

**A Proposal for the Development of a New Field Course in Sri Lanka:
“Ecology, Elephants and Culture in Sri Lanka”
ACS Environmental Initiative: Curriculum and Faculty Development Alliance
Submitted by Dr. Kelly Agnew, Hendrix College Biology Department, 12 December 2005**

I. Introduction

Goals: Hendrix College proposes to develop a course in collaboration with the University of Peradeniya on Sri Lanka ecology and culture. This grant is requesting funds for travel for one Hendrix faculty member to Sri Lanka in March 2006 to scout sites for a student trip that may take place as early as July-August 2007. Hendrix College will provide matching funds to support travel for an additional faculty member.

Justification: Although Hendrix College has a strong study abroad program, most of our efforts are either in Europe or Latin America. This course will focus on the distinctly different ecology and culture of Sri Lanka. Our Environmental Studies program faculty are excited about the possibility of counting the course, along with our programs in Costa Rica, as part of the Environmental Studies major. It is our hope that the course would also be available to students and faculty from other ACS institutions. Finally, the course will strengthen our relationship with conservation researchers at Peradeniya University, the leading science and education institution in Sri Lanka.

Match with ACS Environmental Initiative Priorities: The proposed course is a new course in a foreign country that will focus primarily on the following four topics; 1) the biodiversity in the various ecophysiological regions of Sri Lanka; 2) the conservation of wild elephant populations on the island, human-elephant conflict and sustainable development efforts; 3) the role of temple elephants in religion, particularly in ceremonial processions; 4) the history and culture of Sri Lanka. This is the first proposal for ACS Environmental Initiative funds from Dr. Agnew, who has served as part of the Environmental Studies faculty for the last two years.

II. Project Description

Activities: The two faculty on this scouting trip will travel from the Colombo airport to Kandy in the central highlands. Our Sri Lankan liaison, Dr. Charles Santiapillai, lives in Kandy and teaches at the University of Peradeniya. He is an internationally-recognized expert on Asian elephants. Dr. Santiapillai has agreed to guide us around the island and visit potential sites during the two-week visit. While in Kandy, we will also meet Professor Kirti Tennakone, the Director of the Institute of Fundamental Studies. The IFS could provide inexpensive housing for our students while in the island center.

Kandy is an ideal launching point: it was the capital of the Sinhalese Kings from 1592 to 1815, and is home to the *Sri Dalada Maligawa* (the Temple of the Sacred Tooth Relic). The temple was built within the royal palace complex, which houses a relic tooth of Buddha. The city has been declared a world heritage site by UNESCO. The Udawattekele Sanctuary is also found in Kandy, a 110 hectare tract of dense ancient forest with several mammal species (the endemic Sri Lankan macaque, the mouse deer, the crested porcupine, and the jackal). It also is home to more than 80 bird species and fruit bats (flying foxes). The famous Royal Botanical Gardens are nearby, with a large collection of endemic Sri Lankan plants, especially orchids.

Late July and early August were chosen for the trip with students for two reasons: 1) it wouldn't interfere with normal semester courses; 2) it coincides with one of the most spectacular festivals in Asia, the Kandy *Esala Perahera*, when magnificently-decorated temple elephants process through the streets, with the largest tusker bearing an ornate reliquary casket containing

the Buddha's tooth. Elaborately costumed Kandyan drummers, dancers, and acrobats accompany the procession.

Pinnawela Elephant Orphanage is about 25 miles from Kandy. It is home to the world's largest captive population, currently housing 77 elephants cared for by the Government of Sri Lanka. It will be a good introduction for students to behavior and elephant-mahout relationships.

One tenth of the world's Asian elephant population is found in Sri Lanka, with about 4200 wild animals and 250 in captivity as work elephants or temple animals. Habitat destruction, not poaching, is the primary threat faced by Sri Lankan elephants. Only 20% of the original forest cover remains on the island. Wild elephants are notorious crop raiders, and despite measures taken to protect fields, roughly 100 elephants are year are killed in the wild because of conflict with humans in agricultural areas. Electrified fences have failed for two reasons. First, the powerful batteries required to charge the fences are a precious resource for villagers, and they are often drawn off to power household appliances—the fences must carry a charge of 6000 W to deter an elephant, but power-siphoning reduces charges to 60W—the elephants simply lean against the fence to topple it. Second, ivory does not conduct electricity well, and an intelligent tusker can easily lift electrified wires off their posts and allow an entire herd access to a field. Current efforts to encourage stewardship include selling dung as bio-gas fuel. Adult elephants generate about 19 kilograms of dung in each drop, and have about 16 drops a day.

Many famous archaeological sites and national parks are within 3 to 5 hours' drive of Kandy. We will visit as many as we can to determine which will provide the best mix of habitat diversity, conservation issues, historical significance and resources (housing, meals, roads, etc.) for the students. First on the list is the fascinating ruined city of Anuradhapura, the ancient capital of Sinhalese civilization that flourished for almost 2000 years. One of the large *dagobas* (temples) is home to the oldest historically documented tree on earth—the Sacred Bo tree, grown from a cutting of the tree under which Lord Buddha attained Nirvana. Just east of Anuradhapura is Mihintale, a wildlife sanctuary established about 1500 years ago.

Polonnaruwa is another important archaeological site—it was the capital city from the 11th to the 13th century AD. It has the island's finest collection of ancient Sinhalese art and architecture, including a giant Buddha statue and an ancient reservoir, the Parakrama Samudra. All four of the island's non-human primates occur here (the grey langur, the purple-faced langur, the macaque, and the loris). Minneriya National Park is en route to Polonnaruwa and is famous for large elephant herds. To the east, unspoiled Wasgomuwa Strict Reserve features dry-zone evergreen forests and open plains, and is home to elephants, sambar, chital, water buffalo, leopards, sloth bears, fishing cats, and 143 bird species, including 8 endemics.

Two other nearby important ancient sites are the city of Dambulla, famous for its cave temples from as early as 100 BC with magnificent roof paintings and statuary; and the Citadel of Sigiriya, a large gneiss outcrop that supported the King's Palace. Sigiriya is surrounded by lovely water gardens, but it is perhaps most famous for the largest cave picture gallery in the world, featuring the 5th century Sigiriya Damsels—enormous frescoes of voluptuous women thought to represent *apsaras* (celestial nymphs).

Horton Plains National Park is perched on the edge of the highlands at elev. 2100m (7000ft.). It has elfin cloud forests with the endemic macaque and purple-faced langur, plus large herds of sambar, and the top predator, the leopard. It also has large stretches of high moorlands, and World's End, a sheer escarpment that falls almost a kilometer to the lowlands. En route to Horton Plains we will visit the famous tea growing areas.

The southeastern coast suffered the brunt of the 2004 tsunami, but the brackish lagoons of Ruhuna and Bundala National Parks host the greatest bird diversity in central Asia. Students will also see chital, sambar, water buffalo, elephants, sloth bear, and possibly leopard.

Sri Lanka's largest park, Wilpattu National Park, is in the northwest monsoon forest, and is potentially a good place to spot leopards, sloth bears, crocodiles (both mugger and saltwater species), and spectacular water bird diversity in the ancient man-made reservoirs. However, its proximity to the front lines of civil tensions may prevent our visit.

The 2003 cease-fire agreement between the Sri Lankan government and the Tamil Tigers was broken in December 2005. An eruption of island-wide violence would prevent our trip, but we have planned to avoid the most dangerous areas (the northeast), both with this proposed scouting trip, and the trip with the students.

Timetable: The funds requested in this proposal will support travel and living expenses for Dr. Agnew to research study locations and activities in Sri Lanka during the last two weeks of March, 2006. Because the proposed course must go through departmental and faculty approval, the earliest it could be taught would be July-August of 2007.

Budget with Justification: The least expensive flights are from the west coast of the United States on Singapore Airlines. The following prices are from November 2005:

Airfare, domestic carrier, Little Rock, AR to Los Angeles, CA
Departing March 15 2006, returning 2 April 2006: **\$450** (www.southwest.com)

Airfare, Singapore Airlines, Los Angeles, CA to Colombo, Sri Lanka
Departing March 15 2006, returning 2 April 2006: **\$1384** (www.singaporeair.com)

Car hire with driver and guide (required by Sri Lanka govt.), 13 days: **\$1250**

Camp site fees, admission to archaeological sites and National Parks: est. **\$600**

Total estimated expenses: \$3684

Syllabus: Not yet developed completely, but I envision students meeting weekly or bi-weekly throughout the semester prior to the trip to discuss the biodiversity of the island, the history of Sri Lanka, basic cultural etiquette, the importance of religion in Sri Lankan culture, safety, medical and monetary issues, and particularly safe behavior around both captive and wild elephants. The following texts will be required:

Grimmett, R., C. Inskipp, and T. Inskipp. 1999. Birds of India: A Field Guide to Birds of India, Sri Lanka and the Maldives. Princeton University Press.

Harvey, P. 1990. An Introduction to Buddhism: Teachings, History and Practices. Cambridge University Press.

History of Sri Lanka. *I have not yet decided on a text, but I'm looking for one that covers the rich history of ancient kingdoms on the island, the influence of religion and mythology, the colonial periods (Portuguese, Dutch and British), the changing economy, independence, and finally modern cultural tensions (Sinhala Buddhists and Tamil Hindus) and government.*

Pragnaratne, S. 2002. Sinhala Phrasebook. Lonely Planet Publications.

Thomas, G. 2004. The Rough Guide to Sri Lanka. Rough Guide Publication.

III. Evaluation and Dissemination: For this grant proposal, the goal is to determine whether ACS student study in Sri Lanka is feasible, and if so, which sites are most important and cost-effective for study visits. A written report of our trip, with pictures and costs incurred, will be posted on the ACS CFD website. We can then gauge interest in participation from other ACS faculty and students through their ACS campus representatives.