conservation International (2002), Teresa Heinz Kerry (2003), H.R.H. The Prince of Wales, Prince Charles (2003), The Rockefeller Family (2004), Kathryn Fuller (2006), and Dr. Peter Raven (2007). The presentation takes place at a fund-raising gala dinner and over the last five years these events have raised over $210,000 for the Center's support of graduate education at the University of Missouri-St. Louis.

Whitney and Anna Harris Conservation Forum

The Center co-sponsors an annual Conservation Forum. Over the last five years, the forum has been held at the Saint Louis Zoo. The forum provides a venue for local, state, national and international conservation organizations to raise public awareness of local and global conservation issues. The forum is co-sponsored by the Saint Louis Zoo, Missouri Botanical Garden, The Nature Conservancy-Missouri-Chapter and the Missouri Department of Conservation. The forum is partially funded from income from an endowment (current value: $43,000) established in 2005. Funding for the forum is also underpinned by an annuity trust of $50,000 that will mature on the death of the beneficiary.

Jane and Whitney Harris Lecture

The Jane and Whitney Harris Lecture has been held annually since 1991. The event is held at the Missouri Botanical Garden and is free and open to the public. The lecture is partially funded from income from an endowment (current value: $25,500) established in 1991.

Visiting Scientists

Dr. Kamal Bawa (India, USA), Drs. Jorge Crisci and Liliana Katinas (Argentina), Dr. Ricardo Grau (Argentina) and Dr. Kleber Del Claro (Brazil) are recent visitors to the Center. They have enriched the graduate program through seminars, lectures and short courses. Dr. Carolina Murcia (Colombia) will visit the Center in April 2008.

Whitney R. Harris World Ecology Center Council, Advisory Board and Scientific Board

The Whitney R. Harris World Ecology Center Council (formerly the Development Board) meets three times a year. The Council comprises individuals serving as liaisons between the community and the University and provides ongoing support in the areas of advocacy, fund raising and public relations to ensure the stability and growth of the Center's programs and its educational endeavors. The Council receives an annual financial report and budget proposal.

The Center's Advisory Board provides leadership and guidance in raising awareness of the Center and its activities. Board members nominate and vote upon nominees for the World Ecology Award and assist with fund-raising and organization of the Center's flagship event, the annual gala dinner at which the award is presented.

The Center's Scientific Board provides professional, scientific advice and guidance as well as practical suggestions regarding proposals seeking support from foundations and other funding organizations. Board members also help in identifying opportunities for internship and collaborative research programs.

Newsletter

The Whitney R. Harris World Ecology Center produces a Newsletter twice a year that is mailed to 1,000 faculty, Center friends, alumni and ecology organizations.

Other Outreach Activities

The Center responds to requests for guest lectures by providing a link to our faculty and graduate students. The Center also educates the general public through displays at events such as the Earth Day Festival in Forest Park.

5. Center Advantage

The Center provides significant support to the graduate program in the Department of Biology. It is now moving to increase its financial support to undergraduate students. Over the last five years, the Center has increased its endowment and annuity holdings from $2,079,279 to $4,855,221 (see Attachment 4). In FY2007, the University of Missouri-St. Louis provided salary and benefit support to the Center of $68,538. The Center raised over $228,000 in FY2007 and also established an annuity trust of $1.5 million. Income to distribution accounts from endowments totaled $114,774 in FY2007. The Center has identified the following funding priorities and is working with University Advancement and the Harris Center Council to identify sources:

a. Increase support to undergraduate students for research projects, internships and establish an RA program linked to graduate student research projects: Target endowment: $50,000-$100,000.

b. Strengthen links with the WildCare Institute at the Saint Louis Zoo through a graduate fellowship program similar to the Christensen Fund program that links the Center to the Missouri Botanical Garden. Initial endowment of $500,000 with a target of $1,000,000.

c. Establish an endowment that will support membership dues for the Organization for Tropical Studies (OTS) and participation of graduate and undergraduate students in OTS training programs. This will require an endowment of $250,000.

d. Establish a challenge grant that will provide funds to support a graduate student in their final year so that completion rates can continue to improve. This will require an endowment of $360,000.

Attachment 1

Director, Whitney R. Harris World Ecology Center: As seen in the 13 April issue of *Science*:

DIRECTOR Harris World Ecology Center University of Missouri, St. Louis

The University of Missouri, St. Louis, announces a search for Director of the Whitney R. Harris World Ecology Center in the Department of Biology.

The Harris Center (formerly the International Center for Tropical Ecology, **website: http://icte.umsl.edu/)** was established in 1990 as a partnership between the University and the Missouri Botanical Garden. The Center and Department of Biology have close links with the St. Louis Zoo and enjoy strong interactions with faculty and students at nearby Washington University and St. Louis University.

The Center provides a focal point for the Department's graduate program in ecology, evolution, and systematics. It offers financial support to undergraduate and graduate students, enriches the graduate program with public lectures and symposia, and actively seeks funding from government agencies, foundations, and individuals.

Candidates should merit appointment as **ASSOCIATE PROFESSOR or PROFESSOR of BIOLOGY,** and their duties will be split equally between the Department and the Center. The successful candidate is expected to be an excellent scientist pursuing active research in tropical biology, ecology, evolution, systematics, or conservation, with a strong record of external grant support. The Director will provide visionary leadership for the Center, raising funds from a variety of sources and promoting the Center and its programs. The position offers a competitive salary and setup funding.

Applications should include a cover letter outlining qualifications and interests, curriculum vitae, a statement of research interests and goals, and the names and addresses of five references. Application review begins on receipt.

Please send applications via e-mail to: **Maryann Hempen, e-mail: mhempen@umsl.edu, Search Committee (Harris Director), Department of Biology, University of Missouri-St. Louis, One University Boulevard, St. Louis, MO 63121**

The University of Missouri, St. Louis, is an Affirmative Action, Equal Opportunity Employer committed to excellence through diversity.

Attachment 2: Faculty associated with the Whitney R. Harris World Ecology Center.

University of Missouri-St. Louis

Department of Anthropology
Pamela Ashmore
Jacquelyn Lewis-Harris
Department of Biology
John Blake
Godfrey Bourne
David Clark
Deborah Clark
Elizabeth A. Kellogg
Bette Loiselle
Robert Marquis
Patrick Osborne
Patricia G. Parker
P. Mick Richardson
Robert E. Ricklefs
Peter F. Stevens
Zuleyma Tang-Martinez
Amy Zanne (to join in August 2008)
College of Business Administration
James F. Campbell
Department of Economics
Michael Allison
Susan K. Feigenbaum
Don Phares
Department of History
Andrew Hurley
Department of Political Science
David B. Robertson
Martin J. Rochester
Eduardo G. Silva

Missouri Botanical Garden

Bruce Allen
Ihsan Al-Shehbaz
Alba Arbelaez
Steven P. Churchill
Trisha Consiglio
Indiana Coronado
Thomas B. Croat
Marshall Crosby
Gerrit Davidse
Roy Gereau
Peter Goldblatt
Alan Graham
Michael H. Grayum
Bee Gunn
Barry Hammel
Peter C. Hoch
Iván Jiménez
Peter Møller Jørgensen
Porter P. Lowry II
Robert E. Magill
Olga Martha Montiel
David Neill
Rosa Ortiz-Gentry
Armand Randrianasolo
Peter H. Raven
Jack Regalado
P. Mick Richardson
Zachary S. Rogers
Jan Salick
George E. Schatz
Seema Sheth
James C. Solomon
W. D. Stevens
Charlotte M. Taylor
Carmen Ulloa Ulloa
Henk van der Werff
Rodolfo Vásquez
George Yatskievych
Richard H. Zander
James L. Zarucchi

Center for Plant Conservation

Kathryn Kennedy

Saint Louis Zoo

Cheryl Asa
Jeffrey Bonner
Jeff Ettling
Eric Miller
Ingrid Porton

Attachment 3: Harris Center FY2007 Budget Report

Assets and Income Statement				
	FY 2006		**FY 2007**	
	Amounts	**Sub-totals**	**Amounts**	**Sub-totals**
Assets July 1				
Restricted Assets				
Restricted Accounts (June) C/F	$2,535,352.02		$2,745,467.55	
Less Annual Distribution	($107,112.49)		($114,774.23)	
Restricted Accounts (July)		*$2,428,239.53*		
Unit Trusts			$50,000.00	
Loss on investment sale			($1,471.30)	
Endowments and Trusts				*$2,679,222.02*
Available Assets				
Available Asset Accounts C/F	$87,213.73		$93,196.87	
FY2006 Interest			$133.84	
Annual Distribution	$107,112.49		$114,774.23	
Unrestricted Assets		*$194,326.22*		*$208,104.94*
Total Assets		**$2,622,565.75**		**$2,887,326.96**
Income				
Gifts		*$49,379.33*		*$1,607,395.56*
Gifts to Available Accounts	$34,499.33		$60,540.02	
Gifts to Endowed Accounts	$14,880.00		$49,894.72	
Annuity Gifts			$1,496,960.82	
Annuity Liability			($335,135.08)	
Grants				
Events		*$23,093.08*		*$99,918.14*
Gala Dinner	$17,831.81		$99,918.14	
Earth Day	$52.27			
Other				*$4,180.05*
Loan return			$1,888.05	
Editorial Consultancy	$5,209.00		$2,292.00	
Income raised		**$72,472.41**		$1,711,493.75
Interest earnings	$4,267.81		$4,045.41	
E&E	$3,000.00		$3,000.00	
GIF Income	$26,460.98		$7,143.93	
Total Income		**$106,201.20**		**$1,725,683.09**
Gain/Loss on Investments	$302,348.02	$302,348.02	$656,586.63	

Expenditure Report	FY2006		FY 2007	
	Amounts	**Sub-totals**	**Amounts**	**Sub-totals**
Student Support		*($146,180.73)*		*($138,167.39)*
Fellowships	($104,013.10)		($107,611.39)	
Scholarships - Research	($22,044.05)		($24,736.00)	
Scholarships - Undergraduate			($400.00)	
Scholarships - Internships	($12,925.00)		($2,000.00)	
Scholarships - Training courses	($4,260.15)			
Scholarships - Travel	($2,738.43)		($3,020.00)	
Scholarship - McGrath	($200.00)		($400.00)	
Student Speaker	$0.00			
Graduate Recruitment	($4,625.80)	*($4,625.80)*	($1,550.82)	*($1,550.82)*
Lectures/Symposiums		*($3,106.71)*		*($8,246.96)*
Conservation Forum	($920.66)		($5,044.84)	
Harris Lecture	($2,186.05)		($3,202.12)	
F&WS Training Course				
Visiting Scientists	($3,904.25)	($3,904.25)	($4,282.34)	*($4,282.34)*
Operating Expenses		($2,822.72)		*($6,765.75)*
Newsletter	($1,363.25)		($2,559.46)	
General Office Expenses	($1,459.47)		($4,206.29)	
Other		($5,948.57)		*($7,780.29)*
Outreach	($250.00)		($338.68)	
Editorial Consultancy	($2,941.67)		($3,924.69)	
TCF Steering Committee	($619.00)			
CRC/Dev. Bd Lunch	($1,717.87)		($250.00)	
EarthLinks	($1,366.20)			
OTS Membership			($3,266.92)	
FY Deferral	$946.17			
Program support		**($166,588.78)**		**($166,793.55)**
A&S Salary Support	$16,281.12	$16,281.12	$16,392.39	*$16,392.39*
Biology GIF				
Salaries and Benefits	($42,142.89)		($49,484.83)	*($49,484.83)*
Transfer to Endowment			$80,220.00	
Payment to Beneficiaries			($57,663.46)	
Available Asset Accounts	$93,196.87		$106,826.50	
Endowed Accounts	$2,745,467.55		$4,905,220.73	
Assets Carried-forward	**$2,838,664.42**		**$5,012,047.23**	

Attachment 4: Harris Center Endowed Account History and Use of Funds

Account/FY	FY2007	FY2006	FY2005	FY2004	FY2003	Fund use
Scholarships						
Denver	$84,025	$74,530	$69,048	$65,992	$55,821	Tropical ecology research
Doyle	$95,041	$82,210	$71,623	$63,074	$50,424	Tropical ecology research
Stokes	$43,761	$38,344	$35,532	$33,350	$25,863	Tropical conservation research or internships
Mallinckrodt	$35,369	$31,373	$29,098	$27,906	$24,896	Tropical ecology research
Harris	$24,619	$21,837	$20,254	$19,424	$17,348	Tropical botany research
Christensen	$2,650,969	$2,351,440	$2,180,961	$2,091,619	$1,866,003	Plant conservation fellowships and research
Kent	$15,659	$13,890	$12,883	$12,355	$10,722	Tropical ecology research
Harris Center	$14,962	$13,272	$12,309	$11,805	$10,601	Unrestricted use
McGrath	$13,800	$12,241	$11,353	$10,691		Book awards
Drey	$14,666	$12,947	$11,629			Ecology research
George	$10,083					Undergraduate research
Raven	$80,000					Ecology research
International	$27,432					International recruitment
Scholarships	**$3,110,386**	**$2,652,083**	**$2,454,692**	**$2,336,218**	**$2,061,679**	
Events						
Harris - Lecture	$25,004	$22,179	$20,571	$19,728	$17,600	Annual Harris Lecturer honorarium and lecture expenses
Harris - Forum	$34,898	$21,206	$10,089			Annual Conservation Forum expenses
Events - Total	**$59,902**	**$43,385**	**$30,660**	**$19,728**	**$17,600**	
Total Endowments	**$3,170,287**	**$2,695,467**	**$2,485,352**	**$2,355,946**	**$2,079,279**	
Annuity Trusts						
Harris-Forum UT	$52,642	$50,000	$50,000			Conservation Forum expenses (matures with death of beneficiary)
Harris-CGA	$476,268	$750,000				Unrestricted use (matures with death of beneficiary)
Harris-CRT	$820,888	$750,000				Unrestricted use (matures 2010)
Harris-CGA (liability)	$335,138					Unrestricted use (matures with death of beneficiary)
Total Trusts	**$1,684,933**	**$1,550,000**	**$50,000.00**			
Center Portfolio	**$4,855,221**	**$4,245,468**	**$2,535,352**	**$2,355,946**	**$2,079,279**	

UT = Unit Trust; CGA = Charitable Gift Annuity**;** CRT = Charitable Remainder Trusts