



ITA  
› INKATERRA ‹  
ASOCIACIÓN

**Research and Education**

# 36 years of Science and Conservation

INKATERRA ASOCIACION (ITA) is a Peruvian NGO devoted since 1978 to research for conservation of biodiversity in South Eastern Amazon rainforests of Tambopata, the Andean mountain cloud forests of Machu Picchu and the marine ecosystems of Cabo Blanco in the Peruvian Tropical Pacific.

ITA develops the following programs:

1. Research
2. Conservation
3. Education
4. Production and Community Development
5. Volunteering and Ecotourism
6. Communications



*Where are we working?*  
*¿Dónde estamos trabajando?*

South America





# Research Achievements

Inkaterra started its scientific work in 1978 with the biological inventories sponsoring all costs to the scientific mission of the University of California, Berkeley directed by Ted Pappenfuss, then continued by the University of Kansas with William Duellman, sponsoring the Biological Diversity Program (BIOTROP). This was a groundbreaking study that brought in sponsored teams led by Edward O. Wilson for ants and Alwyn Gentry for vascular plant diversity. This work resulted in 6 species new to science.

Since then, studies supported and lead by Inkaterra Association have resulted in the discovery of 23 species new to science, a program of young researchers, the ITA research scholarship, inventories, publications, strategic alliances and field stations devoted to field research.

Researchers with a deep understanding of the ecosystems form ITA's team, a group of passionate people committed to the study and conservation of biodiversity, contributing to the creation of knowledge every day.



*Dulman & Koechlin - ITA 1986*

# Biological Inventories

Published in 2007 by the Missouri Botanical Garden and ITA

Describes **1266** species found in the Inkaterra Ecological Reserve, an Ecotourism Forestry Concession that Inkaterra and ITA manages since 1979.

This study is the result of the revision of the floristic composition made by Alwyn Gentry in 1990 and the new inventories made latter by Dr. Luis Valenzuela. The 1000 species registered by Gentry were increased in **266** species, containing epiphytes and pteridophytes.

Ecological Reserve by the Missouri Botanical Garden – **1** sp. of liana new to science. (*Haplolophium nunezi*).

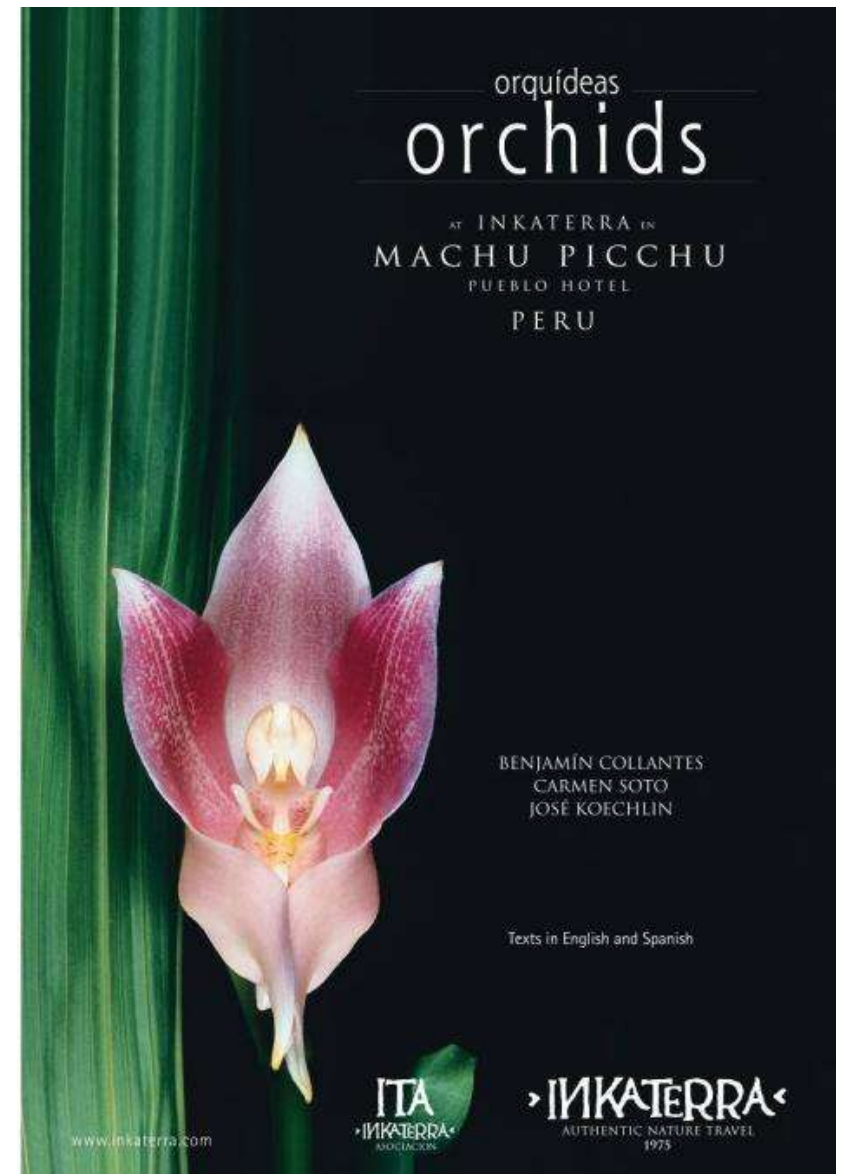


# Biological Inventories

## ORCHIDS AT INKATERRA MACHU PICCHU PUEBLO HOTEL

- Published in 2007 by Inkaterra and ITA
- **372** sp. of nature orchids registered in Inkaterra Machu Picchu Pueblo Hotel by renown scientists– 15 sp. Of orchids new to Science

*Collection of native orchids conserved in their natural habitat the world's largest by American Orchids Society*





# Biological Inventories

## FUNGI

- **25** sp. of wood fungi registered at Inkaterra Reserva Amazonica and Hacienda Concepcion by the Oregon State University Forestry College.
- Many species are being sequenced for genetic ID. We expect new species to science.



# Biological Inventories

## MAMMALS

**100** species registered in Inkaterra Reserva Amazonica by Neal Woodman and Robert Timm from the University of Kansas for the Biological Diversity Program in December 1991.

- Opposums            9 sp.
- Bats                42 sp.
- Monkeys            7 sp.
- Xenarthos          5 sp.
- Lagomorph        1 sp.
- Rodents            24 sp.
- Carnivores        9 sp.
- Tapir               1 sp.





# Biological Inventories

## LIVES OF AMPHIBIANS AND REPTILES

Herpetofauna composed by **149** species registered by William Duellman and Linda Trueb at Inkaterra Reserva Amazonica. This was a 20 year long study that started with BIOTROP.

- Frogs 64 sp. (5 sp. New to Science)
- Crocodilians 3 sp.
- Turtles 5 sp.
- Amphisbaenians 1 sp.
- Lizards 23 sp.
- Snakes 49 sp.



# Biological Inventories

Published in 2005 by Cornell University Press.

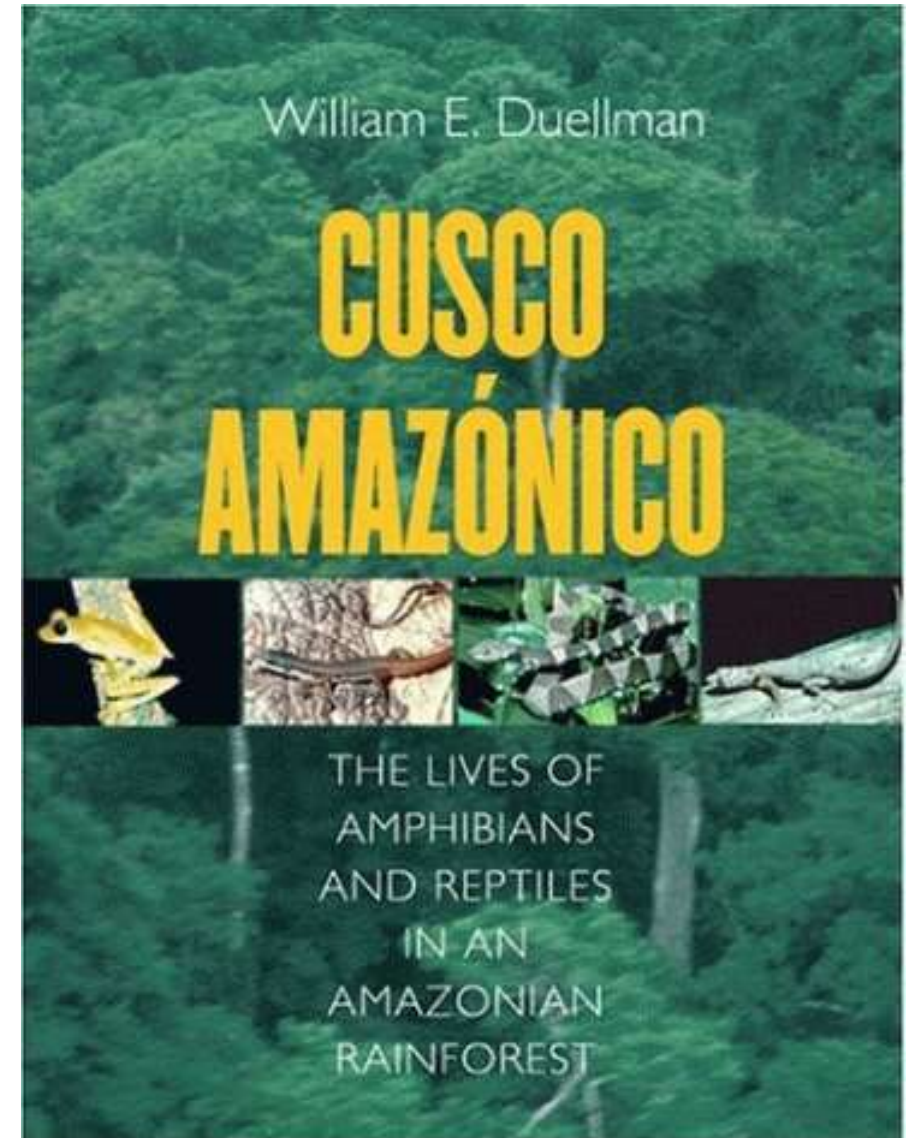
“Cusco Amazonico: The lives of amphibians and reptiles in the Amazonian Rainforest” by William Duellman of the University of Kansas, is the product of a 20 year long research project in Inkaterra Reserva Amazonica with the support of Inkaterra.

*“ Cusco Amazónico will be the baseline against which all future studies of Amazonian amphibians and reptiles (and even other organisms) will be compared..... ”*

*KRAIG ADLER. Cornell University*

\* Cusco Amazonico is the former name of Inkaterra Reserva Amazonica

Four generations of researchers, herpetologists : William Duellman, Eric Wild, Sara Orlofske y Robert Jadin.



# Biological Inventories

## BIRDS

**366** sp. registered in Inkaterra Reserva Amazonica by Tristan J. Davis from the University of Kansas for the Biological Diversity Program.

**540** sp. In Inkaterra areas of influence Lake Sandoval and Lake Valencia.

Since 2012 a Bird Banding Station has been created, is one of the 5 banding stations in Peru. It registers bird diversity in all Inkaterra Association field stations.

**214** species registered within Machu Picchu Pueblo Hotel by the scientific team of ITA and ornithologists of Birdlife International

ITA invited the best ornithologists of the world to participate in the World Birding Rally competition.





# The ITA Bird Banding Station at Casa ITA Field Station

The ITA Bird Banding Station was created jointly with the CORBIDI Banding Program (PAC) and it is one of the five created in Peru. Bird banding ITA staff in charge of the station has been trained on banding techniques and bird handling, as well as to identify different species. The method is based on marking birds individually, placing a band or ring around the leg of the studied bird.

In this station, banding is done using mistnets (12-m length, 2,5-m height and 30 to 35-mm mesh size) placed according to evaluation points. Reports are made monthly and published in Inkaterra Newsletter.



# Biological Inventories

## INVERTEBRATES AT RESERVA AMAZONICA

The biological inventories of invertebrates were made by the scientific mission of the Biological Diversity Program BIOTROP from the University of Kansas.

- **Molusks** 44 sp.
- **Spiders** 442 sp. of Spiders
- **Butterflies** 313 sp. of Butterflies

Registered by Gerardo Lamas from the Natural History Museum. Who discovered a new specie for Science in Inkaterra Machu Picchu Pueblo Hotel (*Greta Hermana koechlini*)

- **Ants** 362 sp. of Ants

Registered by Edward Wilson, John Tobin and Stephan Cover from the Harvard University. It was the largest number of species for given place (World Record ,1995)



## Scientific Papers

Species collected at Cuzco Amazónico by the Museum of Vertebrate Zoology of the University of California at Berkeley under the lead of Dr. Theodore J. Papenfuss can be found at <http://mvz.berkeley.edu/>

MVZ Herps 199467  
Adenomera andreae

LINK:  
<http://arctos.database.museum/guid/MVZ:Herp:199467>

MVZ Herps 199522  
Gonatodes humeralis

LINK:  
<http://arctos.database.museum/guid/MVZ:Herp:199522>

Scientific articles published by researchers that developed their works at Madre de Dios sponsored by Cuzco Amazónico (Inkaterra) can be found at the Biodiversity Heritage Library [www.biodiversitylibrary.org/Default.aspx](http://www.biodiversitylibrary.org/Default.aspx) and the University of Kansas <http://kuscholarworks.ku.edu/dspace/>

### **THE RESERVA CUZCO AMAZONICO, PERU: BIOLOGICAL INVESTIGATIONS, CONSERVATION, AND ECOTOURISM, William E. Duellman and José E. Koechlin**

NUMBER 142, PAGES 1 – 38. 20 NOVEMBER 1991.

LINK: <http://www.biodiversitylibrary.org/item/28553>

### **ANNOTATED CHECKLIST OF THE AMPHIBIANS AND REPTILES OF CUZCO AMAZONICO, PERU**

NUMBER 143, PAGES 1 – 13. 6 DECEMBER 1991.

LINK 1: <http://www.biodiversitylibrary.org/item/28550>

### **ANNOTATED CHECKLIST OF THE BIRDS OF CUZCO AMAZONICO, PERU.**

NUMBER 144, PAGES 1 – 19. 6 DECEMBER 1991.

LINK: <http://www.biodiversitylibrary.org/item/28546>

### **ANNOTATED CHECKLIST OF THE MAMMALS OF CUZCO AMAZONICO, PERU.**

NUMBER 145, PAGES 1 -12. 6 DECEMBER 1991.

LINK:

<http://kuscholarworks.ku.edu/dspace/bitstream/1808/4478/1/Mammals%20of%20Cuzco.pdf>



# Researchers

AÑO	INVESTIGADOR	ESPECIALIDAD	INSTITUCIÓN	PAÍS
70's				
1978	Dra. Avril Fox	Insectos	Natural History Museum	UK
1979	Dr. Theodore Papenfuss	Herpetología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1979	Dr. John Cadle	Ornitología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1979	Dr. James Patton	Mastozoología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1979	Dr. Carol Patton	Mastozoología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
80's				
1981	Dr. Theodore Papenfuss	Herpetología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1981	Dra. Elizabeth Pierson	Mastozoología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1982	Dr. Ned Johnson	Ornitología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1982	Dr. David Green	Citología	University of California at Berkeley	USA
1983	Dr. Tomio Iwamoto	Ichthyology		
1983	Dr. Jerry Edelbrock	Botánica	California Academy of Sciences	USA
1983	Dr. Richard Warner	Herpetología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1983	Dr. Robert Jones	Ornitología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1983	Dr. John Cadle	Ornitología	Smithsonian Institution	USA
1983	Dr. William Duelman	Herpetología	University of Kansas	USA
1983	Sr. Enrique Ortíz	Ornitología	Museo de Historia Natural - Universidad Nacional Mayor de San Marcos	PERU
1984	Dr. Tomio Iwamoto	Ichthyology		
1984	Dr. Jaime Villa	Herpetología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1984	Dr. James Patton	Mastozoología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1984	Mrs. Carol Patton	Mastozoología	Museum of Vertebrate Zoology, University of California at Berkeley	USA
1984	Dr. Phil Meyers	Mastozoología	University of Michigan	USA
1985	Dr. Douglas G. Brust	Mastozoología	University of Arizona	USA
1985	Dr. Craig B. Stanford	Mastozoología	University of California at Berkeley	USA
1985	Michael Ryan	Mastozoología	University of Texas at Austin	USA
1985	Dr. George Pollak	Mastozoología	University of Texas at Austin	USA
1986	David M. Hillis	Botánica	Miami University	USA
1986	Victor Morales	Herpetología	Museo de Historia Natural - Universidad Nacional Mayor de San Marcos	PERU
1986	William E. Duellman	Herpetología	Natural History Museum, University of Kansas	USA
1986	James Patton	Mastozoología	University of California at Berkeley	USA
1986	Linda R. Maxon	Genética	University of Illinois	USA
1986	Linda Trueb	Herpetología	Natural History Museum, University of Kansas	USA
1986	Dr. Reginald Cocroft	Entomología	University of Missouri	USA
1988	Alwyn H. Gentry	Botánica	Missouri Botanical Garden	USA
1989	Rina Ramírez Mesías	Macología	Museo de Historia Natural - Universidad Nacional Mayor de San Marcos	PERU
1989	Gerardo Lamas	Mastozoología	Museo de Historia Natural - Universidad Nacional Mayor de San Marcos	PERU
1989	Mirian Medina	Mastozoología	Museo de Historia Natural - Universidad Nacional Mayor de San Marcos	PERU
1989	Stefan P. Cover	Hormigas	Museum of Comparative Zoology, Harvard University	USA
1989	John E. Tobin	Hormigas	Museum of Comparative Zoology, Harvard University	USA
1989	Edward O. Wilson	Hormigas	Museum of Comparative Zoology, Harvard University	USA
1989	Tristan J. Davis	Ornitología	Natural History Museum, University of Kansas	USA
1989	Robert M. Timm	Mastozoología	Natural History Museum, University of Kansas	USA
1989	Neal Woodman	Mastozoología	Natural History Museum, University of Kansas	USA
90's				
1990	Diana Silva D.	Aracnología	Museo de Historia Natural - Universidad Nacional Mayor de San Marcos	PERU
1990	Pedro W. Lozada	Homópteros	Museo de Historia Natural - Universidad Nacional Mayor de San Marcos	PERU

## Casa ITA Field Station



ITA strongly supports science facilitating research work on the field, putting at disposal all our research infrastructure and specialized teams.

ITA promotes field science through the Young Researchers Program, a initiative that consists in the ITA Research Scholarship that covers all expenses of research thesis of life sciences students, and also selects original research works of Peruvian students to develop them in all our field stations.

The Casa ITA Field Station located in Tambopata is home for national and international students doing their intership, and is a most cherished destination for field trips of courses of universities of Peru and other countries.

Casa ITA Field Station are to be established at Lake Valencia (Tambopata), Machu Picchu Pueblo, Urubamba and Cabo Blanco.

# ITA Scholarship

Through many years ITA has supported research projects at the Casa ITA Field Station in Tambopata. This studies are done by life sciences Peruvian students.

On 2011, ITA decided to formalize its support to young researchers through the ITA Research Scholarship. The fund covers the costs of field equipment, collection permits, plane tickets Puerto Maldonado – Lima, food, lodging and transport within Madre de Dios.

## WINNER OF THE ITA SCHOLARSHIP 2011 – 2012

### **Brenda Medina**

Researcher of the Entomology  
Department of the Natural History  
Museum of the Universidad Nacional  
Mayor de San Marcos

### **Thesis theme:**

Diversity of soil ants  
(Hymenoptera:Formicidae) in Inka Terra  
Asociación Station (ITA) – Reserva  
Amazónica, Tambopata, Peru

### Reference:

Ph.D. Gerardo Lamas Müller  
Chief  
Entomology Department  
[glamas@unmsm.edu.pe](mailto:glamas@unmsm.edu.pe)

Ph.D. Betty Millan Salazar  
Director  
Natural History Museum  
[bmillans@unmsm.edu.pe](mailto:bmillans@unmsm.edu.pe)

<http://museohn.unmsm.edu.pe/>



## WINNER OF THE ITA SCHOLARSHIP 2013 - 2014

### **Sarath Vega**

Researcher of the Forest Sciences  
College of the Universidad Nacional  
Agraria La Molina and now PhD.  
Candidate in the Wood Science  
Department of the Forestry College of  
the Oregon State University.

<http://woodscience.oregonstate.edu/people/graduate-students/vega-gutierrez-sarath>

### **Thesis theme:**

Spalting Fungi in Inka Terra Asociación  
Station (ITA) – Reserva Amazónica and  
Hacienda Concepción, Tambopata, Peru

### Reference:

Ph.D. Sara Robinson  
Professor  
Wood Science Department  
[sara.robinson@oregonstate.edu](mailto:sara.robinson@oregonstate.edu)



# Research Works

## MALACOLOGY DIVERSITY RESEARCH NATURAL HISTORY MUSEUM OF THE UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS

Students from the Biology Sciences School from the Universidad Nacional Mayor de San Marcos, have been developing a pioneer research to determine Amazonian malacological diversity. Mollusks are important indicators of the ecosystems health and are extremely unstudied species.

The research is guided by Ph.D. Rina Ramirez from Malacology department of the Natural History Museum, and a associated researcher of ITA.

The first research works began at 2008 with student Pedro Romero that conducted the research project "Pediose gland in land snails and its evolutionary implications, with emphasis on *Megalobulimus*" the results of this study were published at the Peruvian Biology Magazine. Vol. 17. N°1. April 2010.

<http://sisbib.unmsm.edu.pe/bvrevistas/biologia/v17n1/pdf/a05v17n1.pdf>

On June 2011 a second research work began with students André Ampuero, Dominique Maldonado and Diego Paredes. André and Dominique belong to the Malacology Department and Diego to the Botany Department of the Natural History Museum. They have developed the research "Fresh water Malacological fauna at the low Madre de Dios river basin". This work has been presented at the XX Biological Sciencess Research Institute Antonio Raimondi (ICBAR) of the Universidad Nacional Mayor de San Marcos.



Reference:

Ph.D. Rina Ramírez Mesías  
Chief

Malacology Department  
[r Ramirez@unmsm.edu.pe](mailto:r Ramirez@unmsm.edu.pe)

Ph.D. Betty Millan Salazar  
Director

Natural History Museum  
[bmillans@unmsm.edu.pe](mailto:bmillans@unmsm.edu.pe)

# Research Works

## UNIVERSIDAD NACIONAL AGRARIA LA MOLINA FOREST SCIENCES SCHOOL

Since 2011 the last year undergraduate students of the Forest Sciences School of the Universidad Nacional Agraria La Molina perform their practice work at ITA's Biological Station through our Volunteer Program.

Students do their practices working at conservation and research projects. As wildlife monitoring, forests inventories, reforestation of Amazonian palm trees and managing tree nurseries. The work is made by two brigades, each one with 4 – 5 members. Each brigade stays 5 weeks at Casa ITA biological station, where food, lodging and transport is given, as well as lodging at Puerto Maldonado city, when needed. Also all materials and equipment for research are given by ITA.

Each day at Casa ITA has a cost of USD\$35.00. Up to date we have supported seven brigades, a total of 10 students, each staying 2 month equivalent to USD\$10,500 This program is done in coordination with the Forest Sciences School.

### Reference:

**Ph.D. Gilberto Domínguez Torrejón**

Dean

Forest Sciences School

Universidad Nacional Agraria La Molina

[gdominguez@lamolina.edu.pe](mailto:gdominguez@lamolina.edu.pe)

<http://www.lamolina.edu.pe/facultad/forestales/web2007/default.php>



### Installing permanent plots – January/2011

ITA Conservation Concession  
Forestry student, Emilio Perales, chief of Brigade I,  
marks trees as part of the forest inventory at ITA  
Conservation Concession.



# Field Trips

## UNIVERSIDAD NACIONAL AGRARIA LA MOLINA MASTER OF ECOTOURISM

Since 2000 the Master of Ecotourism is the only one of its kind in South America. It is offered by the Universidad Nacional Agraria La Molina. Its goal is to become a valuable tool for rural development, giving the students the necessary knowledge to lead tourism towards conservation and sustainable development.

Inkaterra is an important study case and the visit to *Reserva Amazónica* at Tambopata has become an obliged study station for the master's program since 2008, every year we welcome approximately twenty students to whom we provide transport, food, lodging and guiding at ITA's research center *Casa ITA Field Station* for a special fee that is affordable for all students.

### Reference:

#### Jorge M. Chávez Salas

Master of Ecotourism Coordinator

Forest Sciences School

Universidad Nacional Agraria La Molina

[jmchavez@lamolina.edu.pe](mailto:jmchavez@lamolina.edu.pe)

<http://www.lamolina.edu.pe/Postgrado/ecoturismo/ecoturismo/Default.htm>



**Master of Ecotourism – January/2011**

Casa ITA Biological Station

Team of ITA talks about conservation projects.



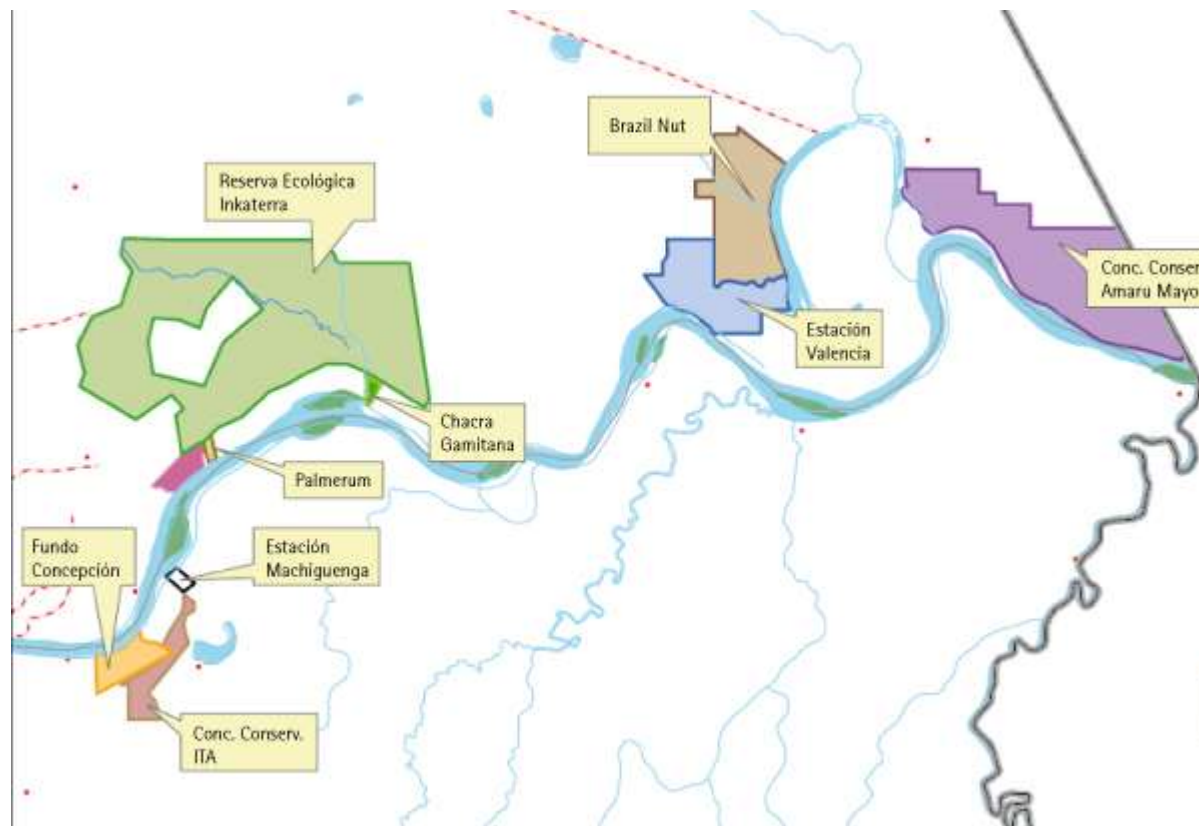
# Tambopata

The Field Stations located in this area are:

- Casa ITA Field Station (full lodging)
- Canopy Station
- Gamitana Farm Agroforestry Station
- Lake Valencia Field Station

## Services

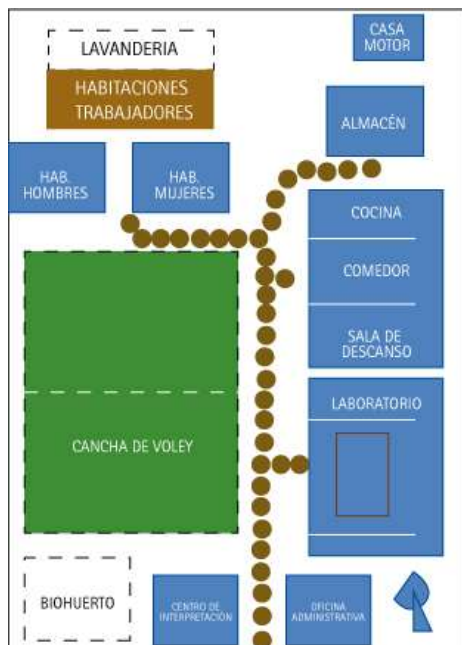
- Transport Puerto Maldonado Airport
- Fluvial transport to Casa ITA and within all stations.
- Lodging
- Homey and healthy food. Can be adapted to specific needs (vegetarians, allergies, etc.).
- Expert field guides.



# Casa ITA Field Station

Casa ITA is an Ese'ēja native style house built with natural materials from the forest.

To guarantee a pleasant stay, the station offers: two rooms, each with bathroom and capacity for 10 people; a room for classes and work; a store room for packages and equipment.



Casa ITA Field Station is being improved, this is the plan for 2015





# Canopy House Station

An interpretation center for the Canopy Walkway.

A 340 m bridge, 30m high above the forest.

The Canopy Walkway is used for:

- Bird Monitoring
- Primates Monitoring
- Ants Monitoring
- Forest Canopy ecology research





# The Field Stations



*Canopy Research*

ITA Field Stations are located in Tambopata, Madre de Dios and in Machu Picchu, Cusco. These areas are devoted to field science, biology monitoring. Agroecology and education; and for providing factual information to Inkaterra guides.

The Tambopata field stations have Casa ITA Field Station as base camp where all activities are directed and that provides full lodging. Is the biggest area of intervention, as it covers more than 15,000 hectares of forests and high levels of biodiversity. It has specialized infrastructure and the stations provide the services needed for an excellent field work, and organic production stations. Has an specialized team with researchers and field guides.

Machu Picchu field stations have Inkaterra Machu Picchu Pueblo Hotel as the main base camp and where all lodging is provided. This area covers a 10 hectares area where The Orchid Research Center is located, with 372 orchids in their natural habitat; The Andean Farm that produces organic carbono free vegetables and honey and the Andean Bear Rescue Center, where live 5 healthy bears.

# Gamitana Farm Agroforestry Station

Gamitana farm station is conceived as a training facility for young agricultural and forestry professionals where they can apply their knowledge.

The agroforestry systems are focused on the organic production of Amazonian crops.

Through experience, it seeks to establish itself as an agroforestry training center for local communities.

All the activities are focused on ecological agriculture practices.



# Lake Valencia Field Station

It is located at Valencia Lake near the Peru-Bolivia border, where various research projects –mainly on birds and mammals– take place, as well as the conservation and management of a very special kind of forest, **the “Castañales” or Brazilian nut forests.**

Lake Valencia has the highest levels of bird diversity in the low basin of the Madre de Dios river.

Valencia Lake has numerous estradas made especially for chestnuts harvest, also are used for Birdwatching. On the lake you can find several fish species occasionally paiche, doncella, dorado and pirañas.



**CANOPY WALKWAY**



**ANACONDA WALK**



**BIRD BANDING  
STATION**



**PERMANENT PLOTS**



**TRAIL SYSTEM**





# Inkaterra Machu Picchu Pueblo Hotel

## Research and Conservation areas are:

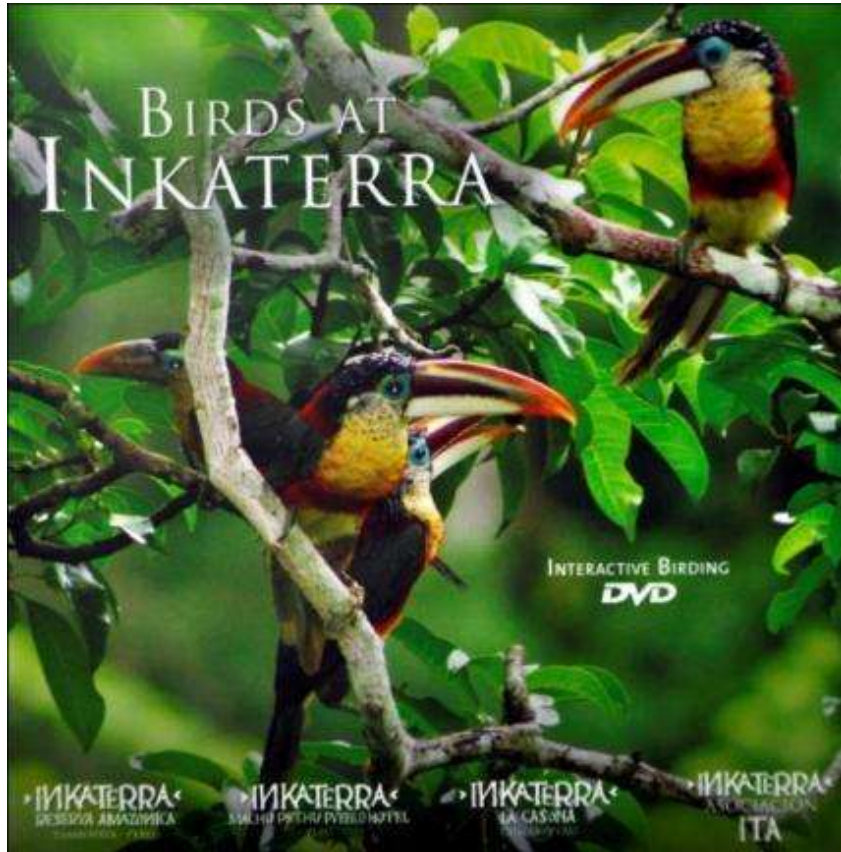
- Native Orchids Research and Conservation Center
- Andean Bear Rescue Center
- Organic Andean Farm
- Organic Tea Plantation
- Trail System

## Services

- Inkaterra Machu Picchu Pueblo Hotel (full lodging)
- Expert field guides.



# Educational Tools



*Interactive birding DVD for children*



*Bird calls at the Inkaterra Reserva Amazonica*

*Bird calls at Inkaterra Machu Picchu Pueblo Hotel*

*Inkaterra Bird calls CD*



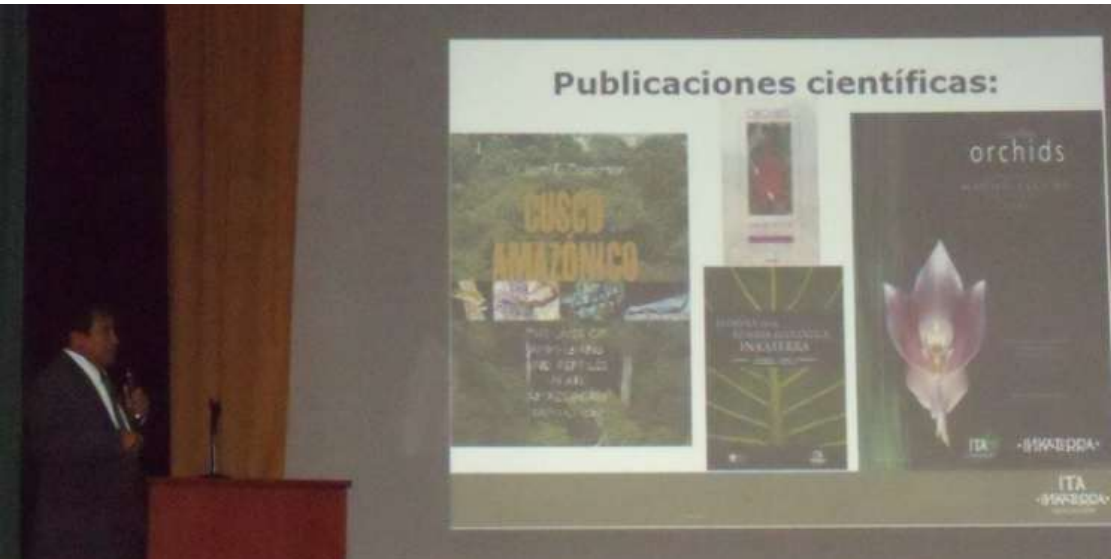
# Support to Education and Research

Plate are very important education tools that allow students and tourists to easily identify the diverse species that can be seen at the forests of both Machu Picchu and Tambopata.



The field guides can be found at the Hotel's shop at one dollar each one. But when we organize participate at university and school events they are given for free.

# Support to Education and Research



*Forest Sciences students at the Universidad Nacional Agraria La Molina, during the Forest Week, check their field guides .*





# Support to Education and Research



*The Amazonian Ants field guide is based in biology student Sara Prado's research work, funded by Inkaterra.*

*The Butterflies of Inkaterra field guide is based in our research work at the Butterfly House laboratory at Puerto Maldonado*







# INKATERRA

AUTHENTIC NATURE TRAVEL  
1975

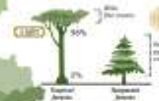
344m long | 2 towers | 8 platforms | 7 bridges

## VERTICAL STRATIFICATION

In Amazonian rainforests, the average size of the tallest trees ranges from 30 to 45 meters (98.4 to 147.6 feet). A few trees grow above these limits, reaching 60 meters (196 feet), and many brachy, bushes, and small trees grow beneath them. The conditions from the forest floor to the highest canopy change radically as you ascend, offering a large number and variety of habitats for rare forest species. To explain its complexity, researchers have suggested the concept of vertical stratification of the rainforest.

## EMERGENT TREES

Emergent trees rise to the crown of the tallest trees, such as *Barringtonia*, the forest roof trees, and the *Alseodaphne*, which tower above the canopy. *Barringtonia* and other emergent trees live in the forest floor exposed to the high light and humidity of the emergent strata. Change in light and humidity creates a unique habitat.



25 species  
The canopy of the Amazon rain forest can reach a height of 100 meters (328 feet), covering an area of 1,000,000 square meters (1,000,000 square feet).

## THE CANOPY

The canopy is made up of the aggregate of continuous tree-top layers, each with its own unique structure and microclimate. In this layer, there is an abundance of leaves, flowers, and fruits that attract a great diversity of specialized animals. These animals develop a complex web of food relationships.

14 birds  
A diverse group of birds, including toucans, parrots, and kingfishers, live in the canopy. They are highly adapted to life in the trees.



## THE UNDERSTORY

The understory is made up of growing trees, palms, bushes, and bromeliads. When one of the huge emergent trees falls, there is a sudden growth of plants in the understory. These plants help to maintain the dynamic of tropical rainforests, as it allows new species to become dominant.



20%  
of the number of the species of the forest floor are found in the understory.

## THE FOREST FLOOR

The forest floor contains a superficial layer of organic material, from which plants obtain their nutrients. It is estimated that 80 different species of plants can be found per hectare (2.5 acres). *Alseodaphne* is the most common plant in the forest floor. It is the largest of the forest floor plants, which also help to maintain the dynamic of tropical rainforests, as it allows new species to become dominant.

The forest floor contains a superficial layer of organic material, from which plants obtain their nutrients. It is estimated that 80 different species of plants can be found per hectare (2.5 acres). *Alseodaphne* is the most common plant in the forest floor. It is the largest of the forest floor plants, which also help to maintain the dynamic of tropical rainforests, as it allows new species to become dominant.

**THE LAST BIOLOGICAL FRONTIER** This system of bridges, platforms, and towers offers an expansive window into the world of the tropical rainforest. It enables us to better understand life, the cycles, and the interdependent relationships among the million organisms inhabiting the canopy. Inkaterra Canopy is considered to be one of the most modern and sophisticated in the world, both due to its innovative design and because the specialists who built it used ecological methods to prevent negative impact on the environment. The canopy walk enables visitors to enjoy an in-depth look at one of the most productive ecosystems in the rainforest: an immense food factory where key players from the botanical and faunal worlds come together. The Inkaterra Canopy was financed by the United Nations' Global Environment Facility (GEF) and by the World Bank's International Finance Corporation (IFC) with the support of the National Geographic Society.



## THE STRANGLERS

When the vines reach the trunk of a tree, they begin to grow with such intensity that they eventually strangle the tree. The tree eventually dies, and the vines continue to grow. This process is known as strangler figs. They are highly adapted to life in the forest, as they can grow in the shade and still reach the canopy.

135 species of mammals  
540 species of birds  
151 species of amphibians and reptiles

## LOFTY GARDENS

The canopy is a vast garden of life. It is a place where many different species of plants and animals live together. The canopy is a complex ecosystem, with many different layers and niches. It is a place where life is constantly changing and evolving.

## ANTS AND PLANTS, INC.

In the world of ants and plants, the forest floor is a place of intense competition. Ants and plants are constantly vying for resources and space. The forest floor is a complex ecosystem, with many different layers and niches. It is a place where life is constantly changing and evolving.

## THE ANIMALS HIGH IN THE CANOPY

The animals of the canopy play a very important role in the forest. They are the great pollinators and seed dispersers. They are also the main predators in the canopy. The animals of the canopy are highly adapted to life in the trees. They are constantly changing and evolving.



## THE ABUNDANCE OF LIFE

The forest floor is a place of intense competition. It is a place where many different species of plants and animals live together. The forest floor is a complex ecosystem, with many different layers and niches. It is a place where life is constantly changing and evolving.

## INKATERRA CANOPY IN FIGURES

Research and conservation efforts are ongoing. The Inkaterra Canopy is a unique and important part of the Amazon rainforest. It is a place where life is constantly changing and evolving.







### SAFETY

The Inkaterra Canopy is considered one of the most modern and sophisticated in the world. It is also one of the safest, due to the use of special cables and lateral mesh on all the bridges and because of the construction of solid vertical towers. It is made from the most resistant woods in the Amazon and the best industrial materials brought from the United States. The entire structure has a lifetime of more than 30 years under Amazonian conditions, although the steel cables can last longer.

Lateral mesh a material and a half high gives stability and safety.

The crosspieces of the bridge are made of the wood of the Ashwinku, *Butyraria toxicaria*.

Stainless steel cables join the tower to the ground.

The platforms are securely fastened to the tree trunk using a system of beams to provide greater stability and safety.

The platforms are built of the wood of the sapilla, *Maxillaria bifida*.

Two strong, flexible stainless steel cables are joined at the ends to the platforms.

Some of the trees supporting the platforms are bound together by a cable. Their job is to move together against strong opposing movements.



### CUSHIONING THE IMPACT

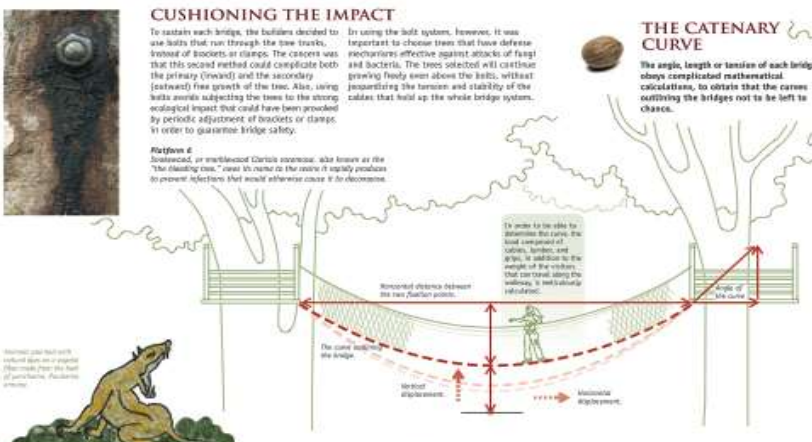
To sustain each bridge, the builders decided to use bolts that run through the tree trunks instead of bolts or clamps. The concern was that this second method could complicate both the primary (inward) and the secondary (outward) free growth of the tree. Also, using bolts would subject the trees to the strong ecological impact that could have been avoided by periodic adjustment of brackets or clamps in order to guarantee bridge safety.

In using the bolt system, however, it was important to choose trees that have defense mechanisms effective against attacks of fungi and bacteria. The trees selected will continue growing freely over the bolts, without jeopardizing the harmony and stability of the cables that hold up the whole bridge system.

**Method 2:** Solved, or implemented. Climb to see: also known as the "floating tree," seen in nature as the canopy it rapidly produces to prevent injuries that would otherwise cause it to die.

### THE CATENERY CURVE

The angle, length or tension of each bridge only complicated mathematical calculations, to obtain that the curves outlining the bridges not to be too chaotic.



INDICATOR	Value
Area	1,500 m <sup>2</sup>
Height	15 m
Length	100 m
Weight	10,000 kg
Construction cost	\$1,000,000
Construction time	12 months

### THE INTERPRETATION CENTER

Here, visitors can learn about the ecological features along the canopy walk, as well as about the environment, the design, and the construction of the Inkaterra Canopy and the support work ITA carries out in some of the communities of the zone.

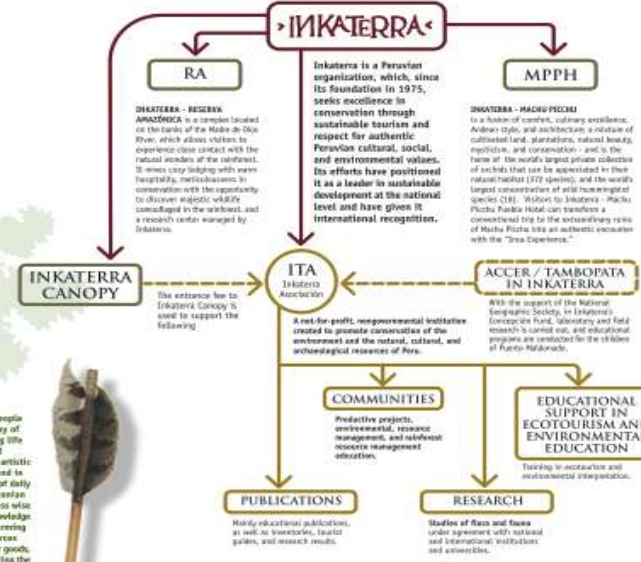


Amazonian people show their way of understanding life and the world through their artistic expressions and in their objects of daily use. All Amazonian peoples possess who and varied knowledge about transforming natural resources into consumer goods, always respecting the environment to which they belong.



### BENEFITS FROM TOURISM

Inkaterra Canopy forms part of an integral project in which the benefits from tourism are earmarked for: a) conservation and social development projects in five adjacent communities along the Madre de Dios River; and b) scientific study and production of educational materials, inventories, tourist guidesbooks, and research materials.



### THE TRUE PEOPLE

This is what the Ese Eja 148 represent: people of the Madre de Dios call themselves. They were previously known as the Haagen or Chama, however today both of those names have pejorative overtones. Ese Eja is the only member of the Tolano linguistic family represented in Peru. For the Ese Eja, the universe is composed of different worlds: the (white), (black), (red), (green), and the (purple). Much knowledge (inside the earth) and Esquipa (inside the water), plus an intermediate world: Esquipa, which connects the world of north and sky.

The Ese Eja lived in this region for centuries and make up a population of nearly 1,000 people. Data concerning their history is used in the chronicles of travelers, missionaries, and conquistadors. They are a hunting, fishing, and gathering people who also devote themselves to forest soil collection, the cultivation of plants of land, and tourist and commercial activities. They were nomadic until the 1970s. Traditional accounts tell that since the time immemorial the territory of the Ese Eja was situated between the (white) and the (black) rivers up to the headwaters of the (red) and (purple) rivers. Many natives believe that when the Ese Eja lived in this region for centuries and make up a population of nearly 1,000 people. Data concerning their history is used in the chronicles of travelers, missionaries, and conquistadors. They are a hunting, fishing, and gathering people who also devote themselves to forest soil collection, the cultivation of plants of land, and tourist and commercial activities. They were nomadic until the 1970s. Traditional accounts tell that since the time immemorial the territory of the Ese Eja was situated between the (white) and the (black) rivers up to the headwaters of the (red) and (purple) rivers.

## INKATERRA CANOPY

TAMBOPATA-PERU

Inkaterra.com



# Environmental Education

## ENVIRONMENT, ECOLOGY AND EDUCATION WORKSHOPS FOR CHILDREN AT MACHU PICCHU

Since 2008 Inkaterra and ITA- Inkaterra Association have developed, each summer during students vacation, activities that are oriented to the involvement of local children to develop a conservation philosophy at the Historical Sanctuary of Machu Picchu, generating an influence among their close relatives, promoting a positive approach to the environment and sustainable practices. The workshop team is composed by the Inkaterra Explorer Guides, ITA biologists, ITA volunteers, Ministry of Culture and Ministry of Environment educators, as well as local guides volunteers. From 2008 to 2012 five workshops have been organized with the participation of approximately 60 children in each one.

Other initiatives like celebrating the Earth Day, doing reforestation and art workshops are also developed with Machu Picchu children.



Every 22 of April we celebrate the Earth Day at Machu Picchu  
Earth Day 2009



# Environmental Education



# Environmental Education



Birding Rally Challenge 2012 Southern Route



Birding Rally Challenge 2013 North Amazon



Birding Rally Challenge 2013 Southern Route



World Birding Rally 2014 North Amazon



# XV LATINOAMERICAN CONGRESS OF FOREST SCIENCES STUDENTS 8-17 November 2011

ITA sponsored and participated at the XV Latin-American Forest Science Students Congress, held at the Universidad Agraria La Molina, on November 8 to 11, 2011. In this event, José Purisaca, General Manager of ITA talked about Conservation and Ecotourism, and Patricia Vega, Project Manager, talked about the Young Researchers and the Volunteer programs. The participants showed a lot of interests and signed up for many ITA initiatives oriented to students.

**Reference:**  
**Ph.D. Gilberto Domínguez Torrejón**  
Dean  
Forest Sciences School  
Universidad Nacional Agraria La Molina  
[gdominguez@lamolina.edu.pe](mailto:gdominguez@lamolina.edu.pe)

[http://www.wix.com/peruclecf/clecf\\_peru#!auspiciadores](http://www.wix.com/peruclecf/clecf_peru#!auspiciadores)



# Promoting Conservation and Research

## IX NEOTROPICAL ORNITHOLOGY CONGRESS

Inkaterra sponsored the IX Neotropical Ornithology Congress that took place in Cusco on November 8 to 14, 2011. In this event ITA participated with a stand showing our birds' conservation and research work. The stand was visited by important national and international ornithologists and birdwatchers. We had the honor to receive the visit of Feldsja, Irma, Irma Francke, Manuel Plenge, Tom Schulenberg, José Luis Venero, Fernando Angulo and Peter Hocking among others. Inkaterra sponsored the event giving lodging to the main speakers of the congress at La Casona Hotel at Cusco city. Sponsorship equivalent to USD\$



ITA's sustainable tourism specialist Dennis Osorio with famous ornithologist John Feldsja and one of Perú's top ornithologist and ITA's associated researcher Fernando Angulo



Verifying an identified species registered by ornithologist José Luis Venero from the left Daniel Lane, José Luis Venero, Tom Schulenberg, Dennis Osorio and Peter Hocking.



Machu Picchu's ITA Sustainable Tourism responsible Marco Huamán with famous ornithologist Tom Schulenberg



# Promoting Conservation and Research

## MAPIBIO – BIODIVERSITY CONFERENCE

Celebrating the 100 years of discovery of Machu Picchu and promoting the biodiversity of the History Sanctuary of Machu Picchu, ITA along with the National Parks Service (SERNANP) and the Peruvian Orchid Society organized MAPIBIO, an event that organized specialized workshops and seminars around key species and themes for the Sanctuary as Bird diversity and Birding, The andean Bear habitat conservation and the Orchids first Scientific conference. MAPIBIO was sponsored by Inkaterra who brought from different parts of the world top scientists and researchers for each theme.



Aves del Santuario



Osos de Anteojos



Conservacion de Orquideas

# Promoting Conservation and Research

WORKSHOP FOR THE CONSERVATION AND STRENGTHENING OF BIRDING AT THE HISTORY SANCTUARY OF MACHU PICCHU  
15 – 18 November 2010



<http://www.mapibio.com/>

See more at :

[www.facebook.com/media/set/?set=a.144093925640906.43603.139271279456504&type=3](http://www.facebook.com/media/set/?set=a.144093925640906.43603.139271279456504&type=3)



# Promoting Conservation and Research

**WORKSHOP FOR THE CONSERVATION STRATEGY OF THE ANDEAN BEAR**  
6 – 10 December 2010



Learn more at :  
<http://www.facebook.com/media/set/?set=a.147238798659752.44676.139271279456504&type=3>



# Promoting Conservation and Research

I SCIENTIFIC CONFERENCE FOR ORCHID CONSERVATION AT THE HISTOYR SANCTURAY OF MACHU PICCHU  
25 – 28 february 2011



See more at :  
<http://www.facebook.com/media/set/?set=a.167366053313693.54875.139271279456504&type=3>



# Educational Program

## **VOLUNTEERING ACTIVITIES**

- Monitoring wildlife: birds, amphibians, mammals and invertebrates.
- Support the recovery of deforested areas.
- Support organic farming and agroforestry.
- evaluation of permanent plots in Making Conception.
- Experience in hotel work and restoration practices.
- Teaching foreign language.

## **SUPPORT EVERY STEP OF THE WAY**

The moment you contact us, our team will be by your side every step of the way. We take care of everything so you have all you need as a researcher as well as enjoy your experience as a teacher, a student or a volunteer.



## Educational Program

### **\$60.00 USD a night at Casa ITA field Station**

Includes full lodging, field guides, transport to and from Puerto Maldonado Airport, and visit to all ITA stations.

### **\$85.00 USD a night at Lake Valencia field Station**

Forest area surrounding the Valencia Lake, Brazilian Nuts concessions and high terrace forests. The highest levels of bird diversity in the low Madre de Dios river.

Includes camping site, dining service, field guides and transport.

### **\$35.00 USD a night for Teachers**

For visit ITA field stations at Tambopata to prepare you trip with your students, we have a special price. Includes full lodging, field guides, transport to and from Puerto Maldonado Airport, and visit to all ITA stations.



# Educational Program

## SERVICE AND COMMUNITY

Students and volunteers discover realities that can not be explained theoretically but experientially, that is why every year takes different environmental education workshops with a human focus to supporting communities with an intercultural approach where different realities are contrasted. Over 7 years of continuous work ITA has made several social projects and intervened in various ways to improve the quality of life in our surrounding communities.





# Educational Program

## **VOLUNTEERING**

ITA offers the opportunity to help the efforts for the conservation, research, social development, education and also support the funding for ITA projects.

The Volunteer Program takes place at the Casa ITA field Station in the Tambopata Southern Amazon.



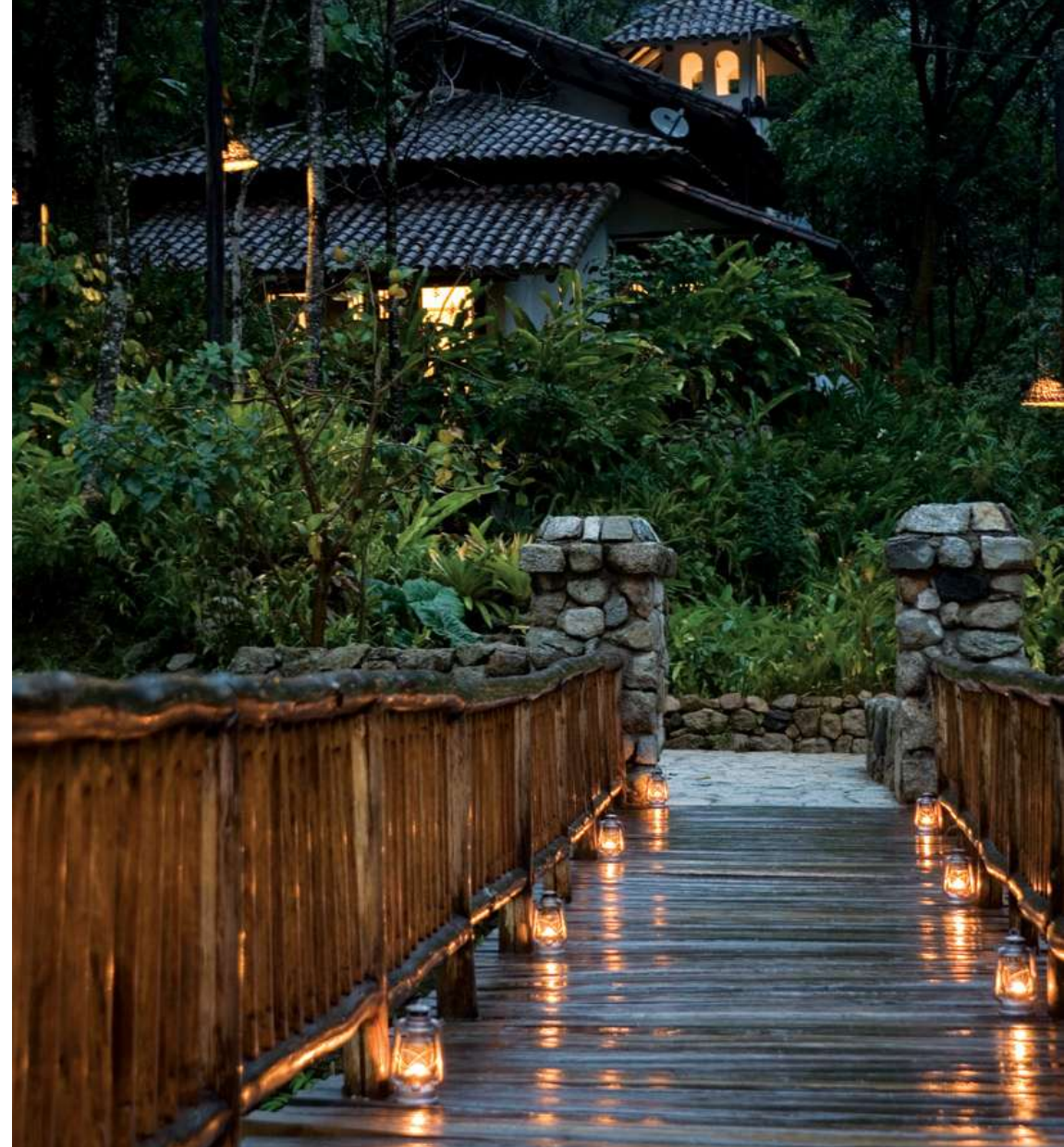


# Educational Program

## INKATERRA MACHU PICCHU PUEBLO HOTEL

The mountain cloud forests of Peru, the Machu Picchu Historical Sanctuary and its exceptional biodiversity.

Visit the Orchid Research Center, the Andean Bear Rescue Center, the Andean Organic Farm. Includes full lodging, field guides, access to all stations, and visit to Machu Picchu citadel.



# Learning with ITA

Educations and research. A

36 year experience in field work,.

Contact us [formularios-ita@inkaterra-asociacion.org](mailto:formularios-ita@inkaterra-asociacion.org)

## RESOURCES

Books, field guides, bird calls and more. Download it from our web page at: [www.Inkaterra-asociacion.org](http://www.Inkaterra-asociacion.org)



ITA  
› INKATERRA ‹  
ASOCIACIÓN

