SPRING SYMPOSIUM

Southeast in South

AMERICAN MUSEUM & NATURAL HISTORY Center for Biodiversity and Conservation

March 20 and 21, 2003

Tiger in the Forest: Sustainable
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Finally, we thank the symposium speakers for traveling here to deliver their presentations, and for the additional input that many provided.

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Tiger, tiger, burning bright
In the forests of the night,
What immortal hand or eye
Could frame thy fearful symmetry?

—William Blake



#### OTHER EVENTS AT THE MUSEUM

The American Museum of Natural History has a long history of scientific and scholarly involvement in Southeast Asia — particularly in Vietnam — beginning with zoological expeditions in the early 20th century. In 1997, with funding from the National Science Foundation and private foundations, the Museum's Center for Biodiversity and Conservation (CBC) initiated a multi-year collaborative project in Vietnam with the Missouri Botanical Garden, St. Louis, and the Institute of Ecology and Biological Resources and the Vietnam National University, both based in Hanoi. In 1998, the Vietnam Museum of Ethnology in Hanoi became the local sponsor of an ethnographic component of the CBC's project, leading to a unique partnership between an American and a Vietnam ese institution. *Tiger in the Forest* is one of several events focusing on Southeast Asia and Vietnam at the Museum this spring.

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Vietnam: Journeys of Body, Mind & Spirit opened at the American Museum of Natural History earlier this month, and will run through January 2004. This exhibition — the first to deal with contemporary Vietnamese culture to be mounted in a major American museum — was developed as a full collaboration between the American Museum of Natural History and the Vietnam Museum of Ethnology, resulting in an extraordinary opportunity for American people to truly experience the contemporary culture of Vietnam. The visitor will encounter Vietnam in the early 21st century, more than a decade after its opening to the global market — an ethnically diverse society of both urban and rural people who live in geographically varied and socially diverse circumstances.

This exhibition and related programs are made possible by the philanthropic leadership of the **Freeman Foundation**. Additional generous funding was provided by the Ford Foundation for the collaboration between the American Museum of Natural History and the Vietnam Museum of Ethnology. Also supported by the Asian Cultural Council. Planning grant provided by the National Endowment for the Humanities.

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Developed by the CBC, a new photographic exhibition entitled *Discovering Vietnam's Biodiversity* is currently on display in the Museum's Akeley Gallery, and celebrates the amazing abundance of biodiversity in Vietnam. Vietnam is remarkable for the number and rarity of the species found within its borders. Much of the country's biodiversity is only now being explored, and in recent years Vietnam has garnered international attention as the only country in the world where new genera of large land mammals are still being discovered. In the past decade the number of new species described has included five larger mammals, three birds, 19 amphibians, and 16 reptiles, along with many more fish, plants, and invertebrates. *Discovering Vietnam's Biodiversity* presents a dynamic vision of the Vietnamese landscape, emphasizing its biotic richness, current exploration and new discoveries, and the biology of the unique species the country harbors.

Discovering Vietnam's Biodiversity is made possible by the **Arthur Ross Foundation**. The material is based in part upon work supported by the National Science Foundation under Grant No. 9870232. Any opinions, findings, and conclusions, or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

## TIGER IN THE FOREST: SUSTAINABLE NATURE-BASED TOURISM IN SOUTHEAST ASIA

## SPRING SYMPOSIUM

March 20 and 21, 2003

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## TIGER IN THE FOREST: Sustainable nature-based tourism in <u>south</u>east asia

## SPRING SYMPOSIUM

he five countries comprising Mainland Southeast Asia — Cambodia, Lao People's Democratic Republic, Myanmar, Thailand, and Vietnam — harbor extraordinary levels of biodiversity, and for this reason they have recently become popular destinations for the nature-based tourism industry. In addition to international visitors, regional and domestic travel is increasing in the region as well, with a growing middle class population and more disposable income. Unlike some other areas, however, nature-based tourism is still operating at relatively low rates in Mainland Southeast Asia.

Therefore, it is imperative that we develop effective plans now for the sustainable growth of nature-based tourism in Southeast Asia. At its simplest level, sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" ("The Bruntland Report," 1987). Currently, no standard industry guidelines exist for sustainable nature-based tourism, and concern is mounting about the effects that tourism can bring to the fragile — and often already threatened — habitats and biodiversity of Southeast Asia. Increased pollution, the introduction of invasive species, overuse of natural resources, and other detrimental effects have been associated with some forms of tourism. There is also urgent concern about maintaining and protecting the region's cultural integrity, which may be significantly affected by the influx of visitors and increased industry.

We define nature-based tourism as the segment of the tourism market in which people travel with the primary purpose of visiting a natural destination. If we were to draw an imaginary line through the tourism industry, with one side (the smaller side) representing sustainable tourism and the other side representing non-sustainable tourism, then nature-based tourism and cultural tourism, etc. would span the divide. We equate ecotourism with nature-based tourism that falls on the sustainable side of the line, where impact on the local environment and human communities is low, direct financial benefits accrue to conservation efforts and the local communities, there is respect for local cultures and needs, and the experience builds environmental awareness. Unfortunately, the greater part of tourism generally falls on the unsustainable side. Worse, unsustainable practices are sometimes marketed under a "green" cloak. But responsible actions by stakeholders can and will lead to moving tourism further across that imaginary line so that the greater part of tourism falls within the bounds of sustainability.

To ensure that multiple perspectives are incorporated into planning, implementing, and monitoring tourism ventures, *Tiger in the Forest: Sustainable Nature-Based Tourism in Southeast Asia* convenes a broad range of stakeholders, including conservation biologists, tourism professionals, natural resource managers, policy makers, community members, donor organizations, and the travelers themselves. The American Museum of Natural History provides an ideal setting for this event, particularly because it is imperative that the growth of nature-based tourism be informed by sound scientific input.

To extend the impact of *Tiger in the Forest*, representatives from many different governmental and non-governmental organizations are attending as audience members. These include: Institute of Ecology and Biological Resources, National Centre for Natural Sciences and Technology, Dong Nai Province People's Committee, Ministry of Agriculture and Rural Development, Vietnam National Administration for Tourism (Vietnam); Angkor Tourist Development of the APSARA Authority (Cambodia); Forest Department (Myanmar); Ministry of Agriculture and Forestry (Lao); and National Park, Wildlife and Plant Department (Thailand).

Our aim in bringing these various stakeholders together is to catalyze an ongoing dialog that leads to definitive action. The goal of sustainable nature-based tourism cannot be achieved without the participation of all.

## TIGER IN THE FOREST: SUSTAINABLE NATURE-BASED TOURISM IN SOUTHEAST ASIA

Thursday, March 20, 2003 Kaufmann Theater, First Floor

8:00 am	Registration Registration		NGUYEN THI DAO, Ecoregion Conservation		
9:00 am	Opening Remarks  MICHAEL J. NOVACEK, Senior Vice President and Provost of Science, American Museum of Natural History (AMNH)		Officer, World Wildlife Fund (WWF) Indochina GEOFFREY LIPMAN, Special Advisor to the Secretary General, World Tourism Organization RUSTY STAFF, President, Asia Transpacific Journeys		
	Morning Session Moderator: GEORGE AMATO, Director, Science Resource Center, Wildlife Conservation Society	3:00 pm	Coffee Break The Critical Role of Science Moderator: <b>ELEANOR J. STERLING,</b> Director, Center for Biodiversity and		
9:10 am	Sustainable Ecotourism: Myth or Imperative? NAY HTUN, Professor and Executive Director, University for Peace	3:20 pm	Conservation, AMNH  Benefiting Biodiversity, Supporting Sustainability: Using Science to Support Nature-Based Tourism		
9:45 am	Southeast Asia's Biodiversity — Its Local, Regional, and Global Importance ROBERT TIZARD, Fermata Inc.	tempiner de sepresent	KATRINA BRANDON, Senior Research Fellow, Center for Applied Biodiversity Science, Conservation International		
10:20 am	Threats to the Biodiversity of the Region  TONY WHITTEN, Senior Biodiversity  Specialist, East Asia and Pacific, World Bank	3:45 pm	Ecotourism in the Tangkoko DuaSudara Nature Reserve: Lost Opportunities? MARGARET KINNAIRD, Conservation Ecologist, WCS Indonesia		
10:55 am 11:15 am	An Economic Perspective on Biodiversity Loss and the Role of Ecotourism in Conservation	4:10 pm	Evaluating the Linkage Between Ecotourism and Wildlife Conservation in Papua New Guinea and Lao PDR ARLYNE JOHNSON, Program Co-Director and Associate Conservation Scientist, WCS Lao		
	ANDREW BOVARNICK, Biodiversity Economist & Manager, Freshwater, Coastal and Marine, Global Environment Facility, United Nations Development Programme	4:35 pm	The Role of Ecotourism in Tiger Conservation: A Case Study from the Mid- and Western Lowlands of Nepal SHANT RAJ JNAWALI, Project Director,		
11:50 am	Panel Discussion (Bovarnick, Htun, Tizard, Whitten)		Bardia Conservation Program, King Mahendra Trust for Nature Conservation (Nepal)		
12:10 pm	Lunch Break	5:00 pm	Panel Discussion (Brandon, Jnawali, Johnson,		
2:00 pm	Panel Discussion Sustaining Nature-Based Tourism: Integrating Diverse Perspectives Moderator: ALICIA STEVENS, Discussion Nature AMNH	5:30 pm	KINNAIRD)  Poster Session Hall of Northwest Coast Indians, First Floor		
	Director, Discovery Tours, AMNH  MARTHA HONEY, Director of the Peace and Security Program, Institute for Policy Studies	MARKE STATES			

GEORGE AMATO, Director, Science Resource

Center, Wildlife Conservation Society

## TIGER IN THE FOREST: SUSTAINABLE NATURE-BASED TOURISM IN SOUTHEAST ASIA

Friday, March 21, 2003 Kaufmann Theater, First Floor

9:00 am 9:10 am	Introduction  Looking Beyond the International Year of Ecotourism: Certification as a Defining Trend  FERGUS TYLER MACLAREN, Director of International Programs, The International	2:00 pm	Vietnam's Cat Tien National Park in Need of Sustainable Nature-Based Tourism  INA BECKER, Cat Tien Ecotourism and Environmental Education Advisor (Vietnam) and TRAN VAN MUI, Director, Cat Tien National Park
9:45 am	Ecotourism Society Profiles of Travel to Mainland Southeast Asia ERIN WILLIGAN, Columbia University	2:20 pm	Ecotourism as an Opportunity in Improved Biodiversity Conservation and Management in the Tonle Sap Biosphere Reserve  NEOU BONHEUR, Deputy Director,  Maintenance (Combalia)
10:15 am	Panel Discussion The Role of Government in Sustainable Nature-Based Tourism Moderator: Joshua Ginsberg, Director, Asia Program, WCS	2:40 pm	Ministry of Environment (Cambodia)  Ecotourism Development In Myanmar  WIN AUNG, Chairman, Woodland Travels Co.,  Ltd. (Myanmar)
	PHAYTHALONG DOUANGSAVANH, Chairman, National Tourism Authority (Lao) PHAM TRUNG LUONG, Vice Director,	3:00 am	Coffee Break STORIES FROM THE FIELD continued
	Tourism Research and Development Institute, Vietnam National Administration of Tourism (Vietnam)  SAM-OEUN MAY, Secretary of State, Ministry of Agriculture, Forestry and Fisheries (Cambodia)		Biodiversity Conservation and Ecotourism in the Nam Ha National Protected Area, Lao PDR PHIMKEO THAMLASINE, Chief, Nam Ha National Protected Area (Lao)
	KHIN MAUNG ZAW, Director, Nature and Wildlife Conservation Division, Ministry of Forestry (Myanmar)  PRADECH PHAYAKVICHIEN, Advisor, Tourism Authority of Thailand	3:40 pm	Nature-Based Tourism in Thailand's Western Forest Complex: Challenges and Opportunities  Dachanee Emphandhu, Assistant Professor, Department of Conservation, Faculty of Forestry, Kasetsart University (Thailand)
11:15 am	Coffee Break STORIES FROM THE FIELD Moderator: ARLYNE JOHNSON, Program Co-Director and Associate Conservation Scientist,	4:00 pm	Panel Discussion (Aung, Bonheur, Emphandhu, Mui/Becker, Thamlasine)
11:35 am	WCS Lao  ALBERT TEO, Managing Director, Borneo Eco Tours (Malaysia)	4:20 pm	Nature-Based Tourism and Conservation in Mainland Southeast Asia: Possibilities and Precautions
11:55 am	JALSA URUBSHUROW, Founder, Nomadic Expeditions (Mongolia)		HANNAH MESSERLI, Clinical Associate Professor, Tisch Center for Hospitality, Tourism and Travel Administration, New York University,
12:15 pm	Panel Discussion (MacLaren, Teo, Urubshurow, WILLIGAN)	4:55 pm	and Erin Willigan, Columbia University  Closing Remarks  ELEANOR J. STERLING, Director, Center
12:35 pm	Lunch Break STORIES FROM THE FIELD continued		for Biodiversity and Conservation, AMNH, and MICHAEL J. NOVACEK, Senior Vice President and Provost of Science, AMNH

## **George Amato**

Wildlife Conservation Society

George Amato is Director of the Science Resource Center and Senior Conservation Geneticist at the Wildlife Conservation Society (WCS), headquartered at the Bronx Zoo in New York City. Dr. Amato began his work with WCS in 1989 when he was hired to initiate the WCS conservation genetics program. This program applied current techniques in molecular biology to the conservation of wildlife in the WCS living collections as well as with field-based conservation activities. His current research interests include genetic issues and fragmentation in endangered parrots, research on the discovery of new mammal species in Southeast Asia, and noninvasive DNA sampling of endangered species. He has lectured and published extensively on conservation strategies for endangered species, particularly on the use of molecular analysis (especially DNA profiling) to determine conservation priorities. He has also participated in research activities worldwide, including research in Tanzania, South Africa, Madagascar, Malaysia, Peru, and Cuba. Dr. Amato serves at Columbia, Fordham, and Yale universities as an adjunct faculty member. He also chairs the Systematics Scientific Advisory Group (SAG) for the American Zoo and Aquarium Association and is an official adviser to a number of Taxon Advisory Groups. Dr. Amato received his Ph.D. from Yale University.

## Win Aung

Woodlands Travels Company (Myanmar)

## ECOTOURISM DEVELOPMENT IN MYANMAR

yanmar, one of the largest nations in Southeast Asia, is well known for its rich biodiversity. Because of its abundant fauna and flora and beautiful natural settings, pressure is mounting to open it up for domestic and international tourists to appreciate. To develop an eco-resort in a fragile destination like Popa Mountain Park, which is surrounded by lovely hill and forest scenery, great care must be taken to retain the pristine state of the forest and preserve the ecological integrity of the area. Management has to benefit socio-economics and the environment, and achieve sustainability without losing local culture identity and nature values.

Win Aung established Woodland Travels Company in 1995 to promote ecotourism in Myanmar. Since then, he has developed the Popa Mountain Resort in harmony with the environment, upgraded the Botanical Garden at Pyin Oo Lwin, and upgraded a primary school, providing fresh water to the nearby village. He is an Honorary Member of the Forest Resource Environmental Development Association (FREDA) and has collaborated with Global Survival Network and Wild Aid on tiger conservation in Myanmar. He participated in Myanmar's June 2002 National Seminar on Sustainable Development on Ecotourism.

#### Ina Becker

Cat Tien National Park Conservation Project

Abstract co-authored with Tran Van Mui

VIETNAM'S CAT TIEN NATIONAL PARK— THE NEED FOR SUSTAINABLE NATURE-BASED TOURISM

Ina Becker has been working as an Advisor on Conservation Education and Sustainable Tourism Development for the Cat Tien National Park Conservation Project in Vietnam since May 1998. Her focus is on capacity building among park staff involved in tourism, law enforcement, and conservation education activities. Working closely with park staff, local authorities, and schools, she is raising awareness among visitors and people living inside and near the park on urgent conservation issues. Her background is Geography as well as Health Education. She has conducted courses for professionals working in developing countries. Her current interest is community-based tourism for conservation and development. Originating from The Netherlands, she has spent considerable time traveling abroad and working in developing countries.

#### RELEVANT PUBLICATIONS:

Becker, F. 2000. Cat Tien National Park these days. Xua Nay 12.

Becker, F. 1999. Cat Tien National Park at work to develop Ecotourism in order to protect and maintain its biodiversity. Proceedings of workshop on development of a national ecotourism strategy for Vietnam; 1999 September 7-9; Vietnam National Administration of Tourism, IUCN, Economic and Social Commission for Asia and Pacific; Hanoi, Vietnam.

Becker, F. 1999. Cat Tien National Park Tourism Management Plan.

Becker, F. and Vu Trong Duyen. 1999. The start of a tourism plan for and by Cat Tien National Park: a document in development, reflecting the process of appreciative participatory tourism planning and action in CTNP.

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#### **Neou Bonheur**

Ministry of Environment (Cambodia)

ECOTOURISM AS AN OPPORTUNITY IN IMPROVED BIODIVERSITY CONSERVATION AND MANAGEMENT IN THE TONLE SAP BIOSPHERE RESERVE

he Tonle Sap Lake in Cambodia is the most productive wetland in Asia, providing a resource base for the country's economy and rural livelihoods. But these rich resources are under growing human pressure driven by rapid change of social, natural, economic and political dimensions. In 1997 the government designated the Tonle Sap Lake as a Biosphere Reserve, which paves the way for biodiversity conservation as an integral part of the management regime. The Prek Toal Core Area is the most important biodiversity hotspot of the Lake, where a large number of wildlife species of global significance are found. Because of its

global value and unique cultural landscape, ecotourism is considered an environmentally sound economic opportunity. Conservation and ecotourism still face some constraints and risks associated with limited knowledge, ineffective policy, lack of participation from key social groups, socio-economic needs and limited human capacity. Harmonization of biodiversity conservation and ecotourism development with old social values and practices represents a challenging task.

Neou Bonheur is Deputy Director of the Department for Nature Conservation and Protection within Cambodia's Ministry of Environment, and is responsible for the management of 23 protected areas and international designated areas across Cambodia. Dr. Neou Bonheur is also Deputy Permanent Secretary of Tonle Sap Biosphere Reserve Secretariat. The Secretariat is an inter-ministerial coordination body that facilitates policy coordination and integrated natural resources planning; acts as an information clearinghouse mechanism; and provides a connection to a network of national and international communities. As Project Coordinator of the Tonle Sap Environmental Management Project, Dr. Neou Bonheur supervises three project components: natural resources coordination and planning, community fishery organization, and capacity building for biodiversity conservation of the Tonle Sap Biosphere Reserve. Tonle Sap Lake is one of the largest freshwater lakes in Southeast Asia, located in the central floodplain of Cambodia territory, and was designated a Biosphere Reserve by the government in 1997. Dr. Neou Bonheur earned a Mining Engineer, MSc degree in 1989 and Ph.D. in 1994 (in Russia).

#### RELEVANT PUBLICATIONS:

Bonheur, N. 2002. Prevention and resolution of environmental conflicts in the Lower Mekong Basin. Mekong River Commission Secretariat.

Bonheur, N. and B.D. Lane. 2002. Natural resources management for human security in Cambodia's Tonle Sap Biosphere Reserve. ELSEVIER, Environmental Science & Policy.

Bonheur, N. 2001. An experience of conservation zones in the Tonle Sap Biosphere Reserve. Mekong River Commission Fishery Symposium.

#### **Andrew Bovarnick**

United Nations Development Programme-Global Environment Facility (UNDP-GEF)

#### An Economic Perspective on Biodiversity Loss and the Role of Ecotourism in Conservation

n economic perspective on the threats to and underlying causes of biodiversity loss is key not only to understanding why loss is occurring but also to identifying possible solutions. This presentation provides an overview of key economic drivers threatening biodiversity in Southeast Asia, and is based on UNDP experience in the design and implementation of large scale biodiversity conservation and sustainable use projects, which are financed by the Global Environment Facility (GEF).

The presentation will discuss key economic issues influencing the management of natural resources and their consequences for ecosystems and biodiversity. It will specifically review two common underlying problems that threaten protected areas that our UNDP-GEF projects support, and that we try to address, in part, through ecotourism. These are (i) limited financing for protected areas management and (ii) limited economic opportunities for communities living in and around protected areas to generate income, which often results in unsustainable extraction of resources. The presentation then provides an economic rationale for ecotourism, explaining how tourism can provide economic benefits for protected areas and local communities, and ends by briefly highlighting some limitations to ecotourism as an economic tool for conservation.

Andrew Bovarnick is an economist for UNDP's GEF biodiversity team. Mr. Bovarnick advises on the integration of economic issues into biodiversity conservation. This mainly consists of developing strategies for local livelihoods, private sector engagement, financing for protected areas, and mainstreaming biodiversity into productive sectors. He also advises on UNDP's coastal and marine biodiversity projects, particularly focusing on marine protected areas and their interrelationships with fisheries and tourism. Prior to joining UNDP, Mr. Bovarnick was a senior consultant at Environmental Resources Management (ERM), a global environmental consulting firm, where he worked on broader environmental economic and natural resource management projects for donor and private sector clients. Mr. Bovarnick has degrees from Oxford University and the Fletcher School, Tufts University.

#### RELEVANT PUBLICATIONS:

Bovarnick, A. (In press). Local business, global biodiversity conservation: A guidebook for small business development. UNDP.

#### Katrina Brandon

Conservation International, Organization for Tropical Studies

Benefiting Biodiversity, Supporting Sustainability: Using Science to Support Nature-Based Tourism

ature-based tourism benefits biodiversity. Or does it? Five benefits to biodiversity from tourism are introduced and briefly described. Findings from cases in Southeast Asia and elsewhere are used to demonstrate that the type and magnitude of benefits for biodiversity do not necessarily match the type and magnitude of tourism. This mismatch between benefits and impacts largely results from assumptions underlying tourism that are rarely made explicit, but that influence design. Science provides the analytical tools and framework to identify and evaluate these

assumptions, understand potential trade-offs and consequences, and strengthen the potential for sustainability and benefits. Examples of using applied science to strengthen nature-based tourism are described, and their potential implications are explored. Findings from a meta-analysis of tourism activities in Southeast Asia are presented. These cases illustrate the importance of science-based approaches in understanding how benefits to different sectors are influenced at different geographic and temporal scales.

Katrina Brandon is a Senior Research Fellow on Human Dimensions of Biodiversity Conservation with the Center for Applied Biodiversity Science at Conservation International. Her research includes the links between biodiversity conservation, poverty alleviation and rural development; parks and protected areas; drivers of biodiversity loss; integrated conservation and development projects; human-wildlife conflict; ecotourism; and environmental policy in tropical countries. Dr. Brandon is also a Senior Fellow in Environmental Science and Policy with the Organization for Tropical Studies, building training programs for Latin American decision-makers. Her M.S. and Ph.D. degrees are in Development Sociology, Regional Economics and Planning from Cornell University. She also has an M.A. in Inter-America Studies. Dr. Brandon began the research she still pursues while an undergraduate at the University of Miami, studying South Florida development and its impacts on Everglades National Park and the Miccosukee Indians who live within

#### RELEVANT PUBLICATIONS:

Brandon, K. 2002. Getting the basics right: key actions in designing effective parks. In J. Terborgh, L. C. Davenport, and C. Van Schaik, editors. Making parks work: identifying key factors to implementing parks in the tropics. Island Press, Covelo, California, U.S.A.

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Wells, M., and K. Brandon. 1992. People and parks: linking protected area management with local communities. The World Bank, Washington, D.C., U.S.A.

## Phaythalong Douangsavanh

National Tourism Authority (Lao)

Phaythalong Douangsavanh is the Acting Chairman of the National Tourism Authority in Vientiane, Lao PDR, where he is in charge of the administration and operation of the Authority. Mr. Douangsavanh has worked with the National Tourism Authority since 1992, and has served as the editor in chief of the Visiting Muong Lao magazine. He has a degree in law and admin-

istration from the Royal Institute of Administration and Law in Vientiane, Lao PDR. He has worked extensively in journalism since 1976, serving as the editor of the *Pathet Lao* (published in Lao and English) from 1976-1988. He trained with the Vietnam News Agency in Hanoi, with the Czechoslovakia New Agency in Prague, and the Social Science Institute in Moscow, Russia, before beginning his work with the National Tourism Authority. He was born in Xieng Khouang province in Lao PDR.

## Dachanee Emphandhu

Kasetsart University, Thailand

NATURE-BASED TOURISM IN THAILAND'S WESTERN FOREST COMPLEX: CHALLENGES AND OPPORTUNITIES

his presentation discusses challenges and opportunities of nature-based tourism in the Thailand Western Forest Complex (WEFCOM), the largest forest complex in Thailand. In particular, tourism resource potential and the sharing of benefits to local communities living within or nearby the protected areas are reviewed. The challenges of several issues are also discussed, such as involving all relevant stakeholders in the development of sound management plans, conserving the environment, and maintaining the quality of the visitor experience.

Dachanee Emphandhu is an assistant professor at the Department of Conservation, Faculty of Forestry at Kasetsart University, Thailand. She is responsible for teaching and conducting research in nature-based tourism in protected areas and community-based tourism. Her area of expertise is ecotourism, national park management planning, public participation, and conflict management. Projects she has worked on include: strategy for facilitating community-based tourism in protected areas under the Asia-Pacific environmental innovation strategy project; research on innovative and strategic policy options; assessment of ecotourism resource potential in the Western Forest Complex and management guidelines; and development of an ecotourism data center-Thailand (www.tat.or.th/ecotourism). Dr. Emphandu has a B.S. in watershed management from Faculty of Forestry, Kasetsart University, M.S. and Ph.D. from University of Washington's College of Forest Resources.

#### RELEVANT PUBLICATIONS:

Emphandhu, D. and S. Chettamart. 2002. Experience with coastal and marine protected area planning and management in Thailand. In: P. Dearden, Editor. Studies in Contemporary Thailand No. II: Environmental protection and rural development in Thailand — challenges and opportunities. White Lotus Co., Ltd., Thailand.

Emphandhu, D. 2001. Major governmental bodies in Thailand: their functions and policies in conservation. Proceedings of the Southeast Asian Moving Workshop on Conservation, Management and Utilization of Forest Genetic Resources; 2001 February 25 – March 10; Thailand.

Emphandhu, D. and S. Chettamart. 1997. What makes for viable ecotourism? In: RECOFTC Report No. 15: International Conference Proceedings of Ecotourism for Forest Conservation and Community Development; 1997 January 28-31; Chiang Mai, Thailand.

Emphandhu, D. 1996. Ecotourism resource potentials in Southern Thailand: a case study of Khao Sok National Park. Proceedings of the FORTROP'96; 1996 November 24-26; Kasetsart University, Bangkok, Thailand.

## Joshua Ginsberg

Wildlife Conservation Society

Joshua Ginsberg is the Director of the Asia Program at the Bronx Zoo-based Wildlife Conservation Society (WCS). He currently oversees conservation and biodiversity research programs in 17 Asian countries, with projects focusing on a wide diversity of animals and the wild landscapes that contain them. Dr. Ginsberg received his Ph.D. from Princeton University, and has since lectured and published extensively on a wide range of conservation biology subjects, including animal behavior, population ecology, captive breeding, and human-wildlife conflicts. He has authored and co-authored more than 50 popular and scientific articles, and functions as an associate editor for the journal *Conservation Biology* and a board member for *Oryx*, the journal of the Flora and Fauna Preservation Society.

Dr. Ginsberg has conducted field research in both Asia and Africa, and is considered a world authority on the Grevy's zebra and the African wild dog. Since 2002, Dr. Ginsberg has served as the chair of the NOAA/NMFS Hawaiian Monk Seal Recovery Team and is overseeing the revision of the recovery plan for this species. Dr. Ginsberg has served as a faculty member at Oxford University, University College London, and is currently an adjunct faculty member in the Department of Ecology, Evolutionary and Environmental Biology at Columbia University.

Martha Honey

Institute for Policy Studies/Stanford University, The International Ecotourism Society

Martha Honey is Executive Director of the Center for Ecotourism and Sustainable Development (a joint project of the Institute for Policy Studies and Stanford University) and of The International Ecotourism Society (TIES), both based in Washington, DC. She has written and spoken widely on ecotourism as a tool for development and conservation and on certification, including Ecotourism and Certification: Setting Standards in Practice (2002), Ecotourism and Sustainable Development: Who Owns Paradise? (1999), and Protecting Paradise: Certification Programs for Sustainable Tourism and Ecotourism (2001, with Abigail Rome). For 20 years Dr. Honey worked as a journalist overseas, based first in Tanzania and then in Costa Rica. She reported for BBC, CBC, National Public Radio, The Washington Post, New York Times, The (London) Guardian and other news media. She holds a B.A. in his-

tory from Oberlin College, M.A. in African American Studies from Syracuse University, and Ph.D. in African History from the University of Dar es Salaam. She is a fellow at the Institute for Policy Studies.

Shant Raj Jnawali

Bardia Conservation Program, King Mahendra Trust for Nature Conservation (Nepal)

THE ROLE OF ECOTOURISM IN TIGER CONSERVATION: A CASE STUDY FROM THE MID- AND WESTERN LOWLANDS OF NEPAL

he Himalayan kingdom of Nepal is one of the most popular tourist destinations in south Asia. Nepal's spectacular range of snowcapped high mountains, vivacious socio-cultural composite, and protected area networks that harbor a wide range of globally significant ecosystems are the major attraction for the visitors.

The protected areas spread across different ecological regimes, and cover nearly 20 percent of the country's landmass to provide safe refuge for globally threatened wildlife species ranging from snow leopard in the northern temperate climate to Royal Bengal tiger, elephant, and rhinoceros in the relatively narrow sub-tropical low-lands and nearby foothills in the south. About one third of the visitors coming to Nepal visit the protected areas, contributing over ninety percent of the total revenue. Of the total revenue generated by the protected areas from ecotourism, fifty percent is returned to improve the livelihood of the local communities and to safeguard the ecological integrity of the buffer zone forest resources.

Restoration and management of degraded forest areas, particularly in and around the buffer zone of the lowland protected areas, through community stewardship has greatly enhanced the forest resource base, and has created an additional refuge for tigers and their prey base and other co-existing mega herbivores including rhinoceros and elephants. Bagmara community forest, at the northeastern vicinity of Royal Chitwan National Park, is a role model, where natural resource management and ecotourism have blended together. The income accruing from this community-managed enterprise is utilized for local development and alternative livelihood activities. Similar success stories are evident from other parts of the mid and western lowland of Nepal.

The sharing of the park and reserve revenues has greatly contributed to the well being of the buffer zone communities, and has also made them more proactive towards conservation of endangered tigers and other co-existing species.

Shant Raj Jnawali has been Project Director for the King Mahendra Trust for Nature Conservation (KMTNC) Bardia Conservation Program since 1996. Prior to that, he was an ecologist at KMTNC's Nepal Conservation Research and Training Center in Chitwan. From 1986-1989 he was the manager of the Nepal Terai Ecology Project, a joint initiative between the KMTNC and the Smithsonian Institution. He has done extensive research on the one-horned rhinoceros, as well as the Ganges dolphin and the Nepal tiger population, and led several rhino reintroduction programs in Nepal. He is currently working as a Biodiversity Conservation Specialist in the formulation of the Nepal Biodiversity Implementation Plan with the UNDP.

#### **Arlyne Johnson**

Wildlife Conservation Society-Lao People's Democratic Republic

# EVALUATING THE LINKAGE BETWEEN ECOTOURISM AND WILDLIFE CONSERVATION IN PAPUA NEW GUINEA AND LAO PDR

cotourism has been applied as a strategy to reduce over harvesting of wildlife, but assumes that those who benefit from ecotourism will then sustainably use the resources upon which the tourism depends. To help managers evaluate the association between ecotourism benefits and wildlife use, feasible but effective monitoring systems are essential. This talk describes monitoring and adaptive management methods being used in two protected areas with tourism strategies in Papua New Guinea (PNG) and Lao PDR. Preliminary results from PNG indicate that ecotourism alone has not been sufficient to reduce unsustainable wildlife use. In Lao PDR, a number of indicators of wildlife abundance and use are monitored in villages that receive varying tourism benefits. We contrast conditions between the two sites and the potential of ecotourism to serve as an incentive for sustainable wildlife use.

Arlyne Johnson is an Associate Conservation Scientist with the Wildlife Conservation Society (WCS) and co-director of the WCS country program in Lao PDR. An expert on communitybased wildlife management, she has studied patterns of hunting (and helped develop approaches to mitigation) with WCS in Lao PDR, Ecuador, and Papua New Guinea. In Lao PDR, she provides training for national counterparts in wildlife research and conservation projects with the Department of Forestry and with the faculties of Forestry and Sciences at the national university. In Papua New Guinea she led an eighteen-member interdisciplinary team in a project that examined impacts of community-based wildlife management and economic incentives on the hunting and trade of wildlife. Dr. Johnson has a M.Sc. in Conservation Biology and a Ph.D. in Land Resources from the Institute of Environmental Studies at the University of Wisconsin, Madison. She is on the Board of Directors of the Research and Conservation Foundation of Papua New Guinea and is an active member in the Society for Conservation Biology.

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#### Margaret Kinnaird

Wildlife Conservation Society-Indonesia Program

# ECOTOURISM IN THE TANGKOKO DUASUDARA NATURE RESERVE: LOST OPPORTUNITIES?

ndonesia, like many developing countries, is turning to ecotourism to integrate the goals of development and nature conservation. A critical part of developing ecotourism programs is evaluating the impacts of tourist activities and monitoring the effectiveness of tourism in conserving nature and improving local livelihoods. In the mid-90s, I evaluated ecotourism in the Tangkoko DuaSudara Nature Reserve, North Sulawesi by examining trends in visitor numbers, the tourist experience, distribution of tourist revenues, and tourist impact on endemic primates. Data showed that tourism was expanding rapidly but local benefits were not being fully realized, the reserve did not generate enough money to implement management, and primate behavior was being affected. Recommendations derived from the research included the need for a change in legal status of the reserve, strategies for minimizing impacts on wildlife, increasing income to the reserve, and improving distribution of those resources. Ten years later, few recommendations have been implemented and the situation for the reserve, its wildlife, and the local communities appears worse than during the mid-90s. Tourist arrivals have become highly unpredictable following political, social and financial crises in Indonesia. The few economic benefits realized by the local communities are now volatile and undependable. This study underscores the need for scientifically based evaluations of ecotourism, but also highlights the limitation of even the best designed plans in the face of inadequate implementation, poor governance, and political and social chaos.

Margaret Kinnaird began her career in ecology and conservation in Florida studying the effects of boat mortality on manatee demography. As a graduate student in ecology and evolutionary biology at the University of Michigan, Dr. Kinnaird conducted studies on cooperative breeding of Galapagos mockingbirds and later went to Kenya to study similar behaviors in White-fronted Bee-eaters. She also worked as a naturalist guide in the Galapagos, led ecotourists around the islands, and worked on studies of the effects of tourism on nesting boobies and frigate birds. Dr. Kinnaird's interest in conservation of African wildlife led her to conduct studies on the effects of forest fragmentation on the Tana River crested mangabey for which she received her Ph.D. in wildlife ecology from University of Florida. Dr. Kinnaird has been working in Indonesia as founder and co-director of the Wildlife Conservation Society-Indonesia Program since 1991. Her research has focused on large fruit-eating birds and mammals.

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Kinnaird, M.F. and T.G. O'Brien. 1996. Ecotourism in the Tangkoko DuaSudara Nature Reserve: opening Pandora's box? Oryx **30**(1):65-73.

## **Geoffrey Lipman**

World Tourism Organization

Geoffrey Lipman is special advisor to the secretary general of the World Tourism Organization, an offshoot of the United Nations, based in Madrid. A past president of the World Travel and Tourism Council, Mr. Lipman has focused much of his attention on sustainable tourism, spearheading the creation of Agenda 21 for the sector and establishing the Green Globe environmental program for consumers, corporations, and communities. He has pioneered new research techniques to demonstrate the economic contribution of tourism. Mr. Lipman has directed more than 20 national and regional economic impact studies, presenting their results to governments, industry, and media around the world.

## Fergus Tyler Maclaren

The International Ecotourism Society

LOOKING BEYOND THE INTERNATIONAL YEAR OF ECOTOURISM: CERTIFICATION AS A DEFINING TREND

his presentation provides a background to the regional meeting which took place from November 2001 to April 2002 during the International Year of Ecotourism (IYE), the conclusions drawn from the World Ecotourism Summit, and the

major issues that developed during the year, providing the basis for future action. Particular emphasis will be made on the issues raised at the Southeast Asia Regional meeting held in Chiang Mai, Thailand in March 2002, and the resulting major effort coming out of the IYE: the development of a global accreditation body to support existing certification schemes around the world that are currently providing the operational framework for ecoand sustainable tourism development.

Fergus Maclaren is Director of International Programs for The International Ecotourism Society (TIES). In 2002 Mr. Maclaren managed the international stakeholder input process for the International Year of Ecotourism undertaken by TIES in collaboration with the United Nations Environment Program (UNEP). This translated into the coordination of six regional stakeholder meetings around the world in Belize, Sikkim, Peru, Kenya, Thailand, and the Arctic leading up to the World Ecotourism Summit in Quebec City in May 2002.

He is following up on these post-IYE efforts in 2003 by managing the TIES component of an international sustainable tourism guideline and certification accreditation program in conjunction with UNEP, Rainforest Alliance, and the Institute for Policy Studies/Stanford University. Mr. Maclaren also handles media and communications requests for the organization.

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Parenteau, R. et F.T. Maclaren. 1997. Politiques du logement et du developpement urbain au Vietnam, La pauvrete urbaine au Vietnam: Hanoi et Hochiminh Ville. Editions Karthala, Paris, France.

## Sam-Oeun May

Ministry of Agriculture (Cambodia)

Sam-Oeun May is the Secretary of State for Cambodia's Ministry of Agriculture, Forestry & Fisheries. He also serves as Vice Chairman of the National Committee for Biodiversity in Cambodia, and Chairman of the South East Asian Regional Center for Agriculture. In 2001 Mr. Sam-Oeun May participated in the East Asia Ministerial Conference on Forest Law Enforcement and Governance, where he confirmed Cambodia's commitment to sustainable forest management. He has a Bachelor of Science degree in Fisheries from the Royal University of Agriculture in Phnom Penh, Cambodia, and a Master of Science degree from Utah State University, U.S.A.

#### Hannah Messerli

New York University

Abstract co-authored with Erin Willigan

#### Nature-Based Tourism and Conservation in Mainland Southeast Asia: Possibilities and Precautions

hen thoughtfully developed and managed, nature-based tourism has the potential to be an environmentally benign activity that generates revenue to support biodiversity conservation efforts and community development. However, tourism can have both positive and negative impacts on ecosystems and wildlife and these effects — both direct and indirect — must be considered during tourism planning and management.

Designing and sustaining nature-based tourism requires balancing the supply of natural attractions with the demand for viewing and experiencing them. This involves integrating multiple stake-holders to plan for the quantity of tourists and the types of activities that can be sustained by an ecosystem and adjacent communities in the short, medium, and long-term. It also entails developing the area to offer a unique experience that attracts international as well as domestic visitors.

Currently at New York University as a Clinical Associate Professor, **Hannah Messerli** teaches graduate students from over 35 countries about the challenges and opportunities of tourism development. In her previous position as Managing Director of Horwath Victoria Asia Pacific (Singapore), Dr. Messerli headed the hospitality and tourism development professional services practice, specializing in pre-opening strategies and training for major hotels and resorts throughout Asia.

Dr. Messerli's experience in the public sector includes working as a technical advisor for the United Nation's Development Program in Bali, Indonesia, and as a researcher in the Department of Policy and Analysis of the United States Travel and Tourism Administration in Washington, DC. Dr. Messerli completed her doctoral program at Cornell University's School of Hotel Administration, where she specialized in tourism industry planning and development. Her research includes monitoring tourism area life cycles with special emphasis on assessing local and regional development and management of the industry from infancy to maturity. In addition to her Ph.D., Dr. Messerli holds a Masters degree from Cornell's School of Hotel Administration, a Masters degree in tourism planning from George Washington University, and a Bachelor of Arts degree from the University of Colorado.

#### Nay Htun

University for Peace

# SUSTAINABLE ECOTOURISM: MYTH OR IMPERATIVE?

his presentation reviews the evolving concepts, principles, and practices of sustainability in the context of the cultural and biological diversity of Southeast Asia. Parameters of sustainability have expanded significantly beyond economic viability to include ecological, social, and ethical aspects. The five contiguous Southeast Asia countries: Cambodia, Lao, Myanmar, Thailand, and Vietnam possess substantial biological and cultural wealth—richness underscored by diversity. Harmony between human beings and nature is widely aspired to by the people.

Tourism, drawing upon natural and cultural richness, has the potential to generate significant revenues, particularly foreign exchange earnings. Tourism is also a very powerful mechanism for improving and increasing understanding between and among countries. This has important implications for bilateral and multilateral relations. There is now increasing interest in ecotourism. To sustain it, it is imperative to take into account the ecological carrying capacity, social norms and cultural traditions, and religious beliefs and practices.

If not, tourism and ecotourism cannot be sustained. Overexploitation of ecological beauty and richness, disregarding and trivializing rich and unique cultures, insensitivity to the social traditions and norms, and ignorance of the religious beliefs and practices of the countries and people, will result in the same fate of the proverbial goose that laid the golden egg. Sustainable ecotourism can help to promote peace with nature, peace with neighbors, and peace with ourselves. Should it not be an imperative, when it will also be economically rewarding?

Nay Htun is Professor and Executive Director for Asia Pacific, University for Peace, New York Office. UPEACE was established by a United Nations General Assembly Decision in 1980 as an international post-graduate institution, with the main campus in Costa Rica. Dr. Nay Htun's current areas of focus are on causes of environmental and natural resource conflicts; traditional methods for conflict prevention and resolution; and reconciliation and healing. Dr. Nay Htun was formerly UN Assistant Secretary General with United Nations Development Programme (in charge of the Asia Pacific Bureau) and United Nations Environment Programme (in charge of Asia Pacific; established the Industry and Environment Office, Paris; also served as Deputy Executive Director). He was seconded to the United Nations Conference on Environment and Development Secretariat, Geneva, where he served as Director of Programmes and helped prepare Agenda 21 and organize the Earth Summit at Rio.

He serves on the Board of a number of not-for-profit research organizations, including the Chulabhorn Research Institute,

Bangkok; and the International Research Institute for Climate Prediction, Columbia University, New York. He is a Fellow and Visiting Professor at Imperial College of Science, Technology and Medicine, London University, where he graduated with a Ph.D. degree in Chemical Engineering in 1966, and is also Honorary Professor and Fellow of a number of Universities in the United States and Asia Pacific.

Nguyen Thi Dao

World Wildlife Fund Indochina Programme (Vietnam)

Nguyen Thi Dao is an Ecoregion Conservation Officer with the World Wildlife Fund (WWF) Indochina Programme, where she focuses on biodiversity conservation issues in Vietnam.Ms. Nguyen Thi Dao's particular interest, skill, and affinity lies with community priorities and locality-based approaches to conservation. Ms. Nguyen Thi Dao has worked with WWF Indochina since its early days in Vietnam on a diverse range of projects and programs, from tiger conservation in the central highlands, to coastal and marine conservation with Vietnam's fishing communities, and more recently as a key player in developing the Ecoregion Programme within the Greater Annamites. Ms. Nguyen Thi Dao successfully completed her MSc in Conservation Biology through the Durrell Institute of Conservation and Ecology, at the University of Kent at Canterbury, England. This followed her initial studies in languages and environmental studies at Hanoi National University.

## Michael J. Novacek

American Museum of Natural History

As the Museum's Senior Vice President and Provost, Michael Novacek provides leadership to the curatorial staff and advises the Museum's president on the direction of scientific research at the Museum. He is a chief spokesperson in enunciating the Museum's scientific program. Dr. Novacek was instrumental in establishing the Museum's Center for Biodiversity and Conservation, and is a co-chair of the steering committee of Systematics Agenda 2000, an international scientific initiative to discover, describe, and classify the world's species. As a curator in the Division of Paleontology, Dr. Novacek has conducted extensive research on the evolutionary relationships of extinct and living mammals. His examination of broad-based problems in systematics and evolution draws upon evidence from the fossil record and molecular biology. He is one of the team leaders of the joint American Museum of Natural History/Mongolian Academy of Sciences ongoing expedition to the Gobi Desert to search for fossils and, in 1993, was one of the discoverers of Ukhaa Tolgod, the richest Cretaceous fossil site known in the world. In addition, Dr. Novacek has led or participated in fossil expeditions to western North America, Mexico, Chile, and the Arabian Peninsula. In 1999, he started a series of Museum expeditions to Patagonia, Argentina, to research dinosaur, mammal, and other fossils. Dr. Novacek, the author of several works of popular science, chronicled his ongoing explorations in Mongolia in his book *Dinosaurs of the Flaming Cliffs*. His most recent book, *Time Traveler*, presents an overview of his experiences as an explorer. Dr. Novacek has served as a member of the National Science Foundation Advisory Board and the Board of the American Association for the Advancement of Science. He earned his Ph.D. in paleontology at the University of California, Berkeley, in 1978. He joined the Museum in 1982.

#### Pham Trung Luong

Institute for Tourism Research and Development (Vietnam)

Pham Trung Luong is the Deputy Director of the Institute for Tourism Research and Development (ITDR) of Vietnam. ITDR is responsible, along with its parent organization Vietnam National Administration of Tourism, for establishing tourism policy, as well as for planning, administration, and research. Mr. Pham Trung Luong has given talks at many seminars throughout Southeast Asia — and around the world — on organizing tourism in conservation areas and on the scientific basis for the development of ecotourism in Vietnam.

## Pradech Phayakvichien

Tourism Authority of Thailand

**Pradech Phayakvichien** is the governor of the Tourism Authority of Thailand (TAT). TAT supplies information and data on tourist areas to the public, publicizes Thailand to encourage travel in Thailand, conducts studies to set development plans for tourist areas, and cooperates with and supports the production and development of personnel in the field of tourism.

## **Rusty Staff**

Asia Transpacific Journeys

Rusty Staff is the co-founder and owner of Asia Transpacific Journeys (ATJ), a high-end specialty tour company focusing on the Asia Pacific region. ATJ organizes in-depth culturally and environmentally responsible travel programs for private individuals, private groups, and institutions (including the American Museum of Natural History's Discovery Tours). Mr. Staff and his company have pioneered many eco-tour programs in the Asia-Pacific including visits to Wildlife Study areas (Camp Leakey Orangutan Research Station, Komodo Island, etc.) and visits to sensitive indigenous cultural enclaves (Irian Jaya, Papua New Guinea, etc.). Mr. Staff has consulted with the World Wildlife Fund in establish-

ing a small eco-tourism facility in Papua New Guinea's pristine Lake Kutubu area. Mr. Staff has traveled extensively throughout the Asia Pacific Region to survey and assist in development of sustainable tourism projects.

## Eleanor J. Sterling

American Museum of Natural History

As Director of the American Museum of Natural History's Center for Biodiversity and Conservation (CBC), Eleanor Sterling oversees strategic planning and project development and manages a multidisciplinary staff of over 20 individuals. In her capacity as a conservation biologist, Dr. Sterling also conducts fieldwork, studying the distribution patterns of biodiversity in tropical regions of the world and translating this information into recommendations for conservation managers. Dr. Sterling's current projects include advising the government of Vietnam on placement of new protected areas, and working in Bolivia with governmental and non-governmental organizations to develop management plans for existing protected areas. Dr. Sterling has more than 15 years of field research experience in Africa, Asia, and Latin America, and is considered a world authority on the aye-aye - a nocturnal lemur in Madagascar. She is the current Director of Graduate Studies for Columbia University's Ecology, Evolution, and Environmental Biology Department, and has taught classes in conservation biology there for the last five years. Dr. Sterling received her Ph.D. in anthropology and forestry and environmental studies from Yale University in 1993. She joined the Museum in 1996 as the CBC's Program Director, and was named Director in 2000.

#### Alicia Stevens

American Museum of Natural History

Alicia Stevens is the Director of Discovery Tours at the American Museum of Natural History. Discovery Tours is one of the oldest educational travel programs in the United States, and has sent more than 16,000 travelers to some of the world's greatest natural history, archeological, and cultural sites. Museum curators, scientists, educators, and experts in various fields serve as study leaders on all programs, ensuring an educationally rich travel experience. Prior to joining the Museum, Ms. Stevens served as International Seminar Coordinator for the Smithsonian Institution and Education Director for the Chief Executives Organization, both in Washington, D.C. Ms. Stevens was also the Assistant Headmaster at a small boarding school in the Rocky Mountains, where she taught French and English and ran the study abroad program. She has managed numerous educational tours, seminars, and conferences around the world.

#### **Albert Teo**

Borneo Eco Tours (Malaysia)

#### SUKAU RAINFOREST LODGE

This paper examines the Kinabatangan Wildlife Sanctuary on the Lower Kinabatangan River: its history, future potential, and opportunities and threats to biodiversity. Specifically, it identifies some of the problems facing the local community, such as high poverty rates, and discusses local economic activities.

The Sukau Rainforest Lodge in Sabah, Malaysia, was set up in 1995 by multi-ecotourism award winners Borneo Eco Tours to complement its tours to the Kinabatangan Wildlife Sanctuary on the Lower Kinabatangan River. The paper will outline the siting and location of the lodge; its operations (including green policies and a code of practice that minimizes the impact on biodiversity); manpower development program; community and environmental projects and community participation; various ways of fundraising for each project; and challenges and successes of each project.

The paper concludes with the setting up of the Sukau Ecotourism Research & Development Centre (SERDC). This strategic alliance with other area stakeholders (including World Wildlife Fund, Partners for Wetlands, local community groups and universities) was created to act as a catalyst for the adoption of a code of practice for lodges and tour operators; as a tool to develop and build capacity of local community; and to deal with problems encountered and to propose future strategic direction.

Albert Teo is managing director of the eleven-year-old Borneo Eco Tours, which also operates the ecolodge, Sukau Rainforest Lodge. His company has received numerous "green" business awards for their environmentally aware practices and projects such as the Rainforest Restoration Initiative in the region of his ecolodge. In addition, Mr. Teo has been Organizing Chairman of the 2002 Asia Pacific Ecotourism Conference, Organizing Chairman of the World Tourism Organization's 1999 Host Committee, and was a member of the Ministry of Culture, Arts and Tourism from 1996-99, and an advisor to the US-based International Ecotourism Society (TIES) from 1996-2000. A native of Borneo, he has been instrumental in that country's ecotourism development.

#### Phimkeo Thamlasine

Nam Ha National Biodiversity Conservation Area Management Unit (Lao)

BIODIVERSITY CONSERVATION AND ECOTOURISM IN THE NAM HA NATIONAL PROTECTED AREA, LAO PDR

he Nam Ha National Protected Area in the northern highlands of Lao PDR is the third largest protected area (2,200 km²) in the country. It is the first in the country to establish a viable ecotourism operation, offering trekking and rafting opportunities inside of the protected area. Within the national system, Nam Ha is considered important for its representation of the flora and fauna of the northern geographical subdivision of the country. Over 100 ethnic minority villages border the protected area, and depend on the forest for harvest of non-timber forest products to varying degrees. This talk describes the protected area, the challenges it faces, and the impact that ecotourism has had on biodiversity conservation in the area.

Phimkeo Thamlasine is the Chief of the Nam Ha National Protected Area in Luang Namtha province in northern Lao PDR. He was recently appointed Deputy Head of the Agriculture and Forestry Office in Luang Namtha Province. He has worked as the national project coordinator for the Nam Ha National Protected Area Strengthening Project since 1999, a collaborative project between the Wildlife Conservation Society — Lao Program and the Lao Ministry of Agriculture and Forestry to build national capacity in protected area and wildlife management. Mr. Thamlasine has a B.Sc. degree in Forestry from the National University of Lao PDR. He was born in Nale District on the border of the Nam Ha National Protected Area and is a member of the Kammu ethnic group.

#### Robert Tizard

Fermata Inc.

SOUTHEAST ASIA'S BIODIVERSITY— ITS LOCAL, REGIONAL, AND GLOBAL IMPORTANCE

The countries of Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam bridge the gap between the Himalayas and the South China Sea and its associated islands. This landmass is criss-crossed by three major river basins, each divided from the other by high forested mountains. This intricate topography has contributed to the evolution of a diverse array of habitats ranging from dry deciduous savannahs to moist coniferous montane forests. As should be expected, an even wider variety of

creatures can be found within these habitats. These include many charismatic species including the tiger, Asian elephant and Green Peafowl; the habitats also serve as a center for diversity within groups such as gibbons, wild cattle, hornbills, and pitas.

In the past decade the most remote and least known corners of the region have begun to share their secrets with the outside world. This has resulted in numerous descriptions of new taxa to the scientific community, including several large mammals and birds alongside dozens of small mammals, reptiles, amphibians, and fish. The region's faunal diversity — with many species not found elsewhere on the planet — deserves global conservation attention. In addition, the region is a source of more widespread species that have dwindling populations in neighboring regions.

Robert Tizard has lived and worked in Southeast Asia for the past ten years. He started working in the region as a biologist with the Wildlife Conservation Society surveying the vertebrate diversity of the forests of Lao PDR. He gradually worked his way into several managerial positions until 1997 when he started the first World Wildlife Fund office in that country. He then expanded his work to include cooperation in trans-boundary conservation among Lao PDR, Vietnam, Cambodia, and Thailand. Since leaving Lao PDR he has worked with the Asian Development Bank on a prototype information system to guide development with particular regard to the fragile biodiversity of the countries of the Greater Mekong region. He remains involved in the region as a member of the Board of Directors of Village Focus International, a conservation and development organization based in Lao PDR. He currently resides in Texas where he works with Fermata Inc., a consulting firm specializing in conservation through the promotion of ecotourism.

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#### Tran Van Mui

Cat Tien National Park (Vietnam)

Abstract co-authored with Ina Becker

#### Vietnam's Cat Tien National Park — The Need for Sustainable Nature-Based Tourism

■his case study begins by describing the substantial biodiversity value of Cat Tien National Park in Vietnam. An overview of threats to the park's ecosystems shows that tourism developments are a reason for conservation concern. Increasing numbers of visitors are expected in the coming years, and attention is being paid to their potential impact on the park's natural environment. Those observations — together with a number of weaknesses in tourism management — lead to the argument that without changes in approach, tourism will become one of the more important threats to the park. Another issue is that local communities hardly benefit from tourism to the park. A discussion is presented on what steps are required to improve the situation so that biodiversity values can be maintained, visitors are able to enjoy the park's nature and learn about the need for conservation, while local communities can gain a share in the benefits that visitors bring. The park management has been fortunate to have a number of opportunities to learn from the experiences of other protected areas, including planning and management of sustainable tourism. It is hoped that lessons learned will be used by park authorities and will lead to implementation of sustainable nature-based tourism as part of conservation action in Cat Tien National Park.

Tran Van Mui has worked in forestry and environmental protection for about 23 years. He has worked as a Teacher at the Forestry School, as an Accountant. and as Manager at a State Forest Enterprise in Dong Nai Province. Currently he is Director of Cat Tien National Park Biosphere Reserve. He is also Director of the Cat Tien National Park Conservation Project (funded by The Netherlands), as well as Director of the Forest Protection and Rural Development Project funded by the World Bank. He received a degree from the Financial Faculty of the Forestry College in Dong Nai Province, a degree from the Forestry University, and a management degree from Ho Chi Minh Political Institute. He is presently engaged in the Forestry Masters training course. He is also Member of the Management Board of Vietnam National Park Association. Cat Tien National Park is one of the National Parks that has had successful wildlife and forest protection activities in Vietnam.

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#### Jalsa Urubshurow

Nomadic Expeditions

# THREE CAMEL LODGE IN MONGOLIA'S GOBI DESERT

The Three Camel Lodge is a premiere luxury expedition camp built by Nomadic Expeditions in Mongolia's Gobi Desert, using environmentally and culturally sustainable development guidelines. Exploring the link between nature-based (eco) tourism and biodiversity conservation in Mongolia, this presentation will give an overview of the design, planning, construction, and community relationships involved in creating the Three Camel Lodge. The structure of the organization and its commitment to biodiversity conservation will be described, and the role that science played in the decision-making, design, and operations for the Lodge will be highlighted.

The design and development of the Three Camel Lodge was guided by an emphasis on local community values and ecological sustainability. Nomadic Expeditions built the lodge to complement its natural surroundings and to utilize renewable energy sources, taking advantage of both solar and wind power.

While planning and building the lodge, Nomadic Expeditions initiated a cooperative agreement — the first of its kind — with local government and National Park authorities, a reflection of their commitment to sustainable development and conservation of nature. Hunting has been prohibited within a 12-mile radius and the Three Camel Lodge will serve as a base for scientific research and wildlife monitoring.

Working with the local community, the Three Camel Lodge funds and organizes nature conservation clubs for children in local secondary schools. Activities for the children include collecting litter, cleaning and protecting mountain springs, planting native trees and bushes, and attending presentations by leading naturalists and scientists.

Jalsa Urubshurow, a Kalmyk Mongolian, is founder and CEO of Nomadic Expeditions, the leading tour operator specializing in educational and adventure travel to Mongolia, including expeditions organized for the American Museum of Natural History, American Birding Association, World Wildlife Fund, and others. He was personally recruited in 1990 by the first democratically elected Prime Minister of Mongolia to advise the government on

expanding accessibility to western travelers. In the post-communist period since 1990, Mr. Urubshurow has advised all seven of Mongolia's Prime Ministers and two Presidents on tourism development and environmental protection legislation.

Mr. Urubshurow was recently elected as Advisor to the Tolstoy Foundation, and as the first foreign member of the Board of Directors of the Zanabazar Museum of Fine Arts in Mongolia. He also is the founder and Chairman of The Nomadic Foundation, a non-profit 501(c) 3 tax-deductible charitable foundation devoted to the preservation of Mongolian and Central Asian cultures.

#### **Tony Whitten**

World Bank

# Threats to the Biodiversity of the Region

Imost all the countries of mainland Southeast Asia and beyond are losing their natural forests at worrying rates. However, forest loss is simply the final stage along a path of insidious degradation and attrition. The wildlife within the forests have been heavily hunted and now many forests are eerily quiet. It tends to be only those people with persistence and good luck who are able to see the larger and more spectacular wildlife.

Spectacular landscapes remaining in the region draw and will continue to draw tourists. Many of these tourists do not, however, end up seeing much in the way of wildlife. Experience shows that sustained protection and time may allow wildlife populations to increase and diversify, and these areas then have the potential to become wonderful attractions for tourists.

At the World Bank, a new approach to stem the loss of biodiversity is being adopted at a small but growing scale: working with faith groups across East Asia. We have been working with Buddhist communities in Thailand, Cambodia and Mongolia, and will soon extend this work to Lao PDR and, in a small way, to Vietnam. In Mongolia, for example, we are exploring the potential for eco-spiritual tourism on a much-pressured sacred mountain.

Tony Whitten is Senior Biodiversity Specialist at the World Bank in Washington, D.C., where he attempts to "speak for the trees," and to achieve conservation of forests, wildlife, karst biota, and freshwater biodiversity by whatever means. He has written over a dozen books of different types on the ecology and natural history of Indonesia, and works throughout the East Asia region, from Mongolia to New Guinea. Dr. Whitten manages stand-alone conservation projects, research/capacity projects, a regional project on religions and forests, and is brought into normal Bank projects in the context of environmental assessment.

#### RELEVANT PUBLICATIONS:

- Whitten, T., S.J. Damanik, and J. Anwar. 2000. The ecology of Sumatra. Periplus Editions, Singapore.
- Whitten, T. and J. Vermeulen. 1999. Biodiversity and cultural heritage in the management of limestone resources: lessons from East Asia. Directions in Development Series, The World Bank, Washington, D.C., U.S.A.
- Whitten, T. and J.E.J. Whitten, editors and contributors. 1997. Indonesian Heritage Encyclopaedia: Wildlife. Archipelago Press, Singapore.
- Whitten, T., A. Soeriaatmadja, and S. Afiff. 1996. The ecology of Java and Bali. Periplus Editions, Singapore.
- Whitten, T., and J.E.J. Whitten. Wild Indonesia. New Holland, London. ISBN 1-85368-128-8.

#### Erin Willigan

Columbia University

# Profiles of Travel to Mainland Southeast Asia

along with people's appetite for cultural, historic, and nature-oriented experiences. According to the World Tourism Organization, the global tourism market totaled 698.8 million international tourists and \$475.8 billion in 2000. Tourism growth in Mainland Southeast Asian has been particularly strong, with growth in international tourist arrivals from 1995-2000 surpassing that of both the Asian region and the world market. In 2000, international tourists to Mainland Southeast Asia reached 12.9 million.

With the combination of strong tourism growth, rich and unique biodiversity, and an established network of protected areas, Mainland Southeast Asia has the potential to develop a sustainable industry in nature-based tourism. Tourism to the region from "Ecotourism Origin Countries" (United States, UK, Germany, Canada, France, Australia, Netherlands, Sweden, Austria, New Zealand, Norway, and Denmark) is already established, and increasing with growth exceeding the regional average.

Domestic tourism is also significant in Mainland Southeast Asia. Domestic tourism in Thailand and Vietnam (45.9 million tourists) exceeded total international visitors to the entire Mainland Southeast Asian region in 2000. Interest in nature-based recreation among domestic tourists is evidenced by growth in visitation to National Parks in both countries.

**Erin Willigan** is currently working towards a Masters of Arts degree in Conservation Biology at Columbia University in the Center for Environmental Research and Conservation. Her current research, focusing on Tourism and Conservation in Mainland

Southeast Asia, specifically addresses the interactions of conservation and ecotourism in this biologically diverse area of the world. Ms. Willigan's recent field research included interviews with key stakeholders in National Parks in Thailand and Vietnam. She received a Masters degree in Business Administration from Harvard Business School at Harvard University in 1987 and a Bachelor of Science degree in Chemical Engineering from Rensselaer Polytechnic Institute in 1982. Ms. Willigan is currently Vice President of Business Development at AGI Media at MeadWestvaco, a Fortune 500 company. Her responsibilities include strategic planning, global market research, and acquisitions support. She anticipates completing her current studies at Columbia in May 2003.

## Khin Maung Zaw

Ministry of Forestry (Myanmar)

Khin Maung Zaw is the Director of the Nature and Wildlife Conservation Division of Myanmar's Ministry of Forestry. As such, he is responsible for the Ecotourism Committee formed by the Ministry of Forestry, and for management of ecotourism sites in Myanmar. Mr. Khin Maung Zaw also manages the development of the Biodiversity Conservation and Protected Area System, which increased from 3.7 % of the total land area of Myanmar to 4.73 % within two years. He has coordinated with many scientific institutions, such as the Wildlife Conservation Society and the Smithsonian, conducting research on Myanmar's unique ecosystem and promoting conservation.

# Center for Biodiversity and Conservation American Museum of Natural History

n 1993, the American Museum of Natural History created the Center for Biodiversity and Conservation (CBC) to enhance the use of scientific data to mitigate threats to biodiversity. The CBC develops strategic partnerships to expand scientific knowledge about diverse species in critical ecosystems and to apply this knowledge to conservation; to build professional and institutional capacities for biodiversity conservation; and to heighten public understanding and stewardship for biodiversity. Working both locally and around the world, we develop model programs that integrate research, education, and outreach so that people — a key factor in the rapid loss of biodiversity — will become participants in its conservation.

The CBC has developed projects in the Bahamas, Bolivia, Madagascar, the Metropolitan New York region, and Vietnam. A country that comprises high levels of species richness and endemism, Vietnam is at a crossroads in its development as it adjusts to its rapid opening to the international market economy. This, combined with severe stresses on its heavily fragmented natural systems, raises grave concerns for its unique biodiversity. In 1997, with funding from the National Science Foundation and private foundations, the CBC initiated a multi-year collaborative project in Vietnam to analyze biogeographic and evolutionary processes structuring regional biodiversity, and to determine their suitability for addition to the Vietnamese protected area system. The CBC has also offered training for Vietnamese conservation specialists in the use of Remote Sensing and Geographic Information System (GIS) techniques, tools critical in a country with highly fragmented but globally significant habitats. Learn more about the CBC's work in Vietnam at http://research.amnh.org/biodiversity/center/programs/vietnam.html.

Raising awareness and promoting conservation action is a CBC imperative; through symposia, workshops, and publications, we help inform the public about biodiversity issues. To make the complex political and economic decisions necessary for the protection of global biological resources, people must have the scientific tools to identify and understand the mechanisms behind the threats to biodiversity. The CBC's role is to equip the world community to use these tools effectively.

Center for Biodiversity and Conservation American Museum of Natural History

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See back cover for listing of CBC Advisory Council.

# Symposium Collaborators and Sponsors

## The Wildlife Conservation Society



The Wildlife Conservation Society (WCS) was founded in 1895 as the New York Zoological Society. WCS is dedicated to assuring a future for wildlife and wildlands, and currently helps steward 50 living landscapes and seascapes in Africa, Asia, Latin America and North America. WCS's field conservation program conducts scientific research, training, and education activities in more than 50 countries around the world. The mission of the WCS Asia Program is to generate and apply scientific solutions that lead to the conservation and recovery of important Asian wildlife such as tigers, elephants, hornbills, gibbons, and the ecosystems that support them. The WCS Asia Program also works closely with local communities, government agencies, regional institutions, and local non-governmental agencies, to ensure that our research results are applied to Asia's most pressing conservation problems. For more information on the Wildlife Conservation Society, link to http://wcs.org/

## World Wildlife Fund



Recognized worldwide by its panda logo, World Wildlife Fund (WWF) is dedicated to protecting the world's wildlife and wild lands. The largest global conservation organization with offices and projects in over 120 countries, WWF's work is driven by a passion for the natural world, grounded in science, and shaped by an understanding that addressing human needs is critical to successful long-term conservation. To meet this challenge, WWF employs methods that are as varied as the challenge demands — from creating and strengthening parks and protected areas to protecting endangered species to influencing local, national, and international policies. Our ambitious agenda includes saving the "Global 200" — the most outstanding array of Earth's diverse habitats; rescuing the world's most endangered species, including tigers, rhinos, pandas, and elephants; and curtailing global threats such as deforestation and marine degradation. For more information on the World Wildlife Fund, link to www.worldwildlife.org.

## **US-AEP**



nder the leadership of the U.S. Agency for International Development (USAID), the United States-Asia Environmental Partnership (US-AEP) is a public-private initiative that promotes environmentally sustainable development in Asia. US-AEP works in four program areas — Policy, Urban, Industry and Technology Cooperation — and embodies a model of cooperative development that encourages US and Asian partnerships, engaging key decision-makers who affect economic change and environmental awareness in Asia and the U.S. For more information on the United States-Asia Environmental Partnership, link to http://www.usaep.org/

# etherlands development organ

## **SNV**

**SNV** is a multicultural development agency based in the Netherlands and operating internationally. SNV delivers capacity strengthening support to meso-level organizations and local capacity builders with the aim of improving governance and reducing poverty. The sustainable tourism sector is one of the sectors in which SNV operates. For more information on SNV, link to http://www.snvworld.org/

## SUGGESTED RESOURCES

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Center for Biodiversity and Conservation at the American Museum of Natural History http://research.amnh.org/biodiversity/

Wildlife Conservation Society

http://www.wcs.org

World Wildlife Fund

http://www.wwf.org

Conservation International — Ecotourism Department

http://www.ecotour@conservation.org

Institute for Policy Studies (Ecotourism and Sustainable Development Project)

http://www.ips-dc.org/ecotourism/index.htm

King Mahendra Trust for Nature Conservation

http://www.panasia.org.sg/nepalnet/kmtnc/

Mekong Protected Area Review

http://www.mekong-protected-areas.org/index.htm

National Tourism Authority of Lao

http://mekongcenter.com/

Rainforest Alliance Sustainable Tourism Stewardship Council

http://www.rainforest-alliance.org/programs/sv/stsc.html

The International Ecotourism Society (TIES)

http://www.ecotourism.org

Tisch Center for Hospitality, Tourism, and Travel Administration, New York University http://www.scps.nyu.edu/departments/department.jsp?deptId=22

Tourism Authority of Thailand

http://www.tat.or.th/

United Nations Development Programme

http://www.undp.org/

University for Peace

http://www.upeace.org/

Vietnam National Administration of Tourism

http://www.vietnam-tourism.com/

World Ecotourism Summit - Quebec 2002

http://www.ecotourism2002.org

World Tourism Organization

http://www.world-tourism.org/

World Bank

(Biodiversity)

http://lnweb18.worldbank.org/ESSD/essdext.nsf/ 48ByDocName/Biodiversity

(South Asia)

http://lnweb18.worldbank.org/sar/sa.nsf

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