

ACEER

F O U N D A T I O N

ACEER Botanical Medicine Workshop 2008

Itinerary

Friday Sept. 26 – Oct. 5, 2008

With trip leaders Jerry Cott, Steven Foster, and Joe Bishop

(\$3,109 from Lima)

**Sponsored by: The American Botanical Council,
The ACEER Foundation, and West Chester University of PA**

Day 01

Friday, September 26

USA TO LIMA

Meals – On flight

Evening arrival in Lima, welcome and transfer to our hotel.

Overnight – Lima - El Condado Hotel

Day 02

Saturday, September 27

LIMA/RESERVA AMAZONICA

Activity 1: During early breakfast, there will be introductions and an orientation session, led by Joe Bishop.

After breakfast, we are transferred to the Lima airport for a two-hour flight to Puerto Maldonado via Cusco. Puerto Maldonado, with a population of approximately 60,000, is the capital of the Madre de Dios region and is located at the confluence of the Tambopata and Madre de Dios Rivers. This small frontier town has a history of resource extraction beginning with the rubber boom, logging and gold prospecting, and more recently oil exploration. Despite this activity, 98% of the region is composed of primary rainforest. There are three national parks and reserves in the area that together comprise more than 3.5 million hectares of protected forest ecosystems. They are: The Manu Biosphere Reserve, Tambopata-Candamo Reserve, and the Bahuaja Sonene National Park.

Activity 2:

We begin our experience in the region with a visit to the local market, led by Joe Bishop and our local guide, where everything from produce, harvested from the surrounding forest, to live chickens and other animals, to motorcycle parts, and plastics are sold. Of particular interest are the medicinal herb stands, where we will have the opportunity to talk with local *curanderos* and discuss the preparation and use of traditional remedies.

Soon we get our first glimpse of the Madre de Dios River where we board our boat for the one-hour ride to Reserva Amazonica Lodge, where lunch will be provided.

Activity 3:

Exploration of the 10,000 ha Inkaterra Ecological Reserve to introduce basic principles of rainforest ecology. For most this is their first experience in a tropical rainforest. The reserve is located in mature floodplain forest and provides excellent opportunity for wildlife observations. Presentations will focus on the successional and competitive processes that drive biodiversity. Where appropriate, we will begin explaining the diversity of plants that form the basis for medicines from the rainforest.

The Inkaterra Reserve provided a research base for E.O. Wilson's seminal work on ant ecology, and is said to contain one of the world's largest concentration of ant species.

Activity 4:

Evening presentation and discussion: *History of Herbs in Medicine and Pharmacy*, with Steven Foster.

CMEs awarded for the day's activities: 4

Breakfast – Lima - Condado Hotel

Lunch/Dinner – Reserva Amazonica

Overnight – Reserva Amazonica

Day 03

Sunday, September 28

RESERVA AMAZONICA

After breakfast we depart for the 45-minute boat ride to the Inkaterra site *El Fundo Concepción*. In partnership with The National Geographic Society, and Peruvian partners, The Amazon Center for Environmental Education and Research (ACEER) Foundation developed this comprehensive international education and research center. The facility is located on a 340-hectare private reserve that joins the pristine Tambopata National Reserve and Lake Sandoval, a huge oxbow lake known for its concentrations of birds and butterflies and a long-term research project on the endangered giant river otter.

The ACEER at Tambopata includes:

- A Nature Interpretation Center
- Meeting and classrooms
- Laboratory
- A medicinal plants garden
- A children's rainforest garden, and
- A 3.5 km Useful Plants Trail

Activity 1:

At the Fundo Concepción we will begin at the Nature Interpretation Center, and its exhibit: *Madre de Dios—River of Change*, designed by the National Geographic Society. The exhibit describes the climate, geography, history, ecosystems, and culture of the tropical rainforest of the Madre de Dios region. Led by Joe Bishop.

Activity 2:

Laboratory activity – working in the new field lab – looking at traditional medicines obtained in market in Puerto Maldonado, and botanicals harvested from medicinal gardens at Fundo Concepción, led by Steven Foster and Joe Bishop.

Activity 3:

Field exercises and demonstrations at the Jardín de Plantas Medicinales, the Children’s Rainforest Garden and the Useful Plants Trail. Sessions will be led by Steven Foster and Joe Bishop and accompanied by head gardener Justo Rengifo. Topics will include: *Medicinal Plants of the Amazon*; and *Plants of Economic and Health Value*. Plant diversity, taxonomy, ecological processes, and adaptations will be discussed.

Activity 4:

Our studies at Fundo Concepción will include *Amazonian Shamanic Traditions*, with Justo Rengifo, and will conclude with a special “Bath of Tranquility”.

Lunch will be served at Fundo Concepción.

Activity 5:

The high point, literally, of the afternoon will be a visit to the Inkaterra Canopy Walkway – a series of suspended walkways 100 feet above the forest floor and providing an unparalleled opportunity to study the vertical structure of the forest and life in the canopy, led by Joe Bishop and our Inkaterra guide.

Dinner: Reserva Amazonica

Activity 6:

After dinner, there will be a discussion: *Herb-Drug Interactions*, with Jerry Cott.

CMEs awarded for the day’s activities: 6

Overnight: Reserva Amazonica

Day 04

Monday, September 29

SANDOVAL LAKE

After an early breakfast we depart for the 15 minute boat ride to the entrance to Lake Sandoval. There will be a one hour walk to reach the lake, where we will board canoes for an exploration of the lake.

Activity 1:

The trail to the lake passes through a mix of successional forest types. Along the way there will be excellent opportunities to see small animals such as anteaters, agouties, capybaras, and monkeys, as well as numerous bird species. Here we will continue our discussions on the diversity of plants that form the basis for medicines from the rainforest. Activity will be led by our guide and Steven Foster.

Sandoval Lake is an exceptional "oxbow lake" formed generations ago by the shifting waters of the Madre de Dios River. It is located adjacent to Fundo Concepción and is within hiking distance of the center. Sandoval with its clear, calm waters has evolved into a mature lake environment attracting a wide variety of wildlife and flora. Sandoval is home to the endangered giant river otter and is an exceptional place to observe small parrots, herons, kingfishers, hoatzins, caimans, and turtles. Brown capuchin, Bolivian squirrel, red howler, saddle-backed tamarin, and night monkeys live in the forests surrounding the lake.

We will return to Reserva Amazonica for lunch.

Activity 2: Visit to Inkaterra's demonstration farm. Jerry Cott will discuss *Amazonian Food Farmacy Diet*.

This activity will be followed by a boat journey up nearby Gamitana Creek to view wildlife.

CMEs awarded for the day's activities: 2

Breakfast/Lunch/Dinner – Reserva Amazonica

Overnight – Reserva Amazonica

Day 05**Tuesday, September 30 RESERVA AMAZONICA/AGUAS CALIENTES**

After an early breakfast, departure by boat for Puerto Maldonado, where we transfer to the airport for our flight back across the snow-capped Andes Mountains to the heart of the Inca Empire. Nestled in a high valley at nearly 11,000 feet, Cusco is surrounded by some of the highest peaks in the Andes. As we descend into Cusco, the oldest continuously inhabited city in the western hemisphere, we glimpse the red tiled roofs of this colonial capital that was built on the massive foundations created by the Inca Empire. We make our way by bus out of the city and into the historic Urubamba Valley – *The Valley of the Incas* and there we transfer to the train for Machu Picchu, recently selected as one of the *7 New Wonders of the World*. After the hour and a half ride we arrive at Aguas Calientes (Machu Picchu Village). Dinner at a local restaurant and overnight at Machu Picchu Inn

Breakfast– Reserva Amazonica
Lunch – Box Lunch on bus
Dinner – Toto’s House in Aguas Calientes
Overnight – Machu Picchu Inn

Day 06**Wednesday, October 1 MACHU PICCHU**

After breakfast at the hotel, we board our bus for the journey to Machu Picchu for the day. The topography, geology and hydrology of Machu Picchu create nine life zones and contain a wide diversity of flora and fauna species. There are more than 1000 species of orchids within the Sanctuary, as well as a wide variety of ferns, begonias, palms, and bromeliads. The Sanctuary has many species of fauna as well including the solitary eagle, the Andean condor, the ocelot, spectacled bear, and a great variety of birds including the Cock-of-the-Rock, Peru’s national bird.

Exploration of the architectural remains of plazas, palaces, temples, homes, cemeteries and more than 100 irrigated terraces that formed the structure for the Incan agricultural system. The day will provide an ongoing opportunity for discussions of Incan cultural traditions including their agricultural and medicinal practices. Led by our local guide.

Breakfast – Machu Picchu Inn
Lunch – Sanctuary Lodge
Dinner – Pueblo Viejo
Overnight – Machu Picchu Inn

Day 07**Thursday, October 2****AGUAS CALIENTES/OLLANTAYTAMBO**

After early breakfast, we board the train for Ollantaytambo. Morning include visits to salt ponds at Maras the local market in Pisac.

Activity 1: The day will include a visit with a Shaman in the Sacred Valley to learn about shamanic traditions in the Andean region. Led by the Shaman and our local guide.

The afternoon will end with a visit to the Inca ruins at Ollantaytambo.

Activity 2:

After dinner, there will be a discussion: *Herbs and Aging*, with Jerry Cott.

CMEs awarded for the day's activities: 2

Breakfast – Machu Picchu Inn

Lunch – Sol y Luna Restaurant

Dinner – Restaurant at Hotel Pakareqtampu

Overnight – Hotel Pakareqtampu

Day 08**Friday, October 3****OLLANTAYTAMBO/CUSCO**

After breakfast, board bus for Cusco. Along the way will include stops at Weaving Arts Gallery and the Incan ceremonial ruins at Sacsayhuaman. Arrive in Cusco in mid-afternoon. Later in the afternoon there will be some time to explore and shop Cusco on your own. Our Farewell Dinner will be at a local restaurant in Cusco.

Breakfast – Hotel Pakareqtampu

Lunch – Box Lunch

Dinner – Local Restaurant in Cusco

Overnight – Cusco Hotel – Casa Andina

Day 09**Saturday, October 4****CUSCO/LIMA/OVERNIGHT FLIGHT TO USA**

After breakfast, the group will have some more time to explore Cusco. Transfer to airport for flight to Lima will be around mid-day. Upon arrival in Lima we will transfer to a day room at El Condado Hotel in Miraflores. We will later transfer to airport for overnight flight to US.

Breakfast – Cusco Hotel - Casa Andina

Lunch/Dinner – on own

Day Room – Condado Hotel

Overnight flight to US

Day 10
Sunday, October 5

ARRIVE IN USA

Contact: Dr. Roger Mustalish Mary Ann Robinson
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Total Cost: \$3,109 all inclusive from Lima (hotels, food, transportation, guide service). Deposit of \$500 and registration forms are due by June 23rd, 2008. Final payment for the remaining cost is due July 23rd, 2008. Mail checks to:

The ACEER Foundation
P. O. Box 2549 WCU
West Chester, PA 19383

For West Chester University students – WCU will pre-pay the workshop travel costs. Set up a payment plan through the Bursar’s Office. Credit is also available for this workshop. Schedule for HEA 547 in the Fall semester and contact Dr. Roger Mustalish for a syllabus. CMEs and Continuing Education credits are also available through West Chester University.

Continuing Medical Education Statement

The College of Health Sciences at West Chester University of Pennsylvania is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

CME Designation Statement

The College of Health Sciences at West Chester University of Pennsylvania designates this educational activity for a maximum of 25 category AMA PRA Category 1 credits. Each physician should only claim credit commensurate with the extent of their participation in the activity.

Instructors' Biographical Information

Steven Foster, Author, photographer, international consultant and lecturer, Steven Foster, has 31 years of comprehensive experience in the herbal field. His career began in Maine at the Sabbathday Lake Shaker's Herb Department; America's oldest herb business dating to 1799. He is the co-author of three Peterson Field Guides, the bibles for identifying North American herbs including *A Field Guide to Medicinal Plants—Eastern and Central North America* (with Jim Duke). Other books include *Tyler's Honest Herbal* and the award-winning *101 Medicinal Herbs*. His latest book was just published by the National Geographic Society: *A Desk Reference to Nature's Medicine* (with Rebecca Johnson). Foster's medicinal and aromatic plant photographs appear in numerous books and magazines, and are regularly featured in *HerbalGram*, the Journal of the American Botanical Council. He serves on the organization's Board of Trustees as well. Eureka Springs Arkansas, in the heart of the medicinal plant-rich Ozarks, is where Steven makes his home.

Jerry Cott, Ph.D., is a neuropsychopharmacologist in Fulton, Maryland. Since obtaining his Ph.D. in pharmacology at the University of North Carolina in Chapel Hill, and a postdoctoral fellowship (with recent Nobel Laureate Arvid Carlsson) at the University of Göteborg, Sweden, he has had a variety of work experiences including teaching medical school at the University of Ibadan in Nigeria; and 8 years in the pharmaceutical industry in the U.S. and Sweden. Dr. Cott was at the National Institute of Mental Health as Chief of the Psychopharmacology Research Program from 1991 until June 2000. He was appointed Scientific Advisor to the Institute of Mental Health Research at the Royal Ottawa Hospital in Canada and is on the Advisory Board of the American Botanical Council and the Editorial Boards of the Journal of the Society for Experimental Biology and Medicine and the Journal of the American Herbalists Guild. He has been a frequent member of the ad hoc NIH Initial Review Groups of the National Center for Complementary and Alternative Medicine and has more than 80 scientific publications. Dr. Cott initiated the 1998 NIH workshop entitled "Omega-3 fatty essential fatty acids and psychiatric disorders," and the NIH controlled clinical trials of St. John's wort in major depression and *Ginkgo biloba* in senile dementia. He is an adjunct faculty member of the Tai Sophia Institute's herbal medicine masters degree program. His present interest is in the integration of mainstream psychiatry with nutritional (particularly omega-3 fatty acids) and botanical interventions for the treatment of severe and chronic mental disorders. He is a member of the Bahá'í Faith, a religion that affirms the fundamental importance of diet in the treatment and prevention of disease.

Joseph (Joe) Bishop, Ph.D. - During the past 13 years Joe has been working with the ACEER Foundation (Amazon Center for Environmental Education and Research) teaching Geographic information systems (GIS) training courses to governmental, academic, and private research groups in Lima and Iquitos, Peru and coordinating the GIS instruction for the joint OTS/ACEER tropical ecology courses. During Spring, 2002, Dr. Bishop surveyed properties of Inka Terra and worked with their staff to help establish the current collaboration with Inka Terra and the renovations of the ACEER-Tambopata at Inka Terra (ATI) education center. As part of his association with the ACEER, Dr. Bishop mapped the trails and habitats of the original ACEER station, and participated in the 1.5 month conservation survey of the Tapiche River, a tributary of the Ucayali River, located 150 miles south of Iquitos, Peru. Joe has led numerous workshops and university courses to field stations and lodges throughout Peru and recently was appointed Chairperson of ACEER's Science and Education Advisory Committee.

In his other life, Dr. Bishop has worked the past 24 years GIS, and related technologies, to ecological studies and environmental resource analyses and planning. His career began as an environmental planner with the Ohio Department of Natural Resources, he worked for The Nature Conservancy's Natural Heritage program, in Connecticut, and then for the Organization of Tropical Studies (OTS), in Costa Rica, where he assisted with the installation of the GIS at their La Selva biological research station. Dr. Bishop completed his Ph.D. in Ecology at The Pennsylvania State University where he focuses his research on landscape structures and their influence on vertebrate habitats. Dr. Bishop coordinates spatial analysis activities for The Penn State Cooperative Wetlands Center.