

# Developing a long-term study in Costa Rica



Eugenio H. Nearn  
Ian P. Swift  
Gareth S. Powell  
Jennifer M. Zaspel

# Developing a long-term study in Costa Rica



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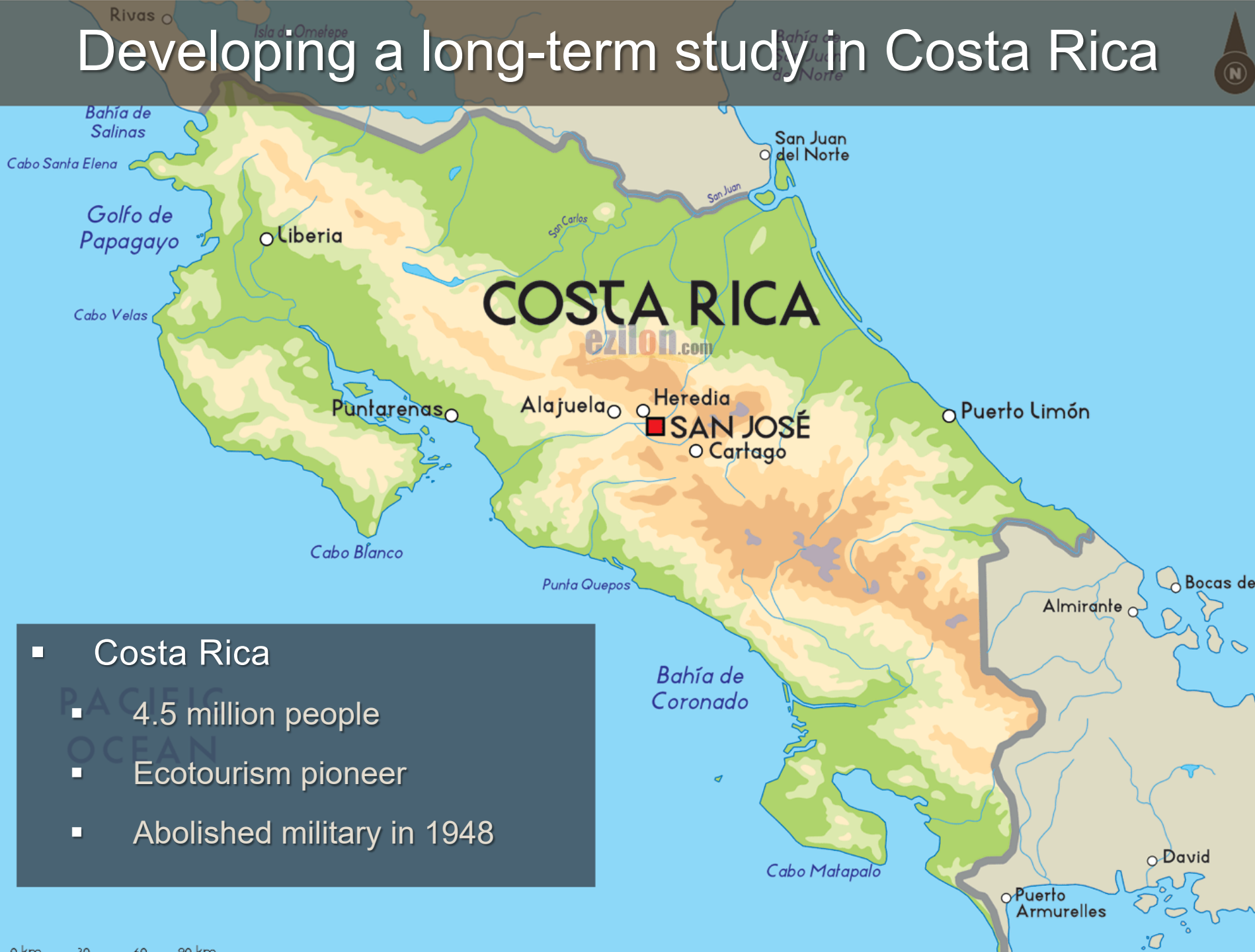
- Introduction
- Collaborators & Study Sites
- Methods, Permits, & Logistics
- Study Abroad Courses



# Developing a long-term study in Costa Rica



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- Costa Rica
  - 4.5 million people
  - Ecotourism pioneer
  - Abolished military in 1948

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- Biodiversity of longhorned beetles
  - Frank Hovore, Ian Swift, INBio
  - Swift et al. 2010 checklist
- Expanding to additional taxa
  - Coleoptera, Diptera, Hymenoptera, Lepidoptera, etc.
- Goals
  - Faunal surveys, checklists
  - Life histories, host plant associations
  - Education, training CR biologists

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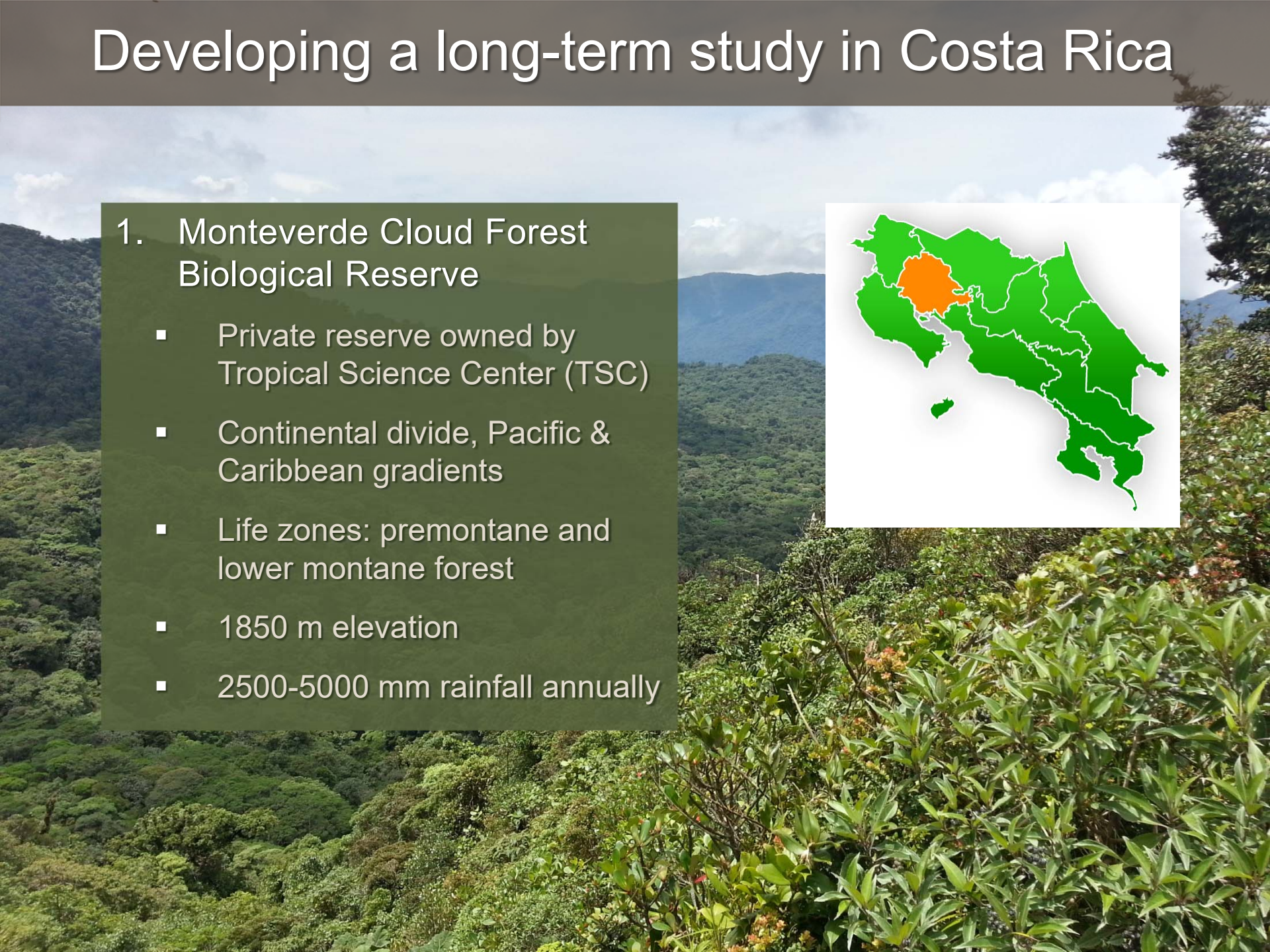




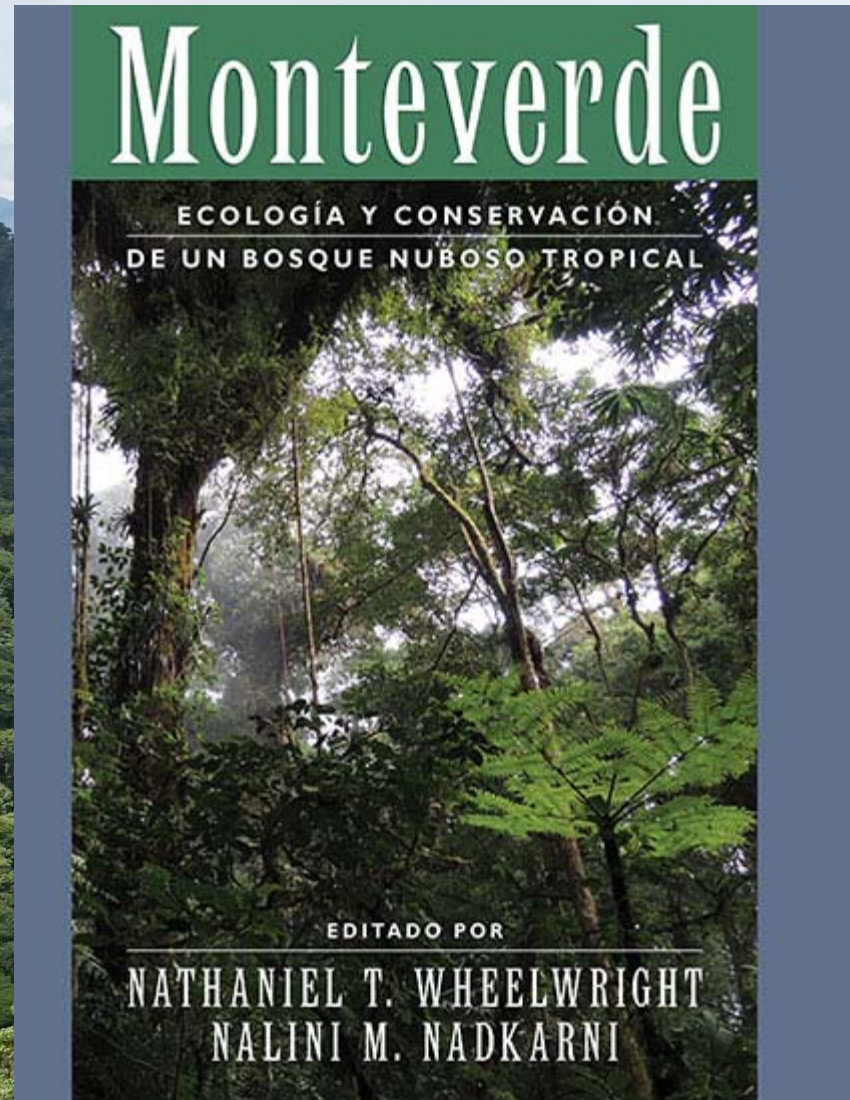
# Developing a long-term study in Costa Rica

## 1. Monteverde Cloud Forest Biological Reserve

- Private reserve owned by Tropical Science Center (TSC)
- Continental divide, Pacific & Caribbean gradients
- Life zones: premontane and lower montane forest
- 1850 m elevation
- 2500-5000 mm rainfall annually



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## 1. Monteverde Cloud Forest Biological Reserve

- Good infrastructure & facilities
- Lab space
- Weather station
- Guides & field assistants



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## 1. Monteverde Cloud Forest Biological Reserve

- Lodging & dining
- Researchers, faculty, students
- Café, gift shop
- Laundry, Wi-Fi



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## 1. Monteverde Cloud Forest Biological Reserve

- Extensive trails, remote shelters
- Very popular with birders
- Trail cameras: jaguar, puma, margay, ocelot, deer, tapir, peccary, fox, monkey, etc.





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Bushnell



01:14:42

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*Psalidognathus modestus*  
(Cerambycidae: Prioninae)

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## 2. San Luis Biological Reserve

- Private reserve also owned by TSC
- Life zone: tropical moist forest (premontane transition)
- 600-800 m elevation
- 1950-3000 mm rainfall annually



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*Dynastes hercules*  
(Scarabaeidae: Dynastinae)

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## 3. Los Cusingos Wildlife Sanctuary

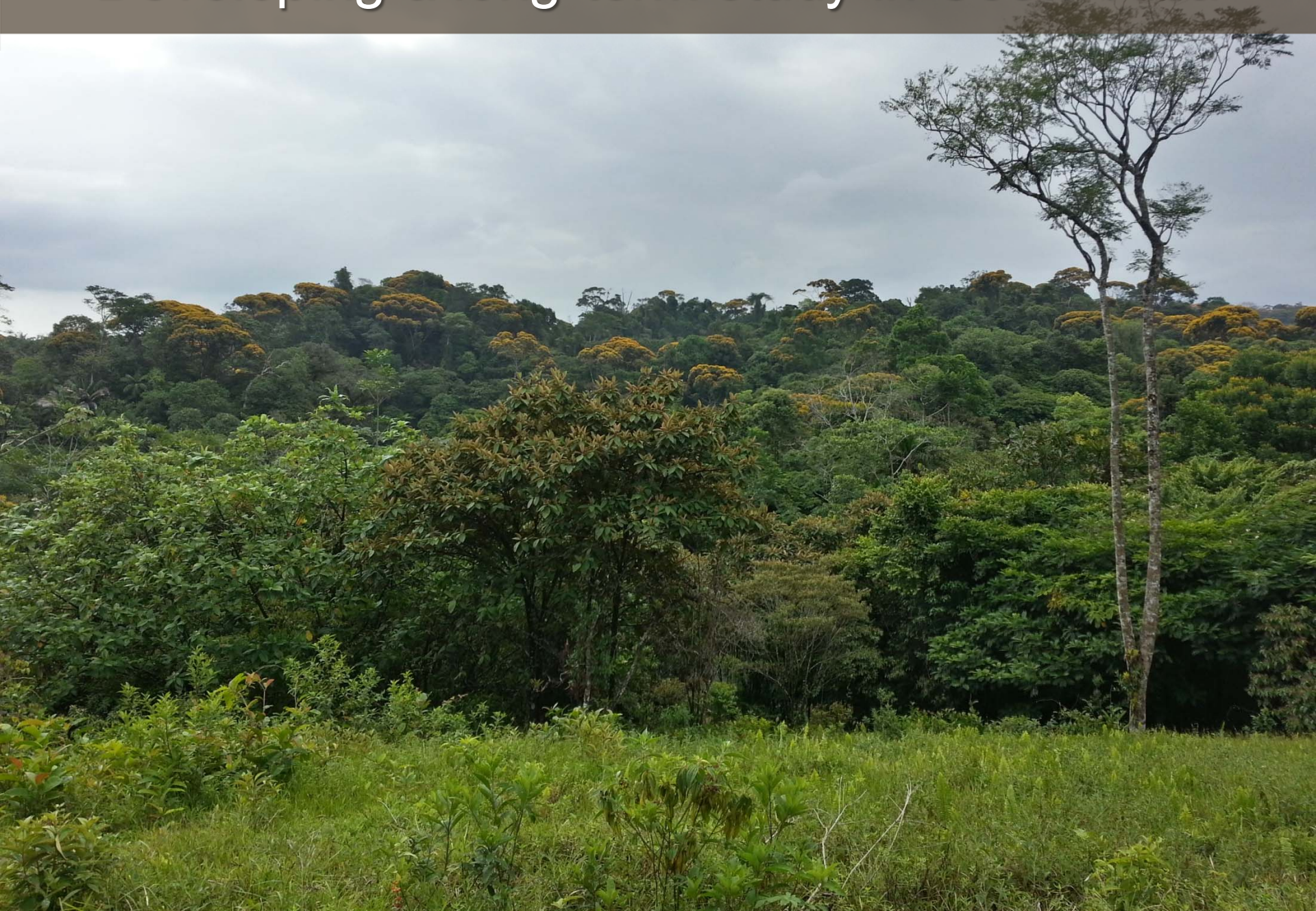
- Private reserve also owned by TSC
- Home of birder Alexander Skutch
- Pacific premontane very humid forest
- 78 ha, 800 m elevation
- Base of Chirripó National Park, 3820 m peak highest in CR
- Trail system, rustic lodging



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## 4. Bijagual Ecological Reserve

- Private reserve owned by CR & US non-profit
- 4 km west of Braulio Carrillo National Park and La Selva/OTS
- 290 ha, 300-400 m elevation
- 5500 mm rainfall annually
- Caribbean lowland rain forest



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## 4. Bijagual Ecological Reserve

- 17 km trail network
- Rustic lodging
- Habitats: old forest, selectively logged forest, riparian forest, secondary forest, natural regeneration, reforestation areas, swamps, & arboretum





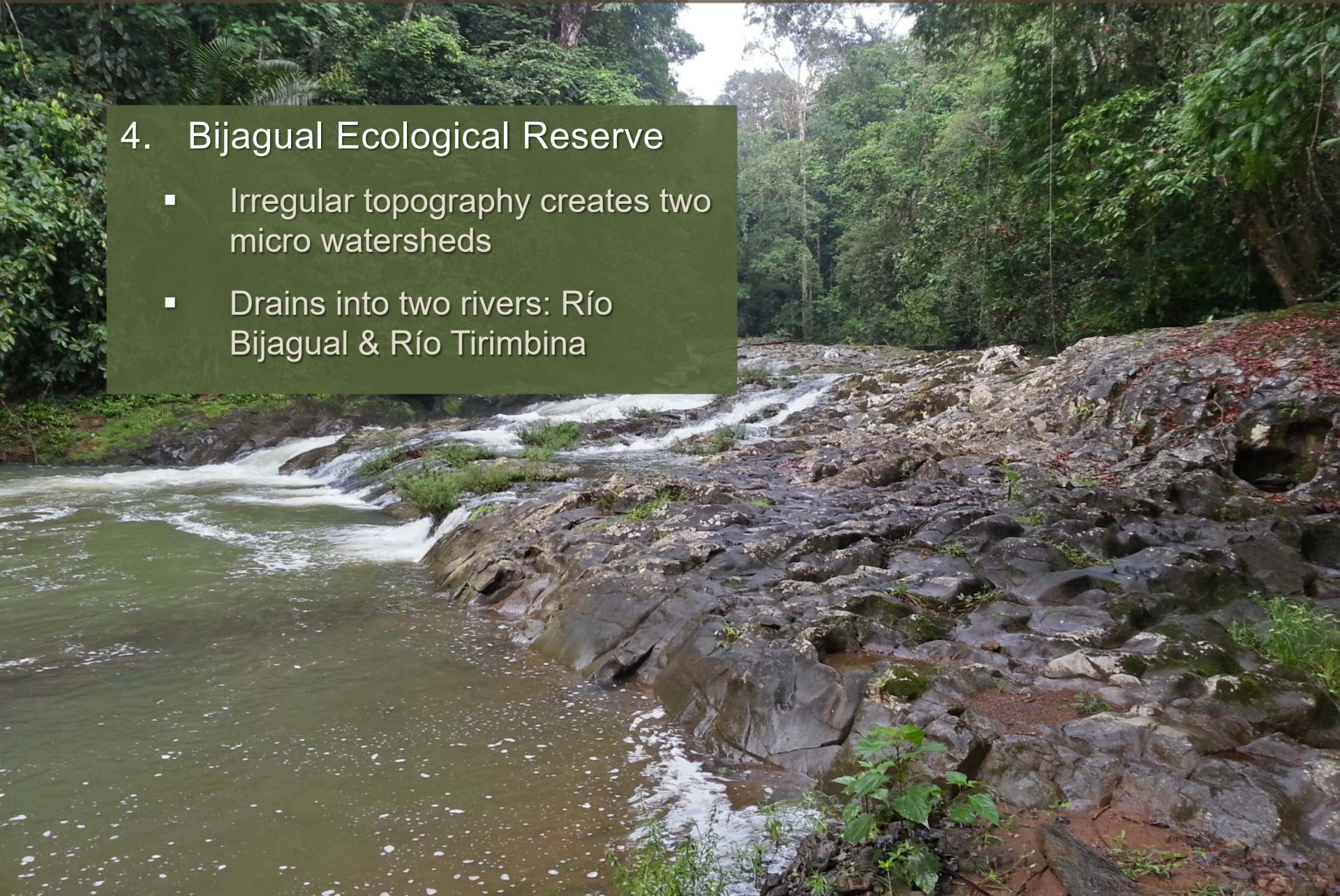
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## 4. Bijagual Ecological Reserve

- Irregular topography creates two micro watersheds
- Drains into two rivers: Río Bijagual & Río Tirimbina



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*Callipogon barbatus*  
(Cerambycidae: Prioninae)

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## 5. Santa Rosa National Park

- 1<sup>st</sup> national park created in CR
- Within the Guanacaste Conservation Area
- Variety of habitats: savannas, deciduous forest, marshlands, & mangrove woodlands



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## 5. Santa Rosa National Park

- 500 sq km
- Dry tropical forest
- Cattle grazing



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*Stenobatyle eburata*  
(Cerambycidae: Cerambycinae)

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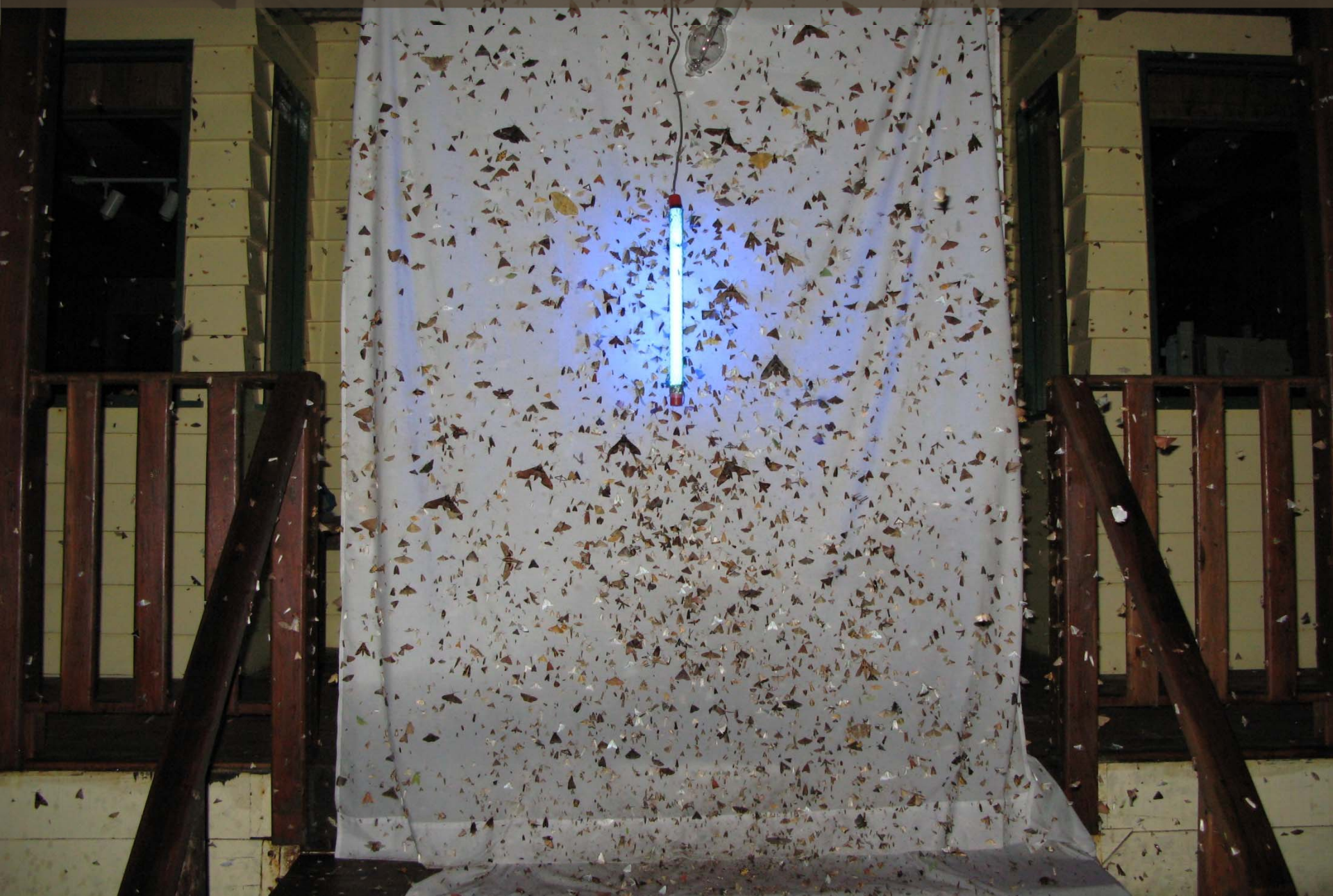
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- Permitting Agencies
  - MINAE - “Ministerio de Ambiente y Energía”
  - SINAC - “Sistema Nacional de Áreas de Conservación”
  - 11 areas of conservation
  - Each conservation area must approve any research



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- Collecting Permit Process
  - All documents in Spanish!
  - Project description
  - Letter of CR institutional support
  - Completed application for permission to conduct research
  - CV for each investigator
  - Valid MINAE scientific passport
  - \$30 fee each investigator
  - Permit valid for 6 months, and report must be submitted to SINAC within 6 months of event

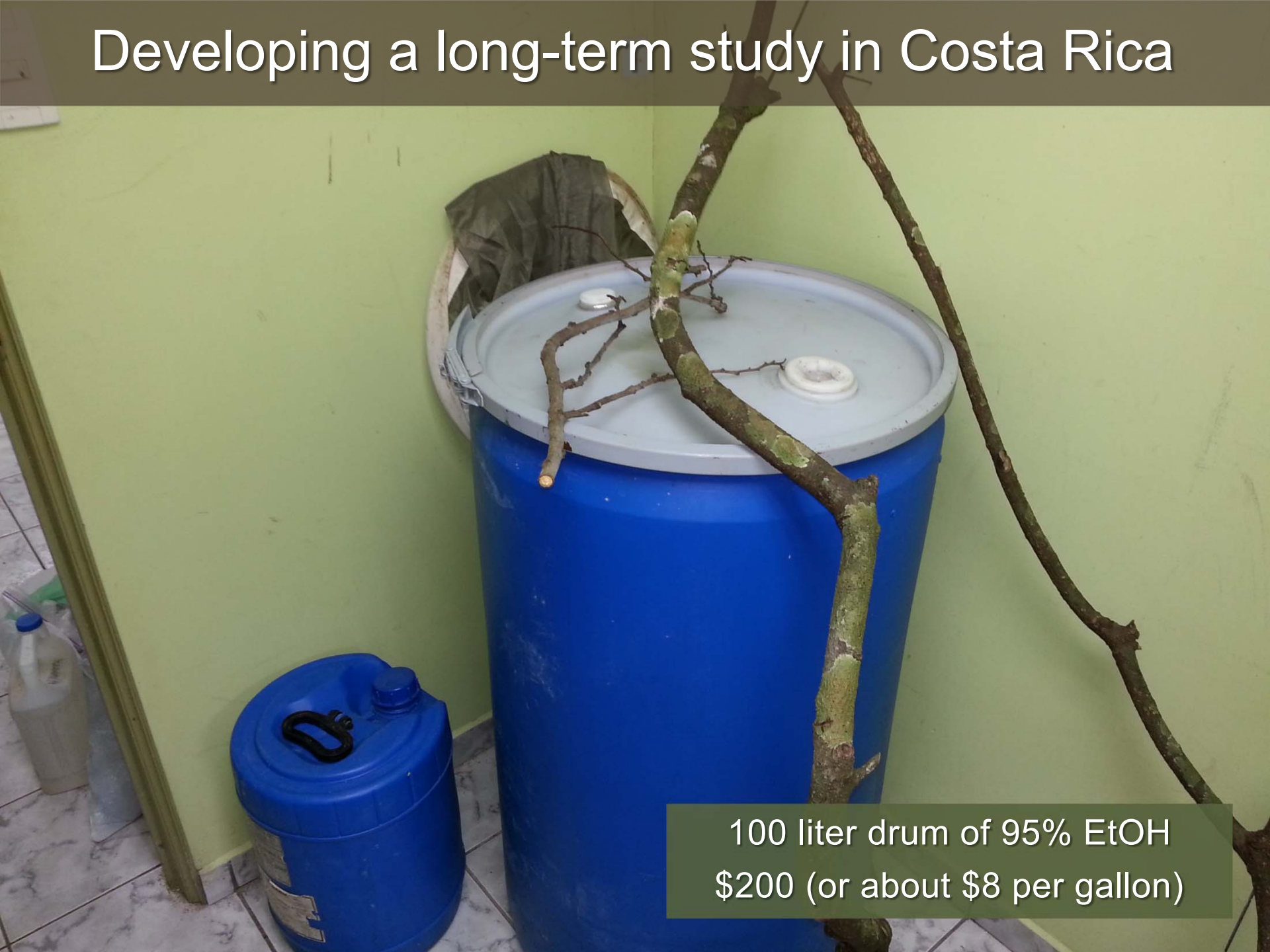


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- Export Permit Process
  - Completed form requesting permission to export specimens
  - Estimated number of specimens
  - Hardcopy of signed form must accompany specimens
  - New request required for each export event



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100 liter drum of 95% EtOH  
\$200 (or about \$8 per gallon)

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Humberto Lezama  
University of Costa Rica

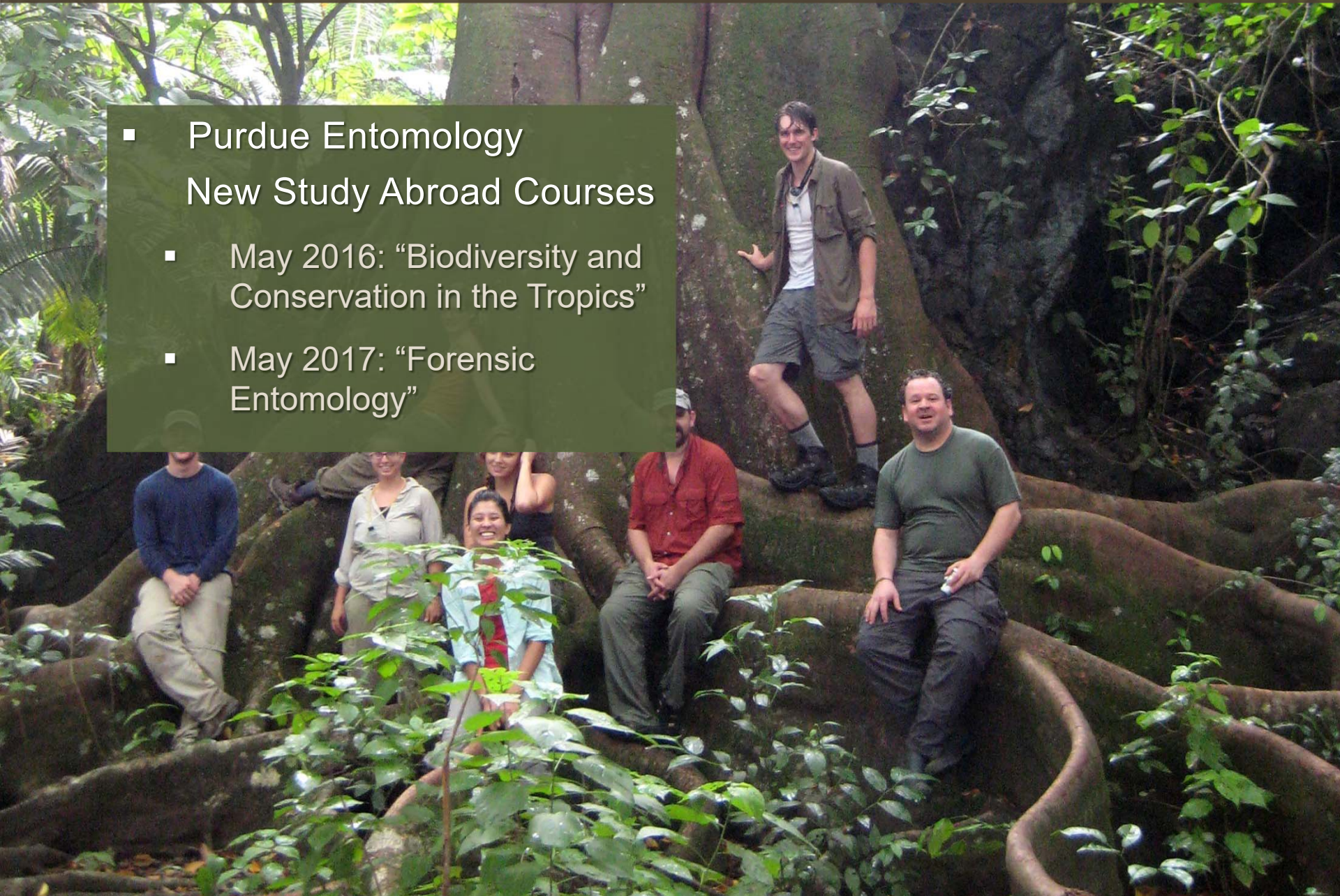


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- Purdue Entomology  
New Study Abroad Courses
  - May 2016: “Biodiversity and Conservation in the Tropics”
  - May 2017: “Forensic Entomology”



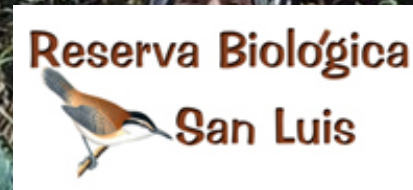
# Acknowledgments



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- Photo Credits
  - Eugenio Nearns, Ian Swift, Monteverde



Thank you!

