

2002 Whitley Gold Award Winner Laury Cullen, Brazil

Agro-forestry to conserve biodiversity in Brazilian Atlantic Forest fragments

Also Winner of The Whitley Award
sponsored by The Rufford
Maurice Laing Foundation
in memory of Daniel Kelly

The issue:

The Brazilian Atlantic Forest once stretched along the coast of South America for thousands of kilometres. Today it is one of the most threatened ecosystems in the world and only 80,000 km² of its original 1.2 million km² extent still exists. Much of what remains is highly fragmented, but despite massive deforestation the forest still supports outstanding biodiversity and a reputed 7% of the world's species.

Among these is the highly endangered black lion tamarin, as well as jaguar, ocelot, puma, tapir and wild peccary.

Most of what remains of the rainforest survives in small pockets in the Pontal do Paranapanema, a poor rural area west of São Paulo. While some of it is protected within the 42,000ha Morro do Diabo State Park, beyond its borders the forest is under threat from sugar plantation and cattle ranching. Population growth in the region has also increased demand for charcoal, leading locals to replace natural forest with fast growing eucalyptus. Most forest patches are now isolated and too small to maintain ecological integrity without conservation action.

In the late 1990s a new threat to remaining Atlantic forest came from plans

by the Brazilian government to relocate 50,000 families from shanty towns to rural areas, giving each family a plot of land. This 'land reform' has led to the subdivision of many large farms in the Pontal region into smaller plots of 12 to 15 ha. New settlers to the area have been given land next to the last rainforest fragments. Vulnerable to biodiversity loss through erosion of the forest edge by fire, cattle grazing and pesticides, the new inhabitants to the area have brought with them great challenges to the continued survival of the forest.

The project work:

Winner of the 2002 Whitley Gold Award, Laury Cullen (pictured above) is working with the Brazilian NGO IPÊ and new settlers to not only protect remaining forest, but bring it back to areas where it has been lost. Forging an innovative alliance with the Movimento dos Trabalhadores Rurais Sem Terra, a powerful landless workers' movement, Laury is showing settlers they are the key



to halting deforestation. Settlers are now planting endemic and economically useful trees across their properties to develop buffer zones around primary forest. These living buffers protect the forest from erosion, whilst also reducing conflict with

wildlife and bringing new resources to the community. Locals are also planting forest 'stepping-stones' – small patches of trees and shade coffee rich in flowering and fruit-bearing species – that increase the connectivity between forest fragments. The 'stepping stones' contribute to the genetic transfer of species by promoting dispersal and are helping to ensure a long-term future for remaining forest. Laury is applying a landscape level approach, combining research and biodiversity management with community involvement and habitat restoration to empower local people to improve their conditions of living whilst also protecting their forest.

The future:

Continuation Funding in 2004 enabled Laury to increase the number of buffer zones and stepping stones from the 75 ha planted as a result of his original Whitley Award to a target 170 ha by 2008. Laury is now expanding the community-based tree planting program and planting 390,000 trees per year, which will result in over 1.8 million new trees over the life of the project. With IPÊ he is now applying an exciting regional strategy with support from local decision makers to plant forest corridors between remaining forest fragments. *"The trees are returning"* says Laury. *"I have no doubt that with our continued determination and support from our long standing partnerships, we will bring forest and wildlife back to the Pontal region"*.



Laury Cullen 2002 Whitley Gold Award Winner

WFN  **WHITLEY
FUND FOR NATURE**

AWARDS AND GRANTS FOR INTERNATIONAL NATURE CONSERVATION



Leader Profile:

Laury was born in the city of Piracicaba in São Paulo State, and growing up was a keen game hunter who often visited the Atlantic forest. Looking back, Laury believes it was these experiences tracking tapirs and wild peccaries with his father that inspired him to enter a career in conservation. After studying forestry engineering at the University of São Paulo, Laury co-founded and gained experience with IPÊ before obtaining a MSc from the University of Florida in 1997.

Laury received a small grant to study the behaviour of jaguars and pumas in small forest areas in 1999, radio-collaring some animals in order to better understand their movements from one fragment to another. The research has been vital to understanding how larger species use fragmented habitat and developed into a broader project for which Laury won the Whitley Gold Award in 2002. Laury lives close to the Morro do Diabo State Park with his wife Alessandra, a skilled vet who also works with IPÊ in the field of Conservation Medicine.

Key Threats & Objectives

Threats

- **Habitat fragmentation** – deforestation for cattle, crops and settlement over the past 50 years has decimated the forest. Remaining forest areas support small and vulnerable wildlife populations that are threatened by genetic isolation.
- **Disturbance and edge effect** – Remaining forest is vulnerable to human disturbance, erosion by foraging cattle and extraction for fuelwood, further reducing the size of fragments.



- **Uncontrolled fire** – deliberately started to clear agricultural land, poses a great threat to remaining forest. Unable to escape into contiguous areas, wildlife facing fire in a small fragment is unlikely to survive.

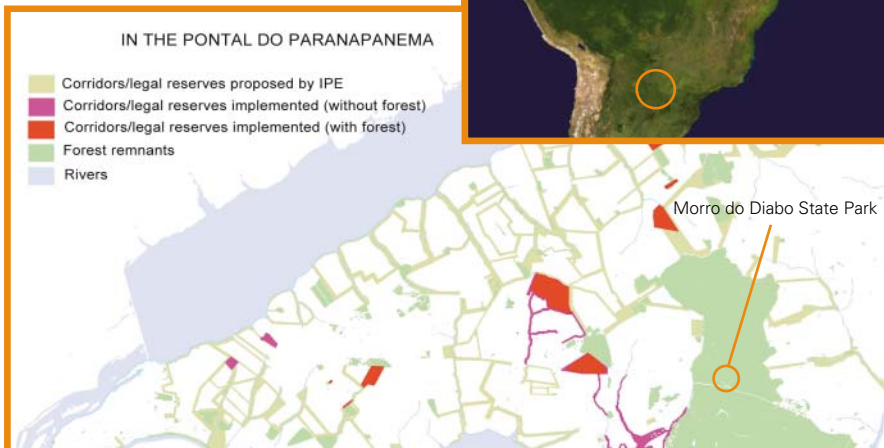


Objectives

- **Regional Forest Restoration Program** – By 2007, five remaining forest fragments in the Pontal will be linked by a network of native-vegetation corridors.
- **Agroforestry training** – to teach new settlers how to grow and sell trees. This raises the standard of living for locals whilst also imparting the knowledge they need to protect their forests. 800 families will be trained in agroforestry by 2008.
- **Buffer zones and stepping stones** – The existing 75 hectares will be increased to a target 170 hectares by 2008, supported by a strong educational program to improve agricultural practices along forest edges.

Location of Project

Place/ Town Black Lion Tamarin Ecological Station, near Theodoro Sampaio
Region/s Pontal do Paranapanema region
State/s São Paulo State
Country Brazil



Collaborative Organisations

Instituto de Pesquisas Ecológicas (IPÊ)
 Wildlife Trust, USA
 Durrell Institute for Conservation Ecology
 Movimento dos Trabalhadores Rurais Sem Terra (COCAMP)
 Government of Brazil

Key Project Team Members

- Jefferson Ferreira Lima**
Agroforestry Extensionist and MSc Student
- Tiago Pavan**
Agronomist and MSc Student
- Haroldo Borges**
Biologist and Agroforestry Extensionist
- Nivaldo Pereira**
Biologist and Agroforestry Extensionist
- Vicente Moscoliato**
Agronomist

Project website

www.ipe.org.br



Whitley Fund for Nature
 50 Queensdale Road, London, W11 4SA
 t: +44 (0) 20 7602 3443
 e: info@whitleyaward.org
 w: www.whitleyaward.org

Patron: HRH The Princess Royal
Trustees: Sir David Attenborough CH FRS, Catherine Faulks, John Laing, Edward Whitley
 Company limited by guarantee, No. 3968699, registered in England and Wales. Registered office: Calder & Co., Regent Street, London SW1Y 4NW. UK Registered Charity Number 1081455