



Effect of Lantana camara on Plant Diversity in Zambia

by Catherine Lwando, Zambia, Russell E. Train Fellow (2005)

Invasive alien species have become a serious threat to plant biodiversity in many parts of the world. Globally, invasive plant species are considered one of the largest threats to biodiversity, second only to habitat loss. Invasive species are a serious impediment to the conservation and sustainable use of global, regional, and local biodiversity, with significant undesirable impacts on the goods and services provided by ecosystems. *Lantana camara L.* is one of the many invasive alien species that severely affects the health and regeneration of the ecosystems in which it inhabits. The Invasive Species Specialist Group has list this species as among the world's 100 worst invasive alien species. Zambia's National Biodiversity Strategy and Action Plan of 1998 identified *L. camara* as one of the invasive plants that negatively impacts ecosystems and indigenous plant diversity.

OBJECTIVES

Currently, there is no available information on the allelopathy (how a plant inhibits the growth of other indigenous plant species) of *L. camara* in Zambia; therefore the findings of this study would generate new information on whether *L. camara* actually reduces native plant diversity and the mechanisms it uses that enable this reduction to occur. The overall objective of the study was to investigate *L. camara*'s allelopathic effects, in Zambia. The study looked at the effect of *L. camara* on seed germination of some indigenous plants and investigated how *L. camara* affects the growth



Catherine Lwando conducting research study on L. camara.

of seedlings in terms of leaf production, root length, root biomass, shoot length, and shoot biomass of *Bauhinia petersiana*, a woody species negatively influenced by *L*. *camara* in the field.

METHODOLOGY

The study was conducted in two phases. Phase one involved a field survey at the Lilayi Game Ranch to determine whether there was a gradient in indigenous woody plant diversity caused by the invasion of *L. camara* and to identify species that appeared to be negatively affected by *L. camara*. The second phase involved laboratory experiments to determine mechanisms by which *L. camara* negatively affects *B. petersiana* seedling growth with regard to leaf production, root length, root biomass, shoot length and shoot biomass .

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BUILDING CAPACITY FOR CONSERVATION LEADERSHIP



In this Issue

- 2 Russell E. Train Fellows; New Fellowship Competition
- **3** EFN Professional Development Grants; Red-shanked douc langurs in Laos
- 4 Andes-Amazon Capacity Building Initiative
- 5 Professional Development Grants in Congo Basin; Conservation Workshop Grants
- 6 Upcoming Conferences & Training
 - Notes from the Field

RESEARCH RESULTS

The results in this study showed that *L. camara* did not necessarily influence plant diversity. The reasons for *L. camara* not influencing plant diversity could be that its influence significantly depends on its density and age. It can be assumed that its influence occurs at very high density beyond the density of 4 groves per hectares at Lilayi Game Ranch where the field survey was conducted. It is also noted that the size of the *L. camara* groves needs to be quite large, beyond the diameter of 4.9 m and 5.3 m, in order to influence the floristic diversity at the Lilayi Game

To learn more about the Russell E. Train Education for Nature Program, please contact:

Education for Nature Program World Wildlife Fund 1250 24th Street, NW Washington, DC 20037-1132, USA Tel: +1 202 293 4800 Fax: +1 202 887-5293 Email: efn@wwfus.org Website: www.worldwildlife.org/efn Ranch study site. Other literature has reported that *L. camara* does affect other biodiversity, such as herbaceous plants but this study did not consider herbaceous plants. There could also be other effects such as *L. camara*'s influence on soil fertility enrichment which was also not considered in this study.

The experimental results revealed that germination and seedling growth in terms of leaf production, root biomass, shoot length, and shoot biomass of *B. petersiana* was reduced by the addition of *L. camara* leaf and root material to soil. This is consistent with results of other studies that have shown that the allelopathic effect of *L. camara* results in severe reductions in seedling recruitment of nearly all species under its influence. The findings in this study support the hypothesis that *L. camara* has allelopathic properties that reduce seed germination and seedling growth of *B. petersiana*.

(Continued on Page 4)

Russell E. Train Fellows

EFN recently awarded six Russell E. Train Fellowships to deserving conservationists around the world. The Fellows selected are studying a myriad of topics including conservation management, sustainable development, and biology. To learn more about fellowships, please visit our website worldwildlife.org/efn/fellowship.

CAMEROON

Elizabeth Mary Itare Ikoe—Diploma in development studies with a specialization in conservation management and development. Pan African Institute of Development, Cameroon

GABON

Joseph Mayombo-MS education for sustainability. London South Bank University, UK

LAOS

Koneouma Phongsa-MS biology. National University of Laos, Laos

Somphavanh Radavanh-MS biology. National University of Laos. Laos

MEXICO Gabriela Georgina

Nava Martinez—PhD ecology and sustainable development. Colegio de la Frontera Sur, Mexico

José Salvador Thomassiny Acosta—



Gabriela Georgina Nava Martinez, Mexico

MS natural resources and rural development. Colegio de la Frontera Sur, Mexico

Bourses d'etudes supérieures Russell E. Train POUR LA RÉPUBLIQUE DÉMOCRATIQUE DU CONGO ET LE GABON FORMULAIRE DE CANDIDATURE 2008 - 2009

Critères d'éligibilité:

- Les particuliers possédant au minimum deux ans d'expérience professionnelle dans le domaine de la conservation ou deux ans d'études officielles dans le cadre d'un cursus universitaire ayant trait à la conservation de l'environnement, peuvent poser leur candidature pour les bourses d'études supérieures Russell E. Train.
- Il convient de rappeler que les candidats soient inscrits, admis ou qu'ils aient déposé une demande d'admission auprès d'un établissement d'enseignement supérieur. Ils doivent commencer leurs études dans l'année.
- Les personnes ayant bénéficié d'une bourse d'études ou de recherche de l'EFN et faisant une demande de bourse aux fins d'obtention d'un deuxième diplôme ne sont pas éligibles.
- Les particuliers ayant reçu une bourse d'études ou de recherche de l'EFN et qui sont en deuxième année officielle de ce cursus peuvent postuler à nouveau.
- Les collaborateurs et consultants à long terme de WWF ne peuvent faire une demande de bourse d'études supérieures Russell E. Train
- Les critères d'éligibilité varient légèrement selon les pays.
- Les candidat(e) doit être citoyen(ne) ou résident(e)) permanent(e) de la République Démocratique du Congo ou du Gabon.

La priorité sera accordée aux études de niveau Master et doctorales visant les spécialités suivantes:

- Conservation des écosystèmes: toute formation liée à la biologie de la conservation (études ayant trait à la protection des espèces terrestres et/ou aquatiques dans le Bassin du Congo); aménagement du territoire; paiement des services écologiques; conservation/ gestion des écosystèmes d'eaux douces; gestion intégrée des bassins fluviaux.
- Conservation et développement communautaire: études visant des approches novatrices de gouvernance dans la gestion des ressources naturelles; Commercialisation de la viande de brousse et des espèces sauvages.
- Changement climatique: des études portant, à titre d'exemple, sur les questions liées aux crédits carbone; gestion des crédits carbone (comptabilité et suivi); commerce du carbone.
- Etudes d'impacts des industries extractives et infrastructures de développement à grande échelle: à titre d'exemple, il s'agira des études portant sur la gestion durable des forêts; les projets de développement à grande échelle (construction de barrages, grands chantiers routiers).
- Politique environnementale, droit environnemental, économie environnementale.

La date limite du dépôt des formulaires pour la bourse Russell E. Train est fixée au 28 Février 2009 (le cachet de la poste faisant foi).

Le formulaire est disponible à: worldwildlife.org/efn/fellowships.

EFN Professional Development Grants BRAZIL

Nefi Marcelo Crossa Martinelli-Fisheries Consultant, Acre State Secretariat and Brazilian Institute of Environment and Renewable Natural Resources. Fish Population Dynamics training course, University of Florida, USA.

GABON

Emelie Arlette Apinda Legnouo-Researcher, Institut de Recherche en Ecologie Tropicale. 2009 Effective Leadership and Communication Tools for Environmental Management and Conservation, Smithsonian Institution, USA.

PHILIPPINES

Pablina Cadiz—Researcher, Silliman University. Mangrove Forest Ecology, Management, and Restoration training workshop, Anne Kolb Nature Center, USA.

Red-shanked douc langurs in Laos

by Phaivanh Phiapalath, Laos, Russell E. Train Fellow (2005)

Pygathrix nemaneus nemaneus, or Red-shanked douc langur is classified as an endangered species in the IUCN Red Data Book and is endemic to Indochina, which means it can be found nowhere else in the world. It contributes to the outstanding biodiversity value of the area. Laos contains the largest population of this species in the world. Due to the high demand for the red-shanked douc langur's organs for medicinal purposes in Vietnam and China, there has been an increase in the hunting of these animals, particularly along the Lao-Vietnam border. Logging has also caused severe habitat destruction further endangering the survival of the remaining population of this rare species. There is still relatively little information on the species' ecology and current population. This data is urgently needed in order to construct a better conservation plan especially in ideal limestone habitat.

In 2006, I began my research on the distribution, behavior, and threats of Red-shanked douc langurs in Hin Namno National Protected Area located in the Khammouance province of Laos. The protected area encompasses 869 km² of the limestone habitat that borders Phong Nha Ke Bang Natural World Heritage Site in Vietnam. Hin Namno

National Protected Area contains the largest number of primate species in the country. Recently, there were 11 primate species confirmed in the area; however, some species populations continue to decline due to over-hunting. Exact populations are unknown because of the difficulty in conducting research in the area.

Red-shanked douc langurs are



Phaivanh Phiapalath in the field

distributed widely throughout these national parks, living mostly in evergreens from mid-to upper-hill limestone during the dry season and descending to the evergreen forests around the foothills during the wet season. The study showed that behavior is not influenced much by season but by the degree of human pressure. More hunting is conducted in the dry season so the study observed some changes to behavior during that season. In the dry season, douc langurs either spend more time searching for safer locations or remain inactive while monitoring the threats from humans. This affects the time spent feeding, grooming, and sleeping.

JANUARY 2009

VIETNAM

Ngo Van Tri—Researcher, Department of Environmental Management and Technology, Institute of Tropical Biology. Research and a field survey conducted on new gekkonid lizards, Vietnam.

ZIMBABWE

Wilson Munyaradzi-GIS and Remote Sensing Technician, WWF SARPO. Advanced Conservation GIS & Remote Sensing Course, Smithsonian Institution, USA.

The main threat to the species is hunting. One of the study plots located close to Vietic community found a total of 458 potential threats to the douc langur populations including 90 camp sites, 57 snare lines, 52 shotguns, and 30 hunters. Many of the camps are located close to the Lao-Vietnam border where the animals are easily sold to Vietnamese traders to create medicinal products to be marketed in Vietnam and China. Logging of illegal timber





is also a serious problem in the area where there is a lack of law enforcement and effective protected area management.

Five villages located close to the Lao-Vietnam border are highly involved in wildlife hunting for trade. Many primate species were killed between 2007 and 2008, including hundreds of Redshanked douc langur, Francios' langurs, and Assamese macaques. Key community leaders were brought together in 2008 to discuss the research findings, particularly the threat to these endangered species and the illegal wildlife trade in the area. Through the discussions, the leaders agreed to limit hunting in key habitats and to manage military weapons used for hunting wild animals. Along with this local initiative, IUCN agreed to work with the Lao government to protect and manage the Hin Namno National Protected Area through a series of capacity building programs, the development of a co-management plan, and the creation of education and awareness materials for the villages around the parks. The partnership's objective is to stop wildlife hunting and trade through local coordination and awareness. IUCN is also helping the Lao government designate the protected area as a Natural World Heritage Site. This designation will connect this area to Phong Nha Kebang National Park in Vietnam making it the largest area under the protection of World Heritage Programme in Southeast Asia.

In 2005, Phaivanh Phiapalath received a Russell E. Train Fellowship to pursue his doctoral degree in environmental biology from the Suranaree University of Technology, Thailand. His thesis explores the distribution, abundance, and behavioral ecology of the red-shanked douc langur in Hin Namno National Protected Area. Phaivanh is working as a program specialist for IUCN and the government of Laos and is the first Lao primatologist.



Effect of Lantana camara on Plant Diversity

(continued from page 1)

RECOMMENDATIONS

Since *L. camara* appears to have allelopathic properties that reduce seed germination and seedling growth of some native woody plants, such as *B. petersiana*, the following recommendations can help improve biodiversity conservation:

- Prevent the spread of this species into unaffected areas
- Ban the sale and use of *L. camara* in gardens as these are potential sources of new infestations
- Develop an integrated approach to biodiversity conservation that uses a variety of control methods including herbicides, mechanical removal, and fire and biological control (Biological control may not eradicate L. camara but could reduce the plant from a weed to a non-weed status, which is then maintained in a steady dynamic equilibrium with the control agent species. In this way, biodiversity may be maintained.)
- Organize community awareness programs about the effects of L. camara on plant diversity, ecosystems, spread prevention, and invasive weed management

Conduct future studies to consider the effect of L. camara on herbaceous plants and ecosystem functions.

Invasive plant species have continued to be a growing problem throughout much of the world and endangers the survival of indigenous plants and ecosystem biodiversity. Strict control of these species and community participation is imperative to preventing the negative effects these species can have on the conservation of vulnerable ecosystems and the goods and services these ecosystems provide.

Catherine Lwando received a Russell E. Train fellowship in 2005 to complete a master's degree in tropical ecology and biodiversity at the University of Zambia. Her thesis focused on the role of allelopathy in influencing plant diversity around Lantana camara groves. After completing her degree, she worked for Ministry of Tourism, Environment, and Natural Resources in Zambia as a project officer for natural resource management. She is currently working as a program officer in the environment and water sector for the Royal Danish Embassy in Zambia.

Andes-Amazon Capacity Building Initiative

Targeted training to improve protected area management

The immensity of the Amazon's challenge requires a long-term conservation vision backed by strong scientific expertise. In this vital landscape, local capacity to implement effective protected area management is limited. WWF's EFN Program, supported by the Gordon and Betty Moore Foundation, makes a difference through its Andes-Amazon Capacity Building Initiative.



The initiative's goal: To establish permanent protection for areas in Bolivia, Colombia, Ecuador and Peru by building local capacity in protected area management. Our approach is comprehensive, weaving together both individual and institutional capacity

development across the four countries. Grant applicants are encouraged to take advantage of the multilayered nature of the new initiative by applying for more than one program.

Training and Grant Opportunities for Protected Area Management

Professional Development Grants aim to build competencies for protected area managers and planners whose work has a direct impact on one or more protected areas. The grants provide support for mid-career professionals to pursue short-term, non-degree training to improve the management of protected areas in the Andes-Amazon.

Park Guard Workshop Grants aim to increase the skills, knowledge and abilities of park guards (official, volunteer, or indigenous) working in protected areas in the Andes-Amazon regions of Bolivia, Ecuador and Peru. These grants support local organizations to host park guard training workshops that address the critical needs of protected areas in this region.

Train-the-Trainer Workshops will create a corps of specialized trainers capable of designing and carrying out effective training programs to improve protected area management. These workshops provide advanced training to individuals responsible for park guard training in protected areas.

Special Grants for Current Train Fellows and Andes Alliance Members

Visiting Expert Grants are meant to foster the exchange of ideas between conservation practitioners in the Andes-Amazon region and international experts in the field of protected area management. These grants enable current Russell E. Train Fellows and Andes Alliance members to connect with outside experts in a number of ways.

Employment Incentive Grants seek to increase institutional capacity at local organizations by helping to place Russell E. Train Fellows in key positions throughout the Amazon. Organizations seeking to hire a fellow to work in protected areas supported by the Moore Foundation or on Moore priority issues may apply for grants to offset salary and benefits or project costs.

How to Apply

Each type of grant requires a separate application. Individuals may be eligible to receive grants from multiple programs. Visit worldwildlife.org/efn/amazon to download the applications.



Contact Us WWF - EFN • Attn: Andrea Santy 1250 24th St. NW • Washington, DC 20037-1193 Tel: 202-495-4447 • capacitacion@wwfus.org worldwildlife.org/efn/amazon



Conservation Workshop Grants

EFN Conservation Workshop Grants support non-governmental organizations, community groups, government agencies, and educational institutions. These grants supported the following organizations in eight countries around the world training more than 1,000 participants in conservation topics such as protected area management, land restoration, alternative livelihoods, and community forestry. For more information on workshop grants, please visit our website at worldwildlife.org/efn/workshop.

Ecological Observation and Wetlands Conservation,	S
Indonesia —training workshop in riparian land restoration to save biodiversity in the Brantas River	of
	U
Jarden Botanico de Missouri, Peru—capacity building course for community volunteer parkguards for Yanesha	W of
Community Reserve and San Matias San Carlos Protected Forest	N
National University of Mongolia Environmental Remote	W
Sensing GIS Laboratory, Mongolia —training workshop on geo-informatics application for conservation in the Eastern Steppe	br va
Steppe	N
Ngezi Natural Resources Conservation Organization, Tanzania—Gender Mainstreaming in Natural Resource	С
Managerment for Ngezi-Vumawimbi Community Governance	W
Structures	cc
Destrong for Productivity Foundation Comproon	Y

Partners for Productivity Foundation, Cameroontraining for practicing and prospective bee farmers in local communities around the Bakossi National Park and proposed Mt Muanenguba Integral Ecological Reserve

Promvihearthor, Cambodia—Community Forestry training workshop

Conservation Workshop Grants in China

These workshops were made possible through a generous gift from Alcoa Foundation to support conservation stakeholder workshop grants in China. With this funding, EFN has awarded more than 40 conservation workshop grants to organizations in China working in the Yunnan Province.

WWF China Program Office—International Conference on Sustainable Development and Integrated River Basin Management in the Lancang River Basin in Yunnan

Wildlife Conservation Office of Yunnan Forestry **Department, China**—workshop on targeting the priority places of biodiversity conservation in the Lancang River Watershed

Yunnan Center for Environment, Protection, Education & Communication, China—training workshop for media and community participatory action in watershed protection in the Lancang River in the Mekong River Basin

JANUARY 2009

4

ociedad Zoologica de Francfort, Peru-Basic Principles f Protected Area Management workshop

Universidad Tecnica Particular de Loja, Ecuador-Vorkshop on capacity building in the generation and application f environmental indicators for monitoring in Podocarpus Vational Park

Watershed Task Group, Cameroon-workshop on roadening livelihood opportunities through water hyacinth alorization in the Wouri Estuary

WWF Central Africa Regional Program Office, Cameroon—WWF Programme Standards Training Workshop

WWF Gabon Country Office—English training for onservation actors and partners in Gabon

ayasan Konservasi Laut (Marine Conservation Foundation), Indonesia—training workshop on marine conservation in the South Sulawesi Province



Yunnan Green Environment Development Foundation, China—Jatropha Sustainable Development Project in Yunnan Province

Yunnan Provincial Communications Transportation Association, China-East Danube Green Mission of Navigation follow-up workshop in Yunnan Province

Yunnan University, China—stakeholder workshop to discuss the environmental and social issues associated with the construction of the Lanping Lead-Zinc Mine in Yunnan



Acropora coral (Acropora millepora) © Brandon D. Cole / WWF-US

International Conferences & Trainings

The NatureServe Conservation Conference 2009 "Conservation on the Move" & the Northeast Natural **Heritage Conference**

Pennsylvania, USA • 20-24 April 2009 www.natureserve.org/

The NatureServe Conservation Conference 2009 is an international training, education, and networking event for the environmental conservation community. Conservation leaders, thinkers, and doers come together for three days of education, discussion, idea exchange, and professional networking. This conference joins natural resource management professionals from the non-profit, government, and corporate sectors to learn from each other, share innovations, and discover useful opportunities for collaboration.

IAIA09: Impact Assessment and Human Well-being Accra, Ghana • 16-22 May 2009

www.iaia.org

IAIA09 conference will bring experts from around the globe assess the relevance of human well-being in impact assessments. Impact assessment aims at ensuring a healthy environment, ultimately leading to improved human well-being. This IAIA09 will focus on how impact assessment assures healthy environment, human well-being, sustainable development, protected ecosystems, and quality of life. In addition to conference sessions, workshops, and training courses, there will also be technical visits and sightseeing tours, including Lake Volta/ Akosombo Dam, deepwater Tema Port, a cocoa processing factory, gold mines, and national parks.

EESD 2009 : International Conference on Energy, **Environment**, Sustainable Development

Paris, France June 24-26, 2009 www.waset.org/wcset09/paris/eesd/ The International Conference on Energy, Environment, Sustainable Development (EESD 2009) aims to bring together researchers, scientists, engineers, and scholar students to exchange and share their experiences, new ideas, and research results about all aspects of energy, environment, sustainable development, and discuss the practical challenges encountered and the solutions adopted. The conference workshops provide a

challenging forum and vibrant opportunity for researchers and industry practitioners to share their research positions, original research results and practical development experiences on specific new challenges and emerging issues.

Beahrs Environmental Leadership Program

California, USA • 26 June-18 July 2009 nature.berkeley.edu/BeahrsELP The Beahrs ELP (ELP) links the complex

local and global environmental challenges of practitioners and decision-makers around the world with interdisciplinary perspectives in environmental and natural resource science, policy and leadership at U.C. Berkeley. The core component of the ELP is an annual three-week summer course in Sustainable Environmental Management held on the Berkeley campus. Course graduates become members of the Berkeley ELP Alumni Network that supports on-going learning, peer exchange and collaborative research and policy projects through the Small Grants Initiative.

Seventh International Conference on Ecosystems and Sustainable **Development**

Chianciano Terme, Italy • 8-10 July 2009 www.wessex.ac.uk/09-conferences/ ecosud-2009.html

ECOSUD 2009 is the 7th International Conference in the well-established series on Ecosystems and Sustainable Development. The meetings provide a unique forum for the presentation and discussion of recent work on different aspects of ecosystems and sustainable development, including physical sciences and modeling. The aim of the Conference is to encourage and facilitate the interdisciplinary communication between scientists, engineers, economists and professionals working in ecological systems and sustainable development. The Conference objectives have evolved over the years, seeking to integrate thermodynamics, ecology and economics into "ecodynamics".

International Congress for Conservation Biology Beijing, China • 11-16 July 2009

scb2009.ioz.ac.cn International Congress for Conservation Biology (23rd Annual Meeting of the Society for Conservation Biology), it is

recognized as the most important global

meeting for conservation professionals and students. SCB Global Meetings bring together conservation professionals and students from every sector of the field including the biological and social sciences, management, policy, and planning. Attendees work for universities, government agencies, non-governmental organizations, private foundations and organizations, and publications. They are scientists, students, managers, decisionmakers, writers, and other conservation professionals from throughout the world. This year's theme focuses on the connections between nature, society, diversity, and mankind, which are critical for achieving the goals of conservation.

OTHER OPPORTUNITIES

Announcing Terra Viva Grants terravivagrants.org

Terra Viva Grants is a new website that will help you identify where to look for grants in the "green sectors" of international development. Currently, the website has profiles of about 300 grant makers worldwide in agriculture, energy, environment and natural resources. The grant makers' profiles can be browsed in lists or searched in a database to speed up filtering and comparison. Grants are for technical assistance (development projects), education and capacity building, research, prizes and awards.

The Borlaug Leadership **Enhancement in Agriculture Program (LEAP)**

11 March 2009 leap.ucdavis.edu/

The Borlaug LEAP fellowship program is funded by the United States Agency for International Development (USAID) to enhance the quality of thesis research of graduate students from developing countries who show strong promise as leaders in the field of agriculture and related disciplines. LEAP is part of the overall Borlaug International Agricultural Science and Technology Fellows Program sponsored by the USDA. The LEAP program will support engaging a mentor at a Consultative Group on International Agricultural Research system center to support and enhance thesis research and mentoring experience.

Notes from the Field

Pitra Akhriadi, Indonesia. Russell E. Train Fellowship (2005)

Pitra Akhriadi received a Russell E. Train fellowship to study the taxonomy of Nepenthes (pitcher plants) of Sumatra to earn his master's degree in biology. After graduating in 2007,



Akhriadi continued to study populations of pitcher plants and their trade in Indonesia. He is working as a biodiversity specialist on a collaborative effort between KKI-WARSI (an Indonesian NGO) and Tropical Forest Trust focused on non-timber forest products. Akhriadi has presented several papers including one on the natural hybrid of pitcher plants in Sumatra at the Sarawak Nepenthes Summit and another on the biodiversity of rafflesia in the Great Forest Park at a workshop on revitalizing management in the park.

Pitra Akhriadi with Nepenthes bicalcarata

Napoleon Forpah Chi, Cameroon. EFN Professional **Development Grant (2003)**

Napoleon Forpah Chi was awarded a Professional Development Grant in 2003 to attend the East Africa Wetland Management Course held by the Kenya Wildlife Service. Since then, Napoleon continues to work for the Watershed Task Force and has recently become the Vice Coordinator of the Western Highlands Nature Conservation Network. In 2008, the Prime Minister of Cameroon appointed Napoleon as the Chairman of the Tender Board for Projects in the Douala IV Urban Council giving him the opportunity to see that environmental factors are taken into consideration during the planning of major infrastructure projects. He is also serving as the project manager for the UNDP GEF Small Grant project in Lake Ossa, Cameroon.

Mathura Khanal, Nepal. Russell E. Train Scholarship (2001)

In 2001, Mathura Khanal received an EFN scholarship to complete her bachelor's degree in forestry at the Institute of Forestry. After graduation, Mathura worked for the Forestry Department in the Terai Region of Nepal and recently completed her master's degree in natural resources and applied life science in Vienna, Austria. Since receiving her degree in 2007, she has worked for Rural Reconstruction Nepal, Nepal's largest nongovernmental organization, on their conservation sector and livelihood support program. Her work focuses on empowerment and building awareness through the transfer of knowledge and technology to rural women in Nepal.

Nagdrel Lhamo, Bhutan. Russell E. Train Scholarship (2000)

Nagdrel Lhamo was awarded a Russell E. Train scholarship in 2000 to complete her bachelor's degree in forestry from the Dr. Y.S. Parmar University of Horticulture and Forestry, India. After graduating in 2003, Nagdrel joined the Nature Conservation Division under the Department of Forests in Bhutan working as a coordinator in the Species Conservation Program. In 2008, she completed her master's degree at the University of

Fellowship (2007) In 2007, Bishnu Devkota received a Russell E Train Fellowship to pursue a master's degree in forestry at Tribhuvan University's Institute of Forestry in Nepal. In 2008, he worked with the Biodiversity Conservation and Research Forum to conduct a vulture conservation awareness program and facilitated a threeday training on biodiversity documentation for community forest groups. In December 2008 he received a Snow Leopard Conservation Grant from Snow Leopard Trust to carry out research on the relationship between prey density and diet of the snow leopard in Nepal.

Applied Sciences in Vienna, Austria. Her thesis was on the extent of human-elephant conflict and the threat to the elephant population in southern Bhutan. Upon graduation she was offered an opportunity to continue



Nagdrel Lhamo in the field

work on human-elephant conflict with the Elephant Conservation Program in the Nature Conservation Division. As the coordinator of the program, her work involves planning and implementing studies and surveys to attain information on elephants and their interactions with humans.

Cesar Bernardo Peredo, Bolivia. EFN Professional **Development Grant (2006)**

Cesar Bernardo Peredo received an EFN Professional Development Grant in 2006 to attend the International Conference on Conservation in Conflict hosted by the Wildlife Watch Group in Nepal. Since receiving his grant, Bernardo has continued to pursue his doctoral studies at Oxford University's Centre for the Environment. He was recently awarded a grant from the International Foundation of Sciences for a project on community-based tourism, biodiversity and local development policies, and indigenous communities in the Madidi National Park, Bolivia. Bernardo was also invited to give a presentation in the Policy Session of the International Conference on Adaptation of Forests and Forest Management to Changing Climate with Emphasis on Forest Health in Sweden.



Mathura Khanal conducting a workshop for women in Nepal

Bishnu Prasad Devkota, Nepal. Russell E Train



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