

# Forests for the Future: Maximizing the Biodiversity Value of Timber Production Forests



Baltic-American Freedom Foundation



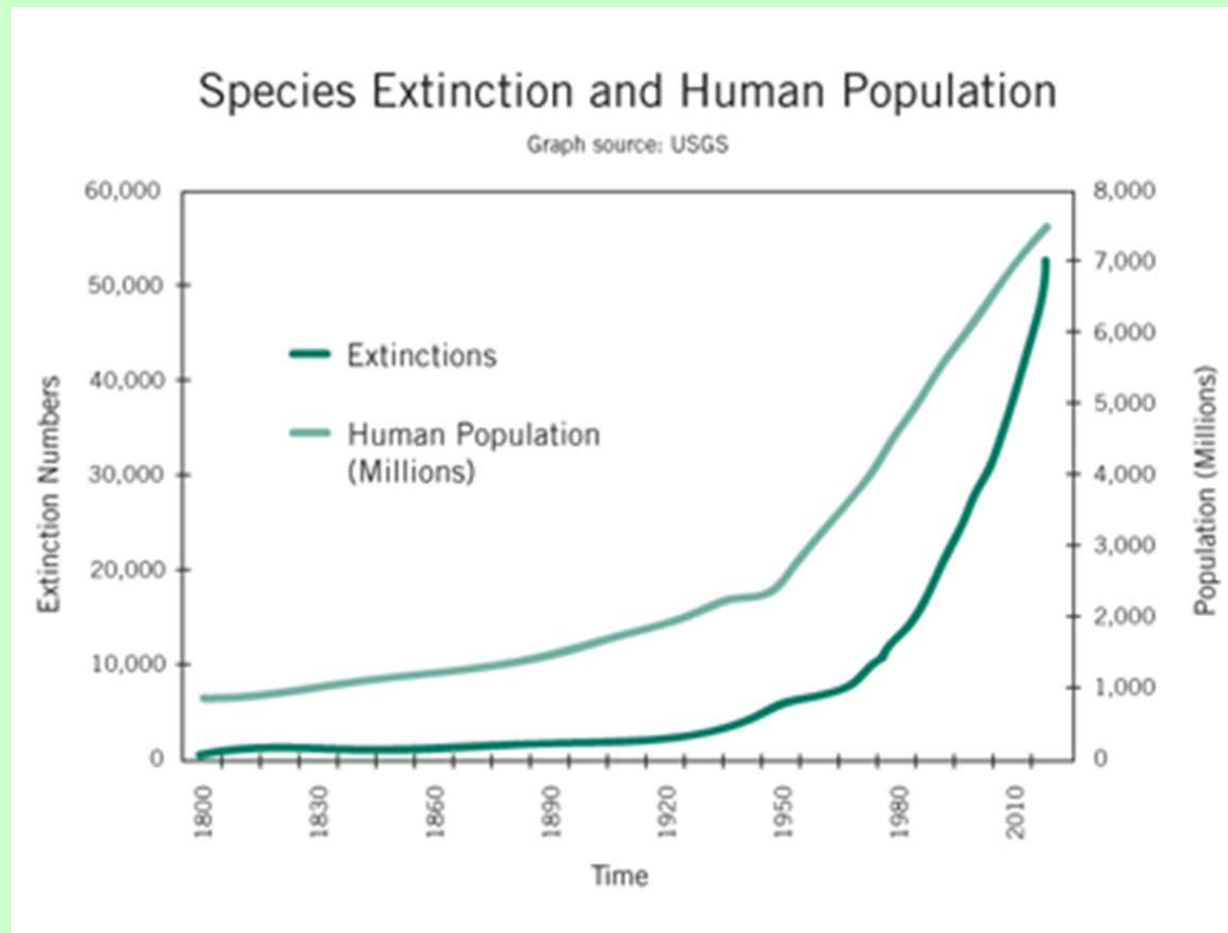
**LATVIJAS  
UNIVERSITĀTE**

Nico Arcilla, PhD

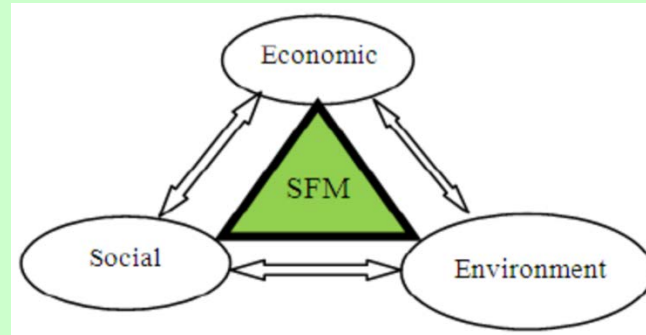
University of Georgia & Crane Trust, USA

# Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines

Gerardo Ceballos<sup>a,1</sup>, Paul R. Ehrlich<sup>b,1</sup>, and Rodolfo Dirzo<sup>b</sup>



# Goal:



- ~50% of Latvia is forest – sustainable forest management is extremely important for economy and biodiversity.
- Recent forest management, especially on private lands and since 2008, focuses on short-term economic benefits, not sustainability
- Logging intensities have tripled since independence --> high levels of fragmentation, losses of forest biodiversity.

# Birds as indicators of forest ecosystem integrity



# EPI: Latvia is the second greenest country in the world

BNN

January 27, 2012

  (+11 rating, 15 votes)     



**When assessing the most environment friendly country in the world, Latvia takes the second place, outrunning countries like Norway, France, Great Britain, Sweden and the 132 country competition, losing only to Switzerland. So states the recent Yale and Columbia universities' research of «Environmental Performance Index» (EPI) research.**

While in the same universities' «Pilot Trend Environmental Performance Index» (Trend EPI) Latvia takes the first place.

# Deforestation in the North?!

*Publicerad: Monday, 22 September, 2014 - 17:49*

Etiketter: Forestry

A recent EPI (Environmental Performance Index) report from the Yale University ranks countries according to the ecosystem vitality of their forests which was estimated based on the change in tree cover between the years 2000 and 2012. Countries get ranked according to a scoring system. The best score is 100 (countries where tree cover was not reduced). The worst is 0. The Nordic and Baltic countries scored as follows: Denmark 19; Estonia 9; Finland 12; Latvia 3; Lithuania 24; Norway 32; Sweden 14. Iceland got no score. The other high latitude countries are Canada (score 17) and Russia (score 35). Thus, the message from EPI seems to be that there is deforestation and unsustainable forestry in the north! / NBforest.info



# Latvia



The page has the score and ranking breakdown per indicator for Latvia. Clicking on an indicator name will take you to that indicator's score/rankings page for all countries in the EPI.

## Environmental Performance Index

	CURRENT RANK	CURRENT SCORE	BASELINE RANK	BASELINE SCORE
 Environmental Performance Index	37	66.12	20	73.68

	CURRENT RANK	CURRENT SCORE	BASELINE RANK	BASELINE SCORE
 <b>Forests</b>	<b>131</b>	<b>3.67</b>	<b>142</b>	<b>6.28</b>
 Tree Cover Loss	131	3.67	142	6.28

# Rake America Great Again – is Donald Trump right about Finland's forests?

Experts pour cold water on American President's claim that raking leaves is used as a way to prevent fires in Finland.





“Just an ordinary day  
in the Finnish forest”



**Pyry Luminen** @pyryluminen

# Using Wildfires as an Excuse to Plunder Forests

Logging won't end the blazes that are sweeping the West.

By **Chad T. Hanson and Michael Brune**

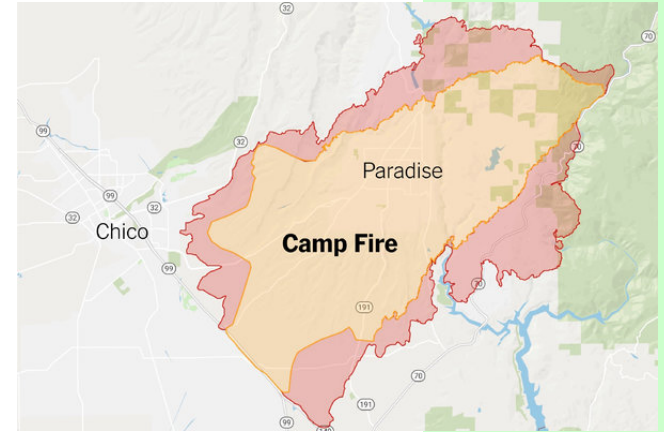
Dr. Hanson is an ecologist whose research focuses on forest and fire ecology. Mr. Brune is the executive director of the Sierra Club.

Sept. 4, 2018

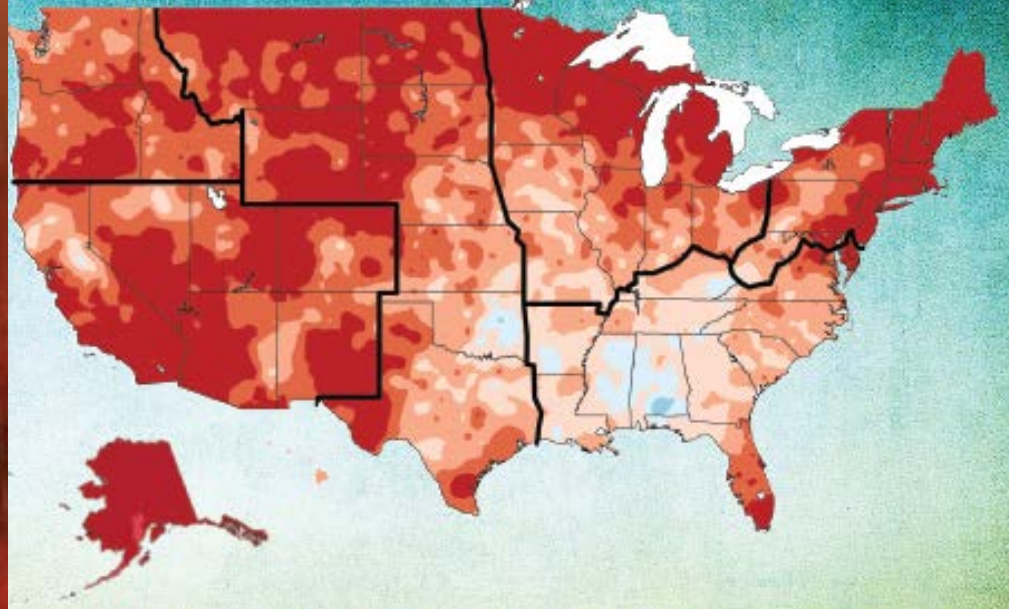
President Trump recently blamed environmental protections for the loss of homes and lives in wildfires in California, and followed up that groundless suggestion by strongly implying that increased logging could protect rural towns from these conflagrations. Not to be outdone, his interior secretary, Ryan Zinke, complained that “environmental terrorist groups” were, in part, responsible, through legal efforts that had blocked logging of live and dead trees.

This false narrative is part of the Trump administration’s effort to promote the inclusion of extreme logging measures in the farm bill that House and Senate leaders are now negotiating. (The current farm bill expires at the end of the month.)

These provisions, included in the House version of the bill, could exempt an unlimited number of commercial logging projects up to 6,000 acres *each* in our national forests from environmental analysis and meaningful public comment. This would include logging of old-growth forests and clearcutting of ecologically important post-fire habitat, upon which many imperiled wildlife species depend. Proposed changes would also essentially nullify the application of the Endangered Species Act to federal forests by eliminating the requirement to consult with the United States Fish and Wildlife Service over impacts to endangered species.



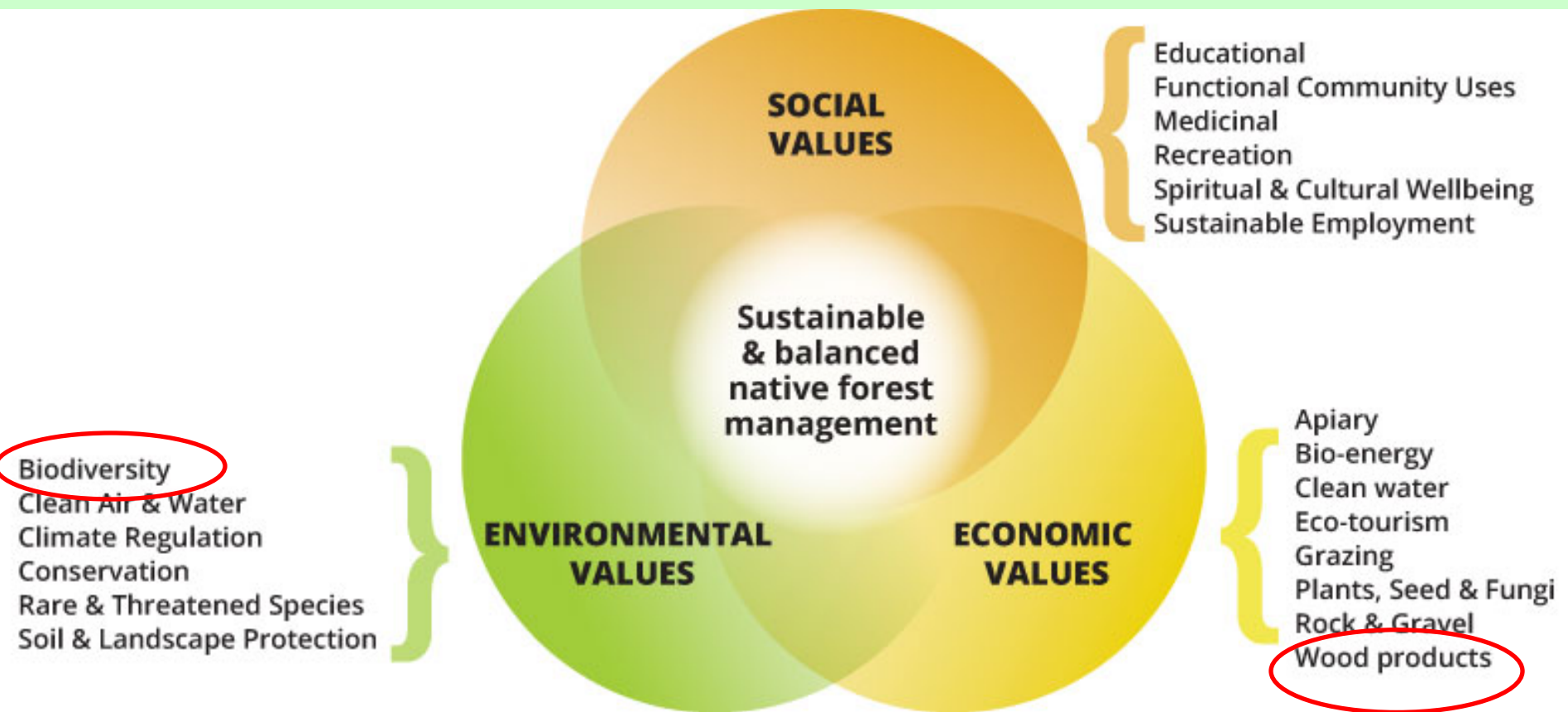
# Climate Change Impacts in the United States



Climate change is why California is burning, and thousands of its citizens displaced, injured, or killed by the wildfires that spread with never-before-seen intensity.

Says who?

The just-released **U.S. National Climate Assessment**, which Donald Trump's own administration released, but which the president seems to believe is a work of fiction.



# A cautionary tale from America

## REPORT

### Ivory-billed Woodpecker (*Campephilus principalis*) Persists in Continental North America

John W. Fitzpatrick<sup>1,\*</sup>, Martjan Lammertink<sup>1,2</sup>, M. David Luneau Jr.<sup>3</sup>, Tim W. Gallagher<sup>1</sup>, Bobby R. Harrison<sup>4</sup>, Gene M. Sparli...

+ See all authors and affiliations

Science 03 Jun 2005:  
Vol. 308, Issue 5727, pp. 1460-1462  
DOI: 10.1126/science.1114103

Article

Figures & Data

Info & Metrics

eLetters

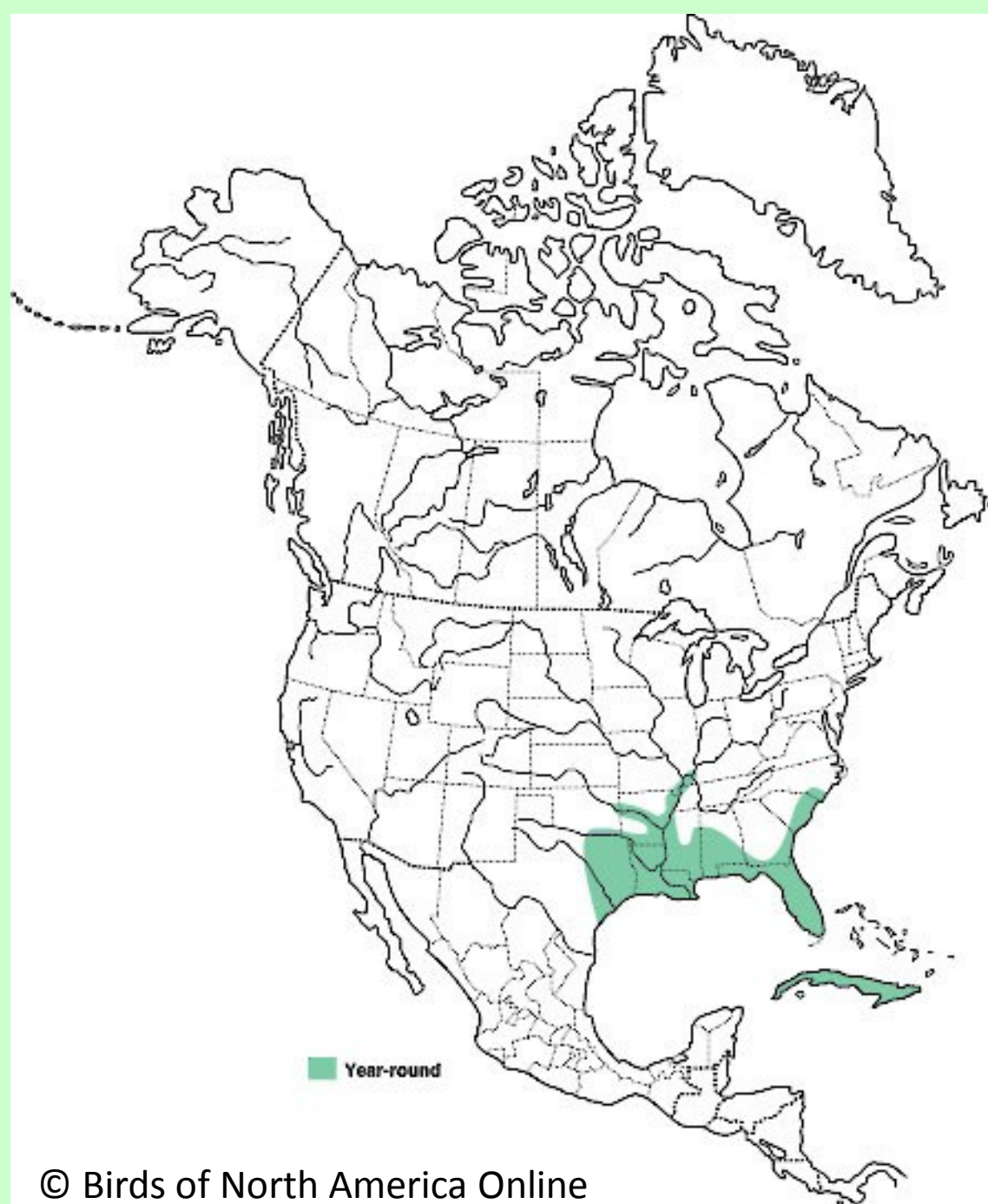
PDF

#### Abstract

The ivory-billed woodpecker (*Campephilus principalis*), long suspected to be extinct, has been rediscovered in the Big Woods region of eastern Arkansas. Visual encounters during 2004 and 2005, and analysis of a video clip from April 2004, confirm the existence of at least one male. Acoustic signatures consistent with *Campephilus* display drums also have been heard from the region. Extensive efforts to find birds away from the primary encounter site remain unsuccessful, but potential habitat for a thinly distributed source population is vast (over 220,000 hectares).

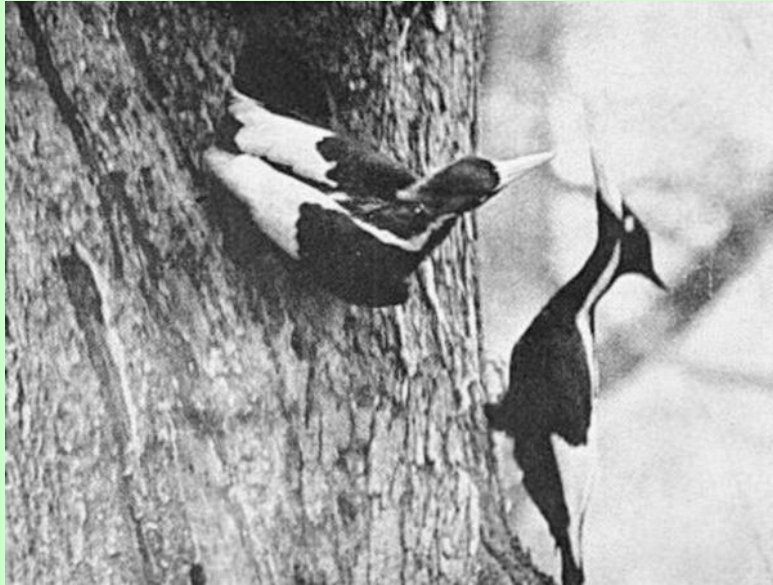


BOOKS

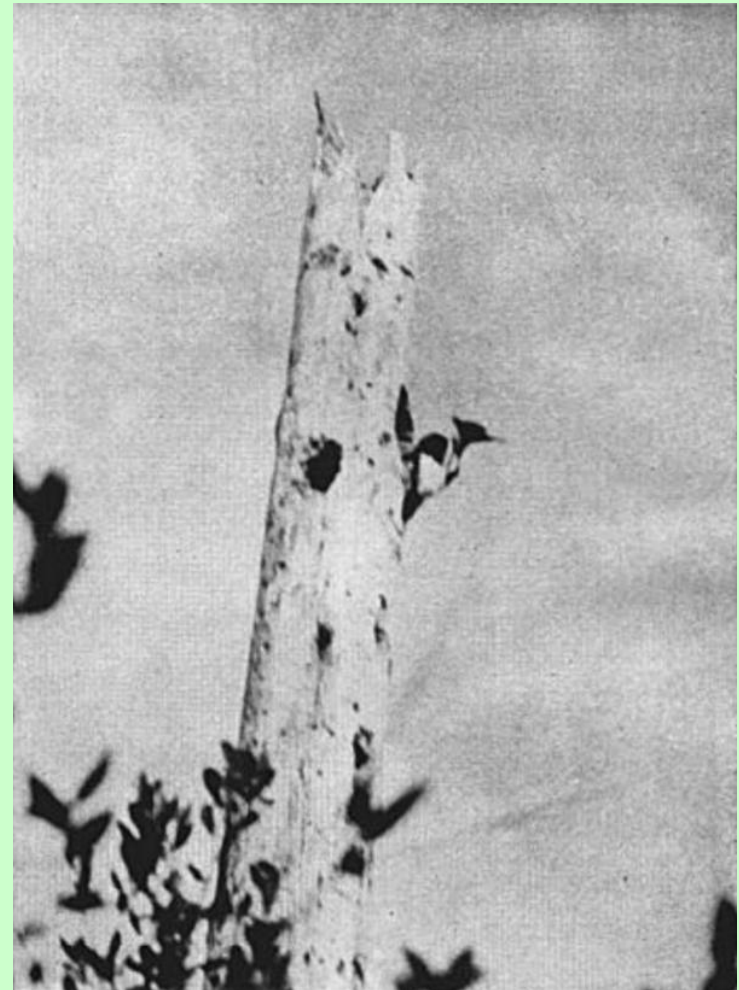


© Birds of North America Online

# Are Ivory-billed woodpeckers back from the dead?



Louisiana IBW 1937 © Arthur Allen



Cuban IBW 1948 © John Dennis



© New York Times



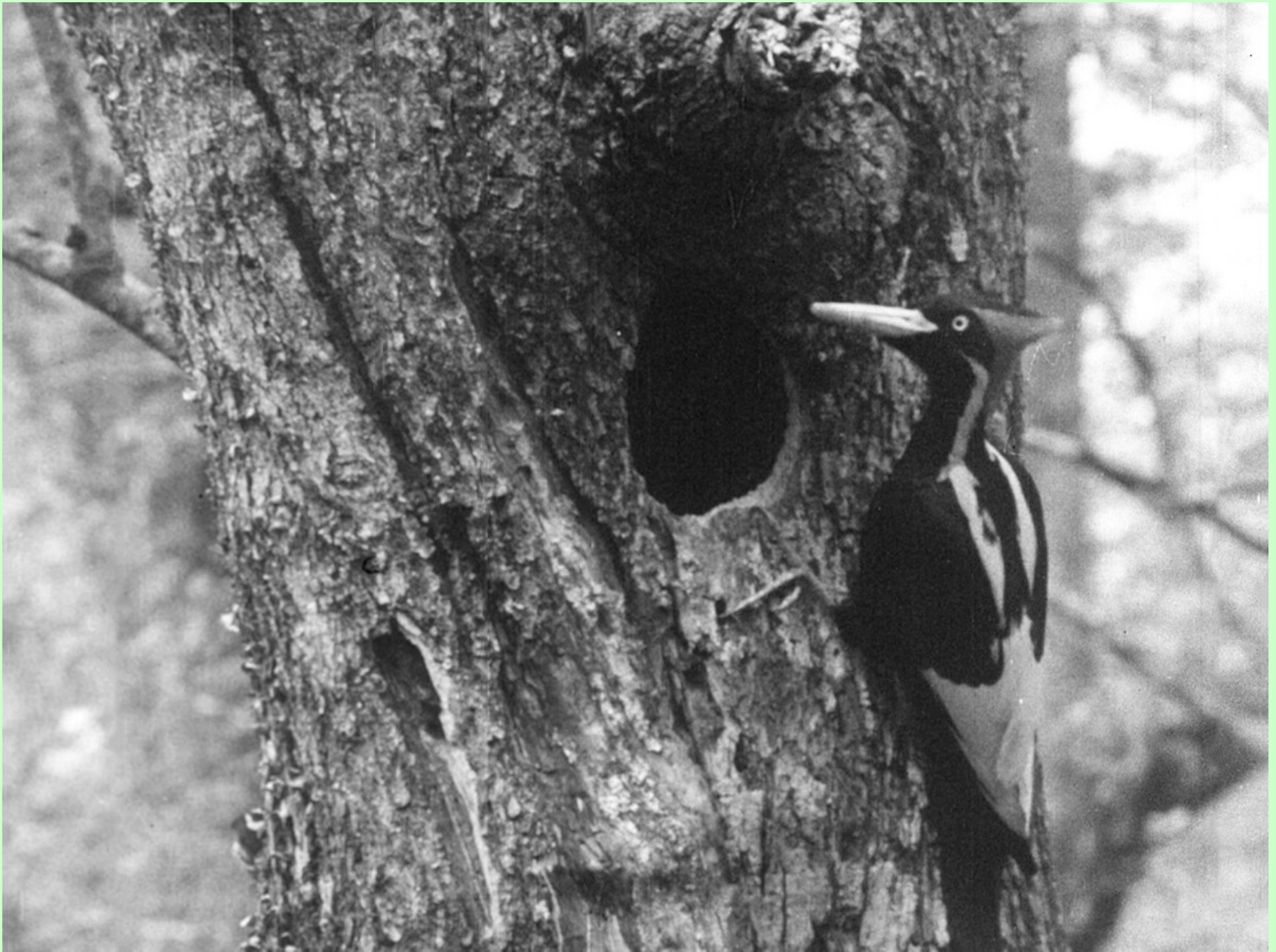
© Mitch Waite Group







Battle of the Wilderness (Virginia) – © Kurz and Allison



Arthur Allen -- Cornell



# *Tensas River National Wildlife Refuge:* **The Singer Tract and the “Last Stand” for the Ivory-Billed Woodpecker**

- The National Audubon Society mounted a campaign to save the Singer Tract but it only accelerated the rate of cutting.
- The Chicago Mill and Lumber Company had no interest in saving the forest or compromising with John Baker, Audubon’s president.





- "It is sickening to see what a waste a lumber company can make of what was a beautiful forest."  
- Richard Pough, letter to John Baker, NAS 1944
- Pough found one female ivory-bill in a small stand of uncut timber, surrounded by destruction.



# US Endangered Species Act





# Northern Spotted Owl



JUNE 25, 1990



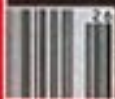
**BUSH'S BURNING ISSUE**

\$2.50

# TIME

## Who Gives A Hoot?

The timber industry says that saving this spotted owl will cost 30,000 jobs. It isn't that simple



BY OTY





The barred owl (pictured, left) could be targeted by the U.S. government to help save the northern spotted owl (at right).

February 29th, 2012

08:02 PM ET

## Feds consider killing barred owls to save another type

A large owl from the eastern United States might pay for its intrusion into the West Coast if the U.S. Fish and Wildlife Service has its way.



Wildlife Society Bulletin 42(2):347–357; 2018; DOI: 10.1002/wsb.872

*In My Opinion*

## Rethinking Forest-Bird Habitat Management Guidelines in the Northern Lake States



R. GREGORY CORACE, III,<sup>1</sup> *U.S. Fish and Wildlife Service, Seney National Wildlife Refuge, 1674 Refuge Entrance Road, Seney, MI 49883, USA*

**ABSTRACT** Biodiversity challenges require more ecologically based approaches to habitat management of forest wildlife. Although active management is necessary for the conservation of many forest-dependent wildlife species, some high-severity (even-aged) forest management practices could be improved upon with greater consideration of natural disturbance models. Using examples of 3 migratory bird species of conservation priority and for which high-severity forest management practices are conducted in the northern Lake States (Kirtland's warbler [*Setophaga kirtlandii*], golden-winged warbler [*Vermivora chrysoptera*], American woodcock [*Scolopax minor*]), I first summarize lessons learned and then illustrates how a more ecological approach to forest-bird habitat planning and management might work. Published 2018. This article is a U.S. Government work and is in the public domain in the USA.

**KEY WORDS** aspen, ecological forestry, fire, Michigan, Minnesota, *Scolopax minor*, *Setophaga kirtlandii*, *Vermivora chrysoptera*, Wisconsin.



## Biological Conservation

Volume 143, Issue 7, July 2010, Pages 1759-1769



### Modeling regional-scale habitat of forest birds when land management guidelines are needed but information is limited

Frederic Beaudry <sup>a</sup>✉, Anna M. Pidgeon <sup>a</sup>✉, Volker C. Radeloff <sup>a</sup>✉, Robert W. Howe <sup>b</sup>✉, David J. Mladenoff <sup>a</sup>✉, Gerald A. Bartelt <sup>c</sup>✉

# MANAGING FOREST BIRDS IN SOUTHEAST OHIO:

A Guide for  
Land Managers



## Forestry Management with Birds in Mind

*A Norwich Bird Week Event*

Saturday, May 13, 2017

1:00pm - 4:00pm

Norwich, Vermont



Upper Midwest Environmental Sciences Center, La Crosse, Wisconsin

## Managing Floodplain Forests for Bird Diversity



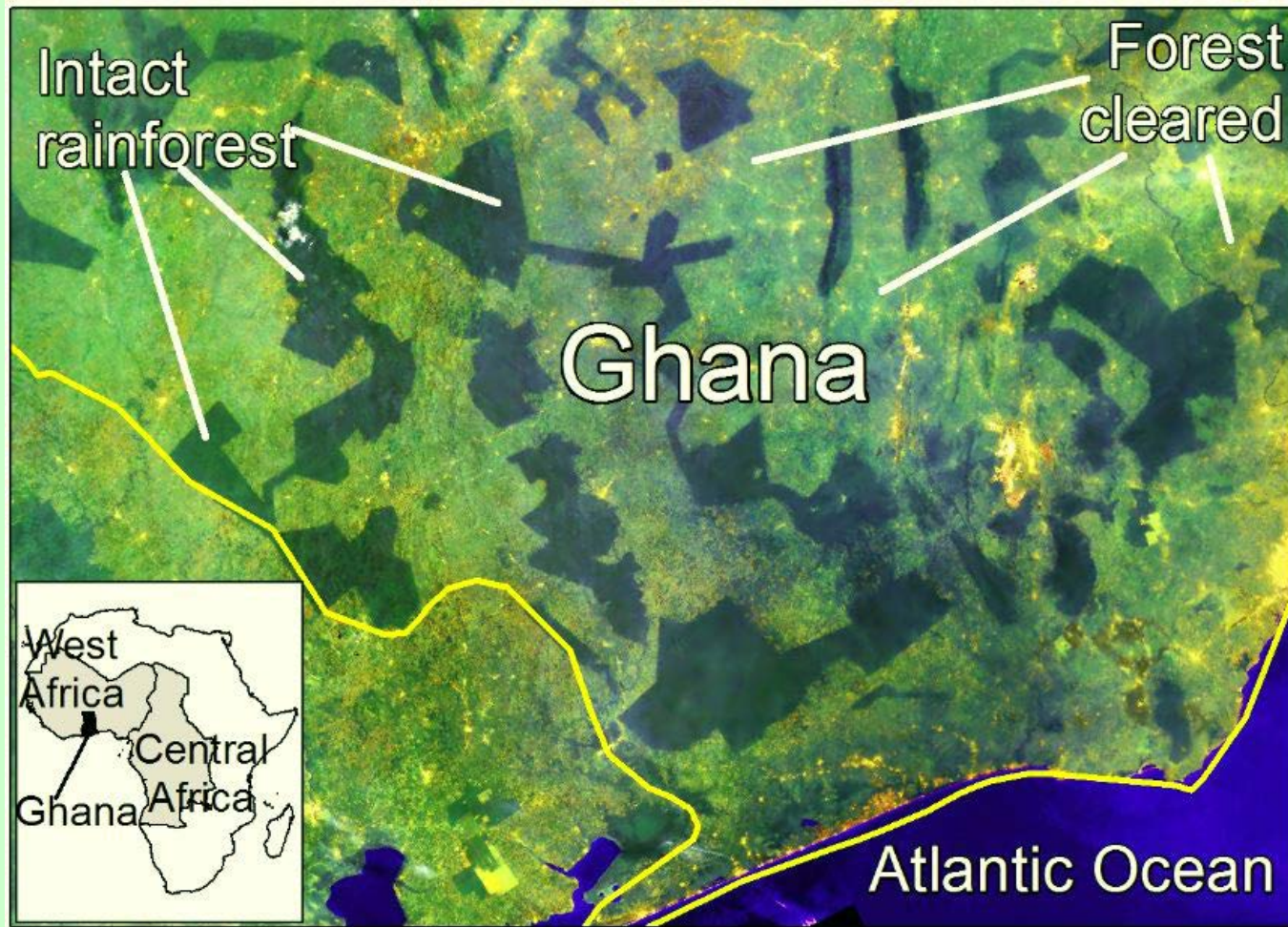
# US Forest Service priorities

- Protecting the existing carbon sink through forest conservation
- Increasing carbon sequestration through reforesting degraded land
- Improving forest health
- Supporting sustainable forest management
- Exploring new opportunities for managing carbon
  - Use of forest biofuels for energy
  - substitution of wood for manufactured products





## **Upper Guinea Forests - Ghana**



- ~80% original forest destroyed during past century
- Most remaining forest protected in government reserves



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

# Biological Conservation

journal homepage: [www.elsevier.com/locate/biocon](http://www.elsevier.com/locate/biocon)



Special Issue Article: Tropical Insectivores

## Severe declines of understory birds follow illegal logging in Upper Guinea forests of Ghana, West Africa

Nicola Arcilla<sup>a,b,\*</sup>, Lars H. Holbech<sup>c</sup>, Sean O'Donnell<sup>b</sup>

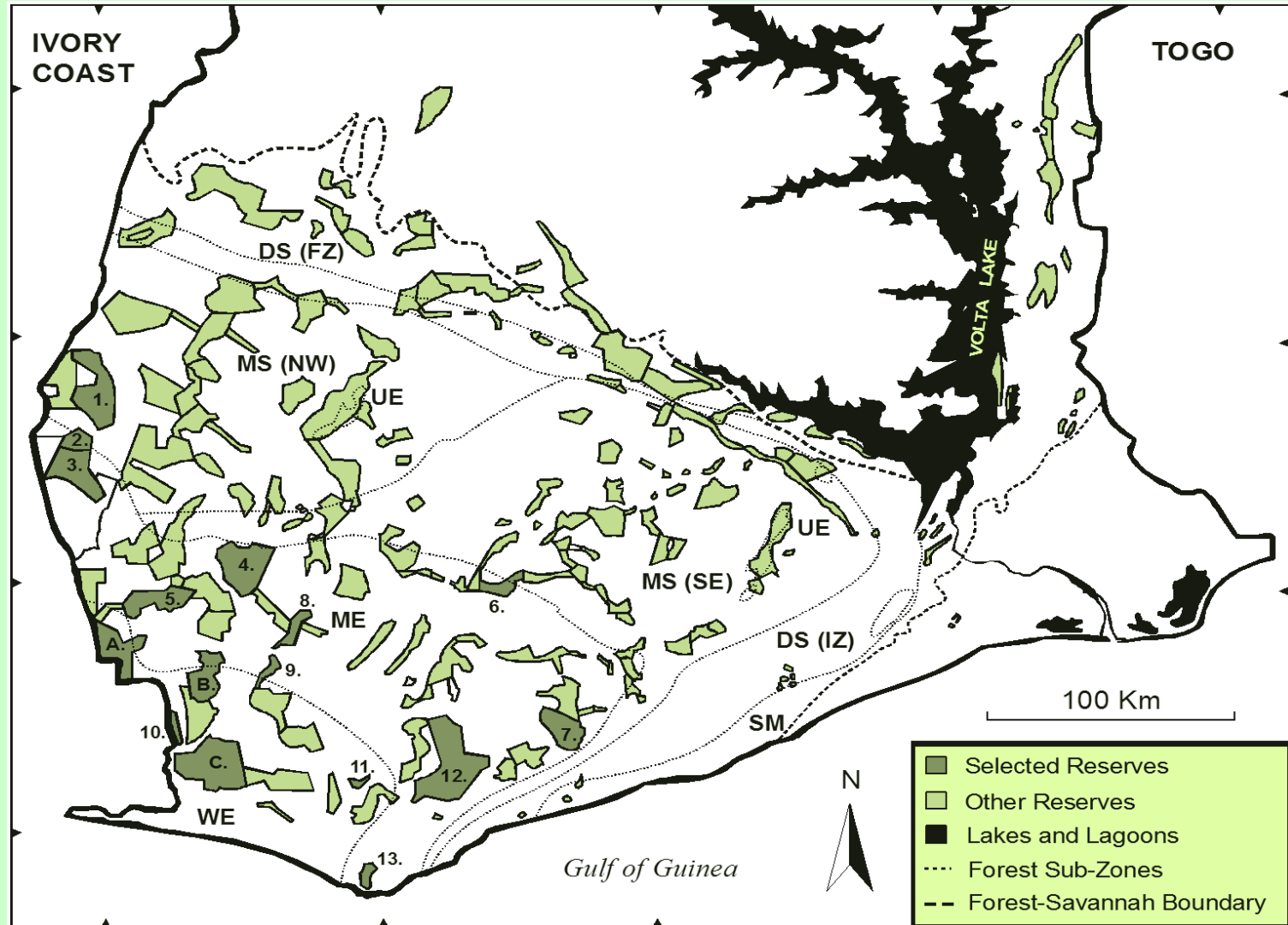
<sup>a</sup>Wildlife Wood Project – Ghana, Conservation Programmes, Zoological Society of London, Regent's Park, London NW1 4RY, UK

<sup>b</sup>Department of Biodiversity, Earth and Environmental Science, Drexel University, Philadelphia, PA 19104, USA

<sup>c</sup>Department of Animal Biology and Conservation Science, University of Ghana, Legon, Accra, Ghana



# Study sites in Ghana



# 1995-2010: legal logging intensities increased > 600%



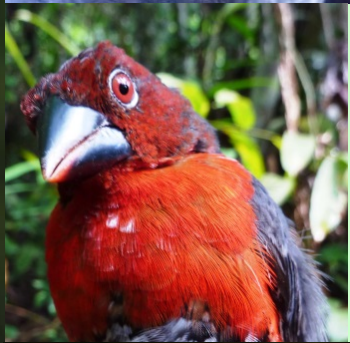
Illegal logging follows legal logging operations  
80% of total harvest illegal



Forests now logged  
at ~6 times maximum  
sustainable rate

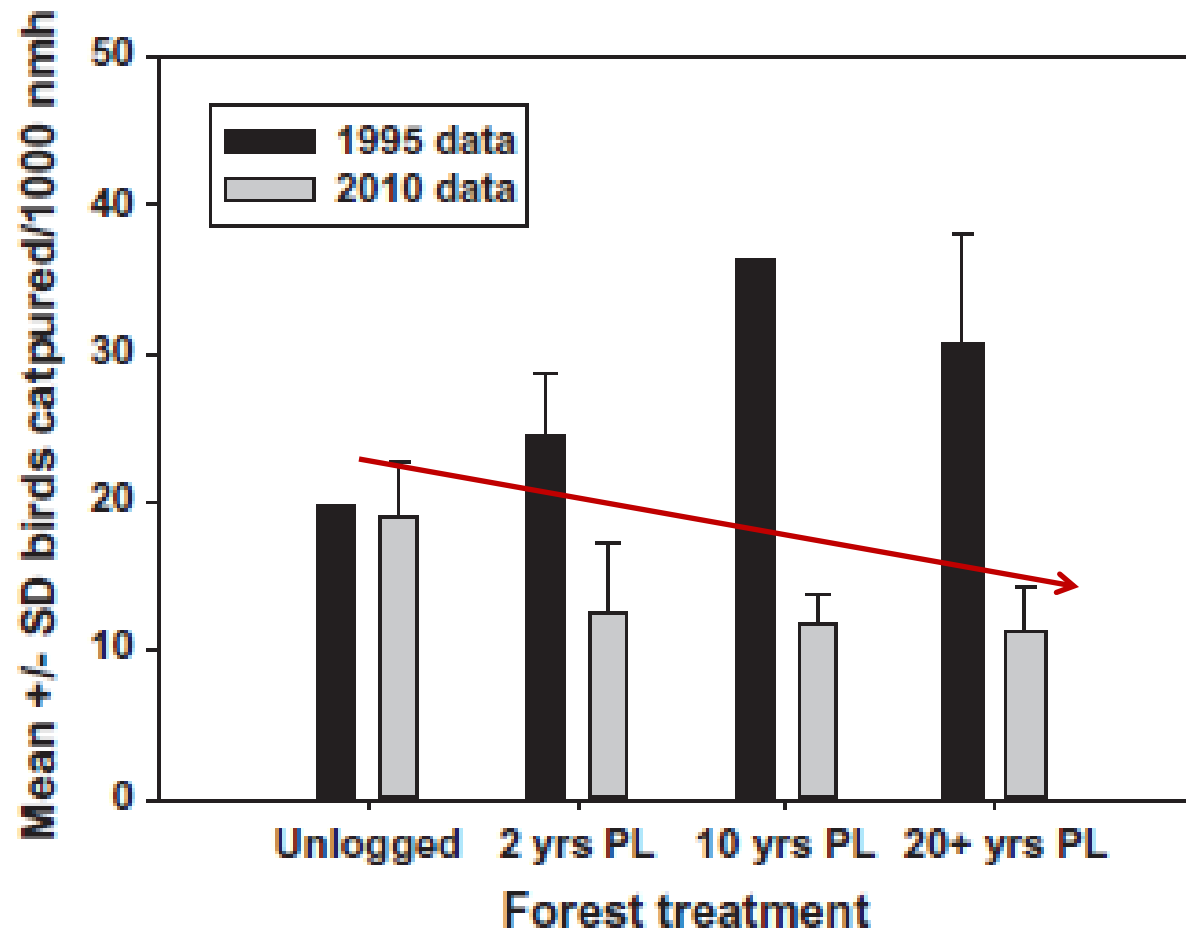
Marfo 2010, Hansen & Treue 2008





962 captures of 46 species

# Bird abundance in logged & unlogged forest





# Bird community changes over time: 1995-2010

- Overall understory bird abundance declined >50%
- No evidence of post-logging recovery
- Illegal logging operations likely prohibit forest recovery



# Common species showing steep declines

- Olive Sunbird ↓ 53%



- Icterine Greenbul ↓ 90%



- Yellow-whiskered Greenbul ↓ 73%

- Forest Robin ↓ 48%



# 37% of species captured in 1995 not detected in 2010

- 2010 (46 species/ 70,000 net meter hours) ; 27 fewer than in 1995
- 1995 (73 species/ ~70,000 net meter hours)



Yellow-throated Greenbul



Yellow-spotted Barbet

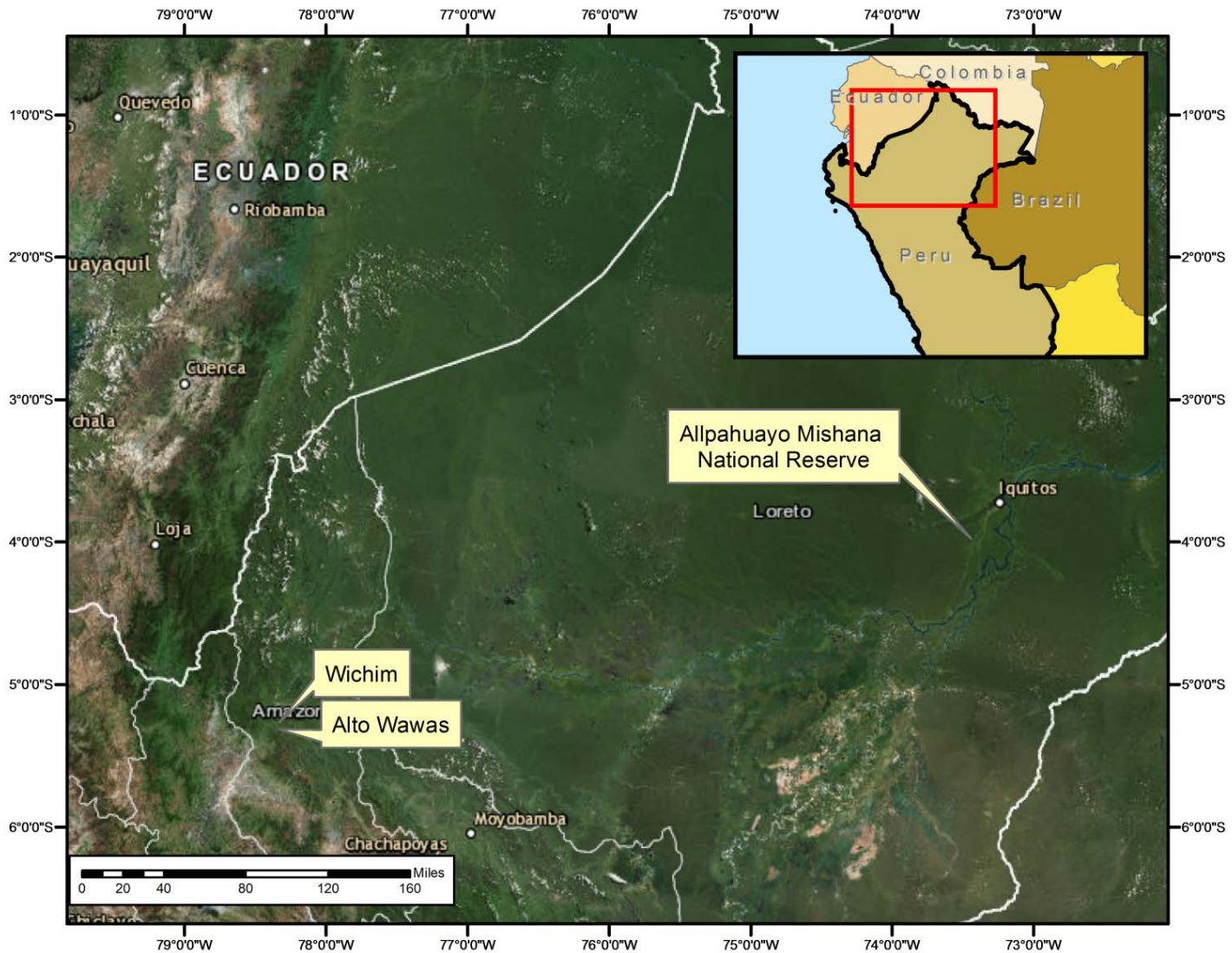


Rufous-winged Illadopsis (NT)



**Amazon Basin - Peru**

# Case studies





PERÚ MINISTERIO DEL AMBIENTE SERNANP SANTUARIO NACIONAL

SANTUARIO NACIONAL CORDILLERA DE COLAN

SITIO EL MIRADOR ALTURA : 2615 MSNM

← →

*Área protegida por el Estado*  
D.S N° 021-2009-MINAM  
LEY N° 26384 de AIP

# Aguaruna-Jívaro (Awajún) people



## BIRD CONSERVATION IN AGUARUNA-JÍVARO COMMUNITIES IN THE CORDILLERA DE COLÁN, PERU

*The Wilson Journal of Ornithology* 121(1):54–74, 2009

## AVIFAUNA OF THE PONGOS BASIN, AMAZONAS DEPARTMENT, PERU



**A new location and altitudinal  
range extension for Royal  
Sunangel *Heliangelus regalis***

**First description of the nest of  
Brown Nunlet *Nonnula  
brunnea***

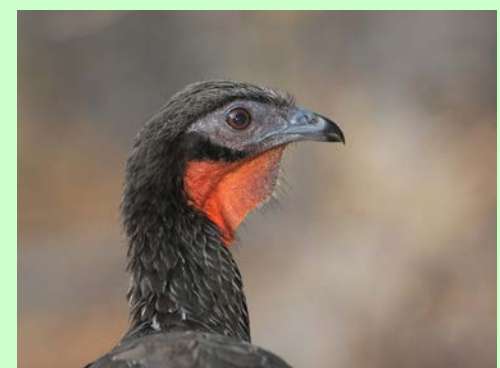
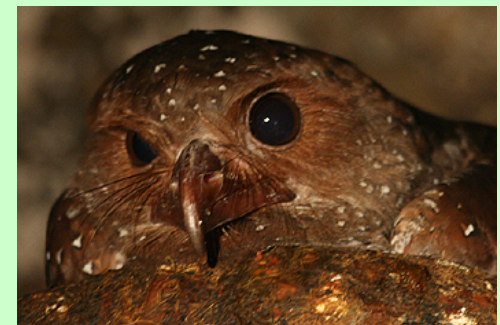


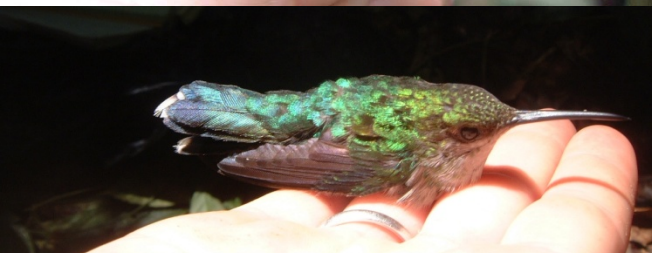






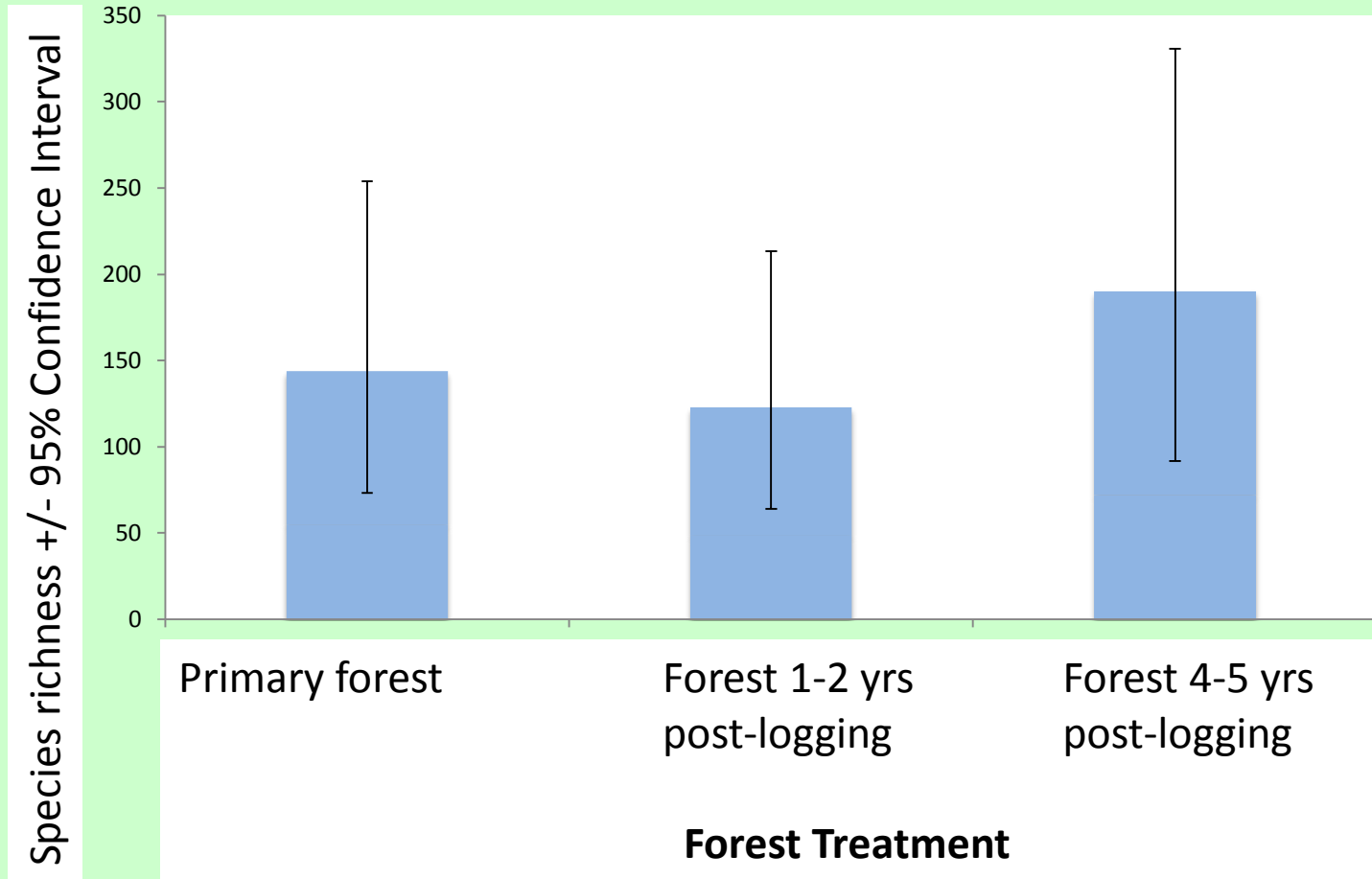
# Aguaruna Knowledge of Bird Foraging Ecology: A comparison with scientific data

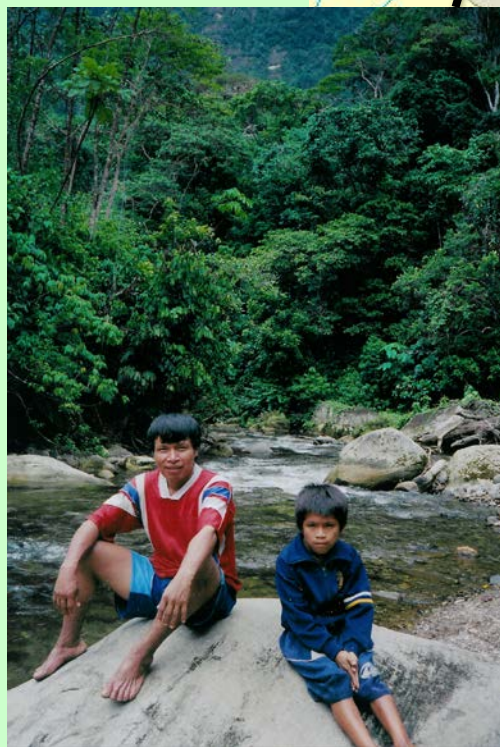




**721 captures of 98 species**

# Indigenous territory: Bird species richness remains stable in logged forest







MINISTERIO DE AGRICULTURA  
**INRENA**

**RESERVA NACIONAL  
 ALLPAHUAYO MISHANA**

**LOS RECURSOS NATURALES SATISFACEN  
 NECESIDADES DEL HOMBRE MAS NO ASI SU  
 AMBICION**

**CONSERVA LA NATURALEZA EN  
 ELLA ESTA LA VIDA**



**EVANGELIST FOR NATURE**

Desde el momento  
 que Dios creó el mundo,  
 ha estado trabajando para  
 que el hombre sea su  
 mayor gloria.



El evangelista  
 trabajando en el campo.

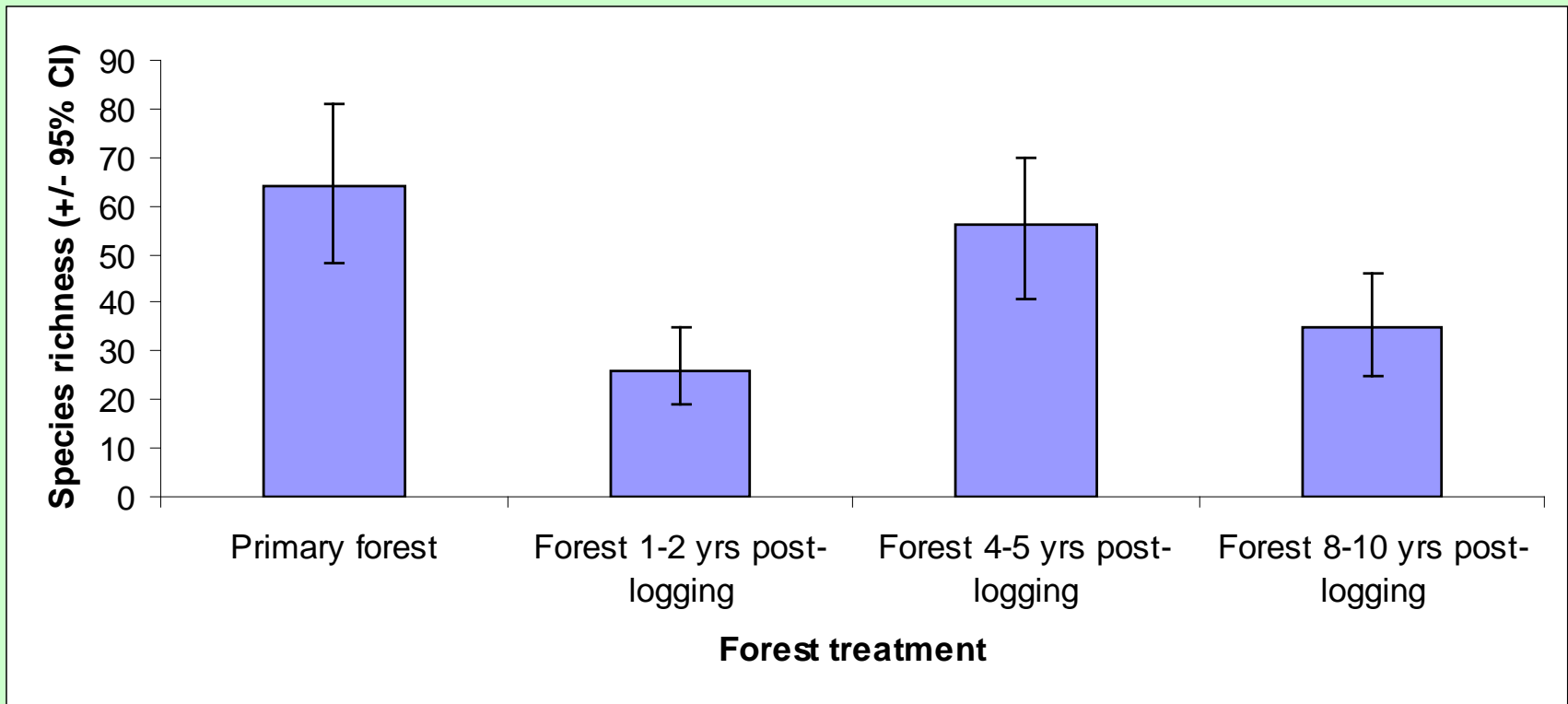
**A**ntes de que el hombre  
 fuera creado, Dios ya  
 había preparado un  
 mundo perfecto para  
 él. Pero el hombre  
 se rebeló contra Dios  
 y se convirtió en  
 un pecado. Desde  
 entonces, el mundo  
 ha estado sufriendo  
 las consecuencias  
 de su pecado. Pero  
 Dios quiere que  
 todos los hombres  
 se arrepientan y  
 se vuelvan a Él.  
 El evangelio es el  
 mensaje de la  
 gracia de Dios que  
 nos libera del  
 pecado y nos da  
 la vida eterna.



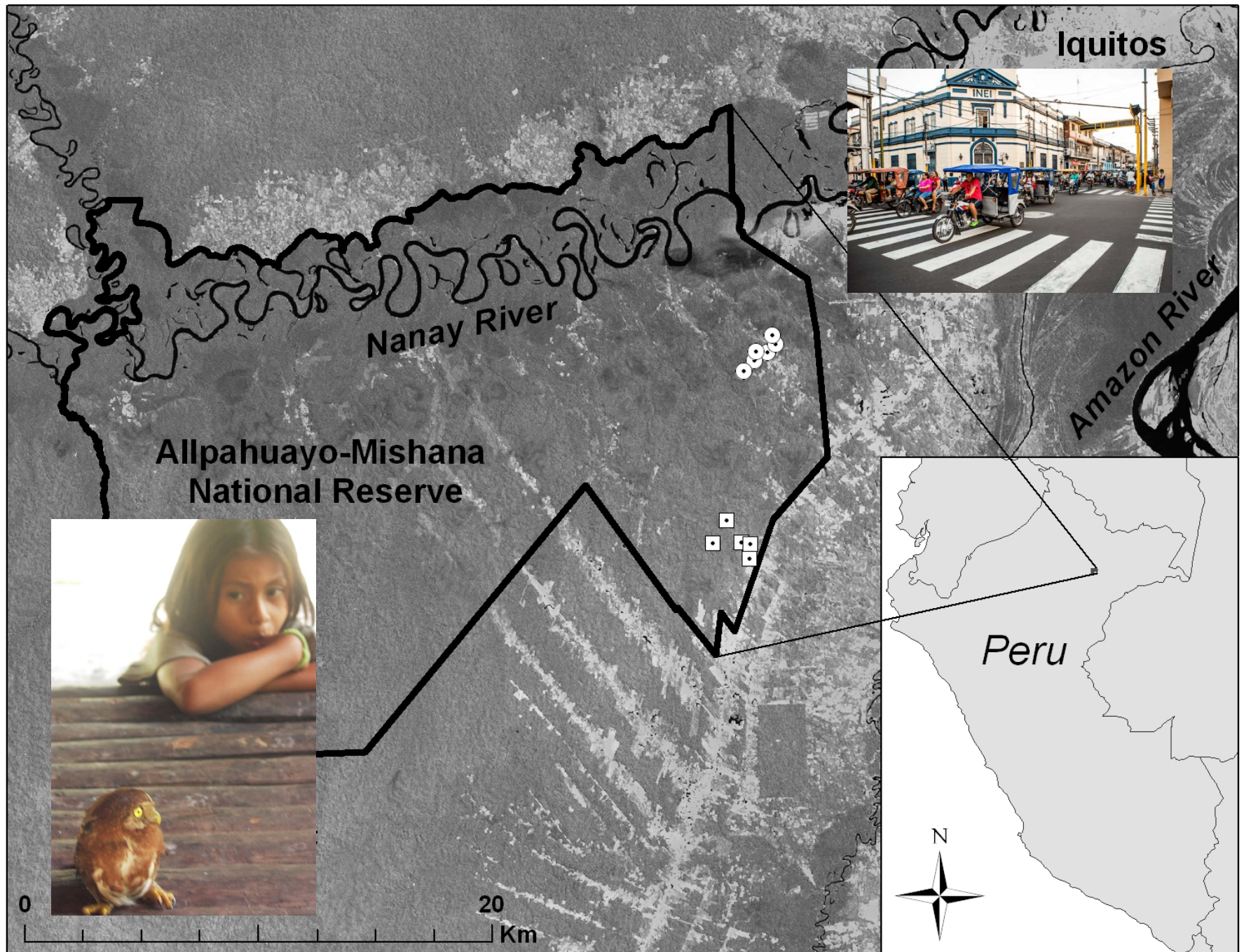


**383 captures of 54 species**

# White sand forest bird species richness declines in logged forest







# Friends of Allpahuayo-Mishana Private Land Purchases & Donation



## Peruvian NGO Buys Private Lands for National Conservation

[Print this page](#)

**IQUITOS, Peru, December 10, 2010 (ENS)** - In a first for Peru, conservationists have purchased privately owned lands within a national protected area and donated them to the Peruvian government.

The Peruvian conservation organization ProNaturaleza bought 29 properties from willing landowners within the Allpahuayo Mishana National Reserve near the city of Iquitos in northern Peru.



# Timing matters

- Raise awareness of the importance of forests for natural and cultural heritage to forest managers, scientists, and the public
- Sustainable forest management approaches can decrease forest fragmentation and increase biodiversity conservation in Latvia
- In turn, forest species like Black Stork may recover from critically endangered status, and Latvia can become a model of sustainable forest management to the world

# Thank you



The University of Georgia

