

INTRODUCTION TO TROPICAL BIODIVERSITY

October 14-22, 2019

Sponsored by the Canopy Family and Naturalist Journeys

Participants: Linda, Maria, Andrew, Pete, Ellen, Hsin-Chih, KC
and Cathie

Guest Scientists: Drs. Carol Simon and Howard Topoff
Canopy Guides: Iguá Jimenez, Dr. Rosa Quesada, Danilo
Rodriguez and Danilo Rodriguez, Jr.

Prepared by Carol Simon and Howard Topoff



Our group spent four nights in the Panamanian lowlands at the Canopy Tower and another four in cloud forest at the Canopy Lodge. In very different habitats, and at different elevations, conditions were optimal for us to see a great variety of birds, butterflies and other insects and arachnids, frogs, lizards and mammals. In general we were in the field twice a day, and added several night excursions. We also visited cultural centers such as the El Valle Market, an Embera Village, the Miraflores Locks on the Panama Canal and the BioMuseo in Panama City, which celebrates Panamanian biodiversity. The trip was enhanced by almost daily lectures by our guest scientists.



Geoffroy's Tamarin, Canopy Tower, Photo by Howard Topoff



Hot Lips, Canopy Tower, Photo by Howard Topoff

Itinerary:

October 14: Arrival and Orientation at Canopy Tower

October 15: Plantation Road, Summit Gardens and local night drive

October 16: Pipeline Road and BioMuseo

October 17: Gatun Lake boat ride, Emberra village, Summit Ponds and Old Gamboa Road

October 18: Gamboa Resort grounds, Miraflores Locks, transfer from Canopy Tower to Canopy Lodge

October 19: La Mesa and Las Minas Roads, Canopy Adventure, Para Iguana and the grounds of Canopy Lodge at night

October 20: Altos del Maria

October 21: Cerro Gaital, El Valle Market

October 22: Departures

Presentations by our Guest Scientists:

Introduction to Tropical Rainforests

Primates of Latin America

Social Insects of the Rainforest

100 Years of the Panama Canal

Butterflies

Poisonous Amphibians and Venomous Reptiles

Tropical Botany

Bird Brains

El Valle Reptiles (By local guest Mario Urriola)



Cathie at Summit Gardens, Photo By Howard Topoff



Spectacled Owls, Cara Iguana, Photo By Howard Topoff

Birds

Tinamous

Great Tinamou, *Tinamus major* (HO)

Ducks, Swans and Geese

Black-bellied Whistling-Duck, *Dendrocygna autumnal*

Muscovy Duck, *Cairina moschata*

Curassows, Guans and Chachalacas

Gray-headed Chachalaca, *Ortalis cinereiceps*

Pigeons and Doves

Rock Pigeon, *Columba livia*

Pale-vented Pigeon, *Patagioenas cayennensis*

Scaled Pigeon, *Patagioenas speciosa*

Ruddy Ground-Dove, *Columbina talpacoti*

White-tipped Dove, *Leptotila verreauxi*

Gray-chested Dove, *Leptotila cassinii*

Cuckoos

Squirrel Cuckoo, *Piaya cayana*

Black-billed Cuckoo, *Coccyzus erythrophthalmus*

Greater Ani, *Crotophaga major*
Smooth-billed Ani, *Crotophaga ani*

Nightjars

Common Nighthawk, *Chordeiles minor*

Swifts

White-collared Swift, *Streptoprocne zonaris*
Short-tailed Swift, *Chaetura brachyuran*

Hummingbirds

White-necked Jacobin, *Florisuga mellivora*
Band-tailed Barbthroat, *Threnetes ruckeri*
Green Hermit, *Phaethornis longirostris*
Long-billed Hermit, *Phaethornis longirostris*
Stripe-throated Hermit, *Phaethornis strigularis*
Purple-crowned Fairy, *Heliathrix barroti*
Long-billed Starthroat, *Heliomaster longirostris*
Garden Emerald, *Chlorostibon assimilis*
Violet-headed Hummingbird, *Klais guimeti*
White-tailed Emerald, *Elvira chionura*
White-vented Plumeleteer, *Chalybura buffonii*
Bronze-tailed Plumeleteer, *Chalybura urochrysis*
Crowned Woodnymph, *Thalurania colombica*
Blue-chested Hummingbird, *Amazilia amabilis*
Snowy-bellied Hummingbird, *Amazilia edward*
Rufous-tailed Hummingbird, *Amazilia tzacatl*
Violet-bellied Hummingbird, *Juliomyia julie*

Rails, Gallinules and Coots

Gray-cowled Wood-Rail, *Aramides cajaneus*
Purple Gallinule, *Porphyrio martinica*
Common Gallinule, *Galinula galeata*

Limpkin

Limpkin, *Aramus guarauna*

Plovers and Lapwings

Southern Lapwing, *Vanellus chilensis*

Jacanas

Wattled Jacana, *Jacana jacana*

Sandpipers and Allies

Spotted Sandpiper, *Actitis macularius*

Gulls, Terns and Allies

Royal Tern, *Thalasseus maximus*

Sandwich Tern, *Thalasseus sandvicensis*

Frigatebirds

Magnificent Frigatebird, *Fregata magnificens*

Cormorant

Neotropic Cormorant, *Phalacrocorax brasilianus*

Darters

Anhinga, *Anhinga anhinga*

Pelicans

Brown Pelican, *Pelecanus occidentalis*

Hérons

Rufescent Tiger-Heron, *Tigrisoma lineatum*

Great Egret, *Ardea alba*

Snowy Egret, *Egretta thula*

Little Blue Heron, *Egretta caerulea*

Tricolored Heron, *Egretta tricolor*

Cattle Egret, *Bubulcus ibis*

Green Heron, *Butorides virescens*

Boat-billed Heron, *Cochlearius cochlearius*

Vultures

Black Vulture, *Coragyps atratus*

Turkey Vulture, *Cathartes aura*

King Vulture, *Sacoramphus papa*

Hawks, Eagles and Kites

Osprey, *Pandion haliaetus*

Gray Headed Kite, *Leptodon cayanensis*

White-tailed Kite, *Elanus leucurus*

Swallow-tailed Kite, *Elanoides forficatus*

Mississippi Kite, *Ictinia mississippiensis*

Crane Hawk, *Geranospiza caerulescens*

Common Black Hawk, *Buteogallus anthracinus*

Roadside Hawk, *Rupornis magnirostris*

White hawk, *Pseudastur albicollis*

Gray-lined Hawk, *Buteo nitidus*

Broad-winged Hawk, *Buteo platypterus*

Short-tailed Hawk, *Buteo brachyurus*

Swainson's Hawk, *Buteo swainsoni*
Black Hawk-Eagle, *Spizaetus tyrannus* (HO)

Typical Owls

Tropical Screech Owl, *Megascops choliba*
Spectacled Owl, *Pulsatrix perspicillata*
Black-and-white Owl, *Ciccaba nigrolineata*

Trogons

Slaty-tailed Trogon, *Trogon Massena*
Black-tailed Trogon, *Trogon melanotus*
White-tailed Trogon, *Trogon chionurus*
Gartered Trogon, *Trogon caligatus*
Orange-bellied Trogon, *Trogon aurantiiventris*

Motmots

Whooping Motmot, *Momotus subrufescens*
Rufous Motmot, *Baryphtheng mart*
Broad-billed Motmot, *Electron platyrhynchum*

Kingfishers

Ringed Kingfisher, *Megaceryle alcyon*
Amazon Kingfisher, *Chloroceryle amazona*
Green Kingfisher, *Chloroceryle americana*

Puffbirds

White-necked Puffbird, *Notharchus hyperrhynchus*
Black-breasted Puffbird, *Notharchus pectoralis*
White-whiskered Puffbird, *Malacoptila panamensis*

Barbets and Toucans

Northern Emerald Toucanet, *Aulacorhynchus prasinus*
Collared Aracari, *Pteroglossus torquatus*
Yellow-eared Toucan, *Selenidera spectabilis*
Keel-billed Toucan, *Ramphastos sulfuratus*
Yellow-throated Toucan, *Ramphastos ambiguus*

Woodpeckers

Black-cheeked Woodpecker, *Melanerpes pucherani*
Red-crowned Woodpecker, *Melanerpes rubricapillus*
Cinnamon Woodpecker, *Ceelus loricatus*
Lineated Woodpecker, *Dryocopus lineatus*
Crimson-bellied Woodpecker, *Campephilus haematogaster*
Crimson-crested Woodpecker, *Campephilus melanoleucos*

Falcons and Caracaras

Yellow-headed Caracara, *Milvago chimachima*

Bat Falcon, *Falco ruficularis*

Parrots

Orange-chinned Parakeet, *Brotogeris jugularis*

Blue Hooded Parrot, *Pionopsitta haematotis*

Blue-headed Parrot, *Pionus menstruus*

Red-lored Parrot, *Amazona autumnalis*

Mealy Parrot, *Amazona farinosa*

Antbirds

Black-crowned Antshrike, *Thamnophilus atrinucha*

Checker-throated Antwren, *Epinecrophylia fulviventris*

Dot-winged Antwren, *Microrhoptias quixensis*

Jet Antbird, *Cercomacra nigricans*

White-bellied Antbird, *Myrmeciza longipes*

Chestnut-backed Antbird, *Myrmeciza exsul*

Spotted Antbird, *Hylophylax naevioides*

Antpittas and Ant Thrushes

Black-faced Ant Thrush, *Formicarius analis*

Ovenbirds and Woodcreepers

Plain-brown Woodcreeper, *Dendrocincia fuliginosa*

Wedge-billed Woodcreeper, *Glyphorhynchus spirurus*

Cocoa Woodcreeper, *Xiphorhynchus susurrant*

Spotted Woodcreeper, *Xiphorhynchus erythropygius*

Plain Xenops, *Xenops minutus*

Salty-winged Foliage-gleaner, *Philydor fuscipenne*

Tyrant Flycatchers

Brown-capped Tyrannulet, *Ornithion brunneicapillus*

Yellow-bellied Elaenia, *Elaenia chiriquensis*

Lesser Elaenia, *Elaenia chiriquensis*

Paltry tyrannulet, *Zimmerius villissimus*

Scale-crested Pygmy-Tyrant, *Lophotriccus pileatus*

Southern Bentbill, *Oncostoma olivaceum*

Common Tody-Flycatcher, *Todirostrum cinereum*

Black-headed Tody-Flycatcher, *Todirostrum cinereum*

Olivaceous Flatbill, *Rhynchocyclus olivaceus*

Yellow-margined Flycatcher, *Tolmomyias assimilis*

Golden-crowned Spadebill, *Platyrinchus coronatus*

Ruddy-tailed Flycatcher, *Terenotriccus erythrurus*

Sulfur-rumped Flycatcher, *Myobius sulfureipygius*

Tufted Flycatcher, *Mitrephanes phaeocercus*
Olive-sided Flycatcher, *Cantopus sordidulus*
Eastern wood-pewee, *Cantopus virens*
Acadian Flycatcher, *Empidonax virescens*
Cattle Tyrant, *Machetornis rixosa*
Dusky-capped Flycatcher, *Myiarchus tuberculifer*
Lesser Kiskadee, *Pitangus lictor*
Great Kiskadee, *Pitangus sulphuratus*
Rusty-margined Flycatcher, *Myiozetetes granadensis*
Social Flycatcher, *Myiozetetes similis*
Streaked Flycatcher, *Myiodynastes maculatus*
Sulfur-bellied Flycatcher, *Myiodynastes luteiventris*
Tropical Kingbird, *Tyrannus melancholicus*,
Eastern Kingbird, *Tyrannus tyrannus*
Fork-tailed Flycatcher, *Tyrannus savana*

Tityras, Becards and Allies

Masked Tityra, *Tityra semifasciata*
Speckled Mourner, *Laniocera rufescens*

Cotingas

Purple-throated Fruitcrow, *Querula purpurata*
Blue Cotinga, *Cotinga nattererii*

Manakins

Blue-crowned Manakin, *Lepidothrix coronata*
Golden-collared Manakin, *Manacus vitellinus*
Red-capped Manakin, *Ceratopipra mentalis*

Vireos

Scrub Greenlet, *Hyophilus flavipes*
Green Shrike-Vireo, *Vireolanius pulchellus*
Lesser Greenlet, *Pachysylvia decurtata*
Yellow-throated Vireo, *Vireo flavifrons*
Red-eyed Vireo, *Vireo olivaceus*

Jays and Crows

Black-chested Jay, *Cyanocorax affinis*

Swallows

Gray-breasted Martin, *Progne chalybea*
Mangrove Swallow, *Tachycineta albilinea*
Southern Rough-winged Swallow, *Stelgidopteryx ruficollis*
Barn Swallow, *Hirundo rustica*

Wrens

Scaly-breasted Wren, *Microcerculus marginatus*
House Wren, *Troglodytes aedon*
Ochraceous Wren, *Troglodytes ochraceus*
Rufous-breasted Wren, *Pheugopedius rutilus*
Black-bellied Wren, *Pheugopedius fasciatoventris* (HO)
Isthmian Wren, *Cantorchilus leucotis* (HO)
White-breasted Wood-wren, *Henicorhina leucosticta*
Grey-breasted Wood-wren, *Henicorhina leucophrys*
Song Wren, *Cyphorhinus phaeocephalus*

Gnatcatchers

Long-billed Gnatwren, *Rhamphocaenus melanurus*
Tropical Gnatcatcher, *Polioptila plumbea* (HO)

Thrushes

Swainson's Thrush, *Catharus ustulatus*
Clay-colored Thrush, *Turdus grayi*

Mockingbirds and Allies

Tropical Mockingbird, *Mimus gilvus*

Goldfinches and Allies

Yellow-crowned Euphonia, *Euphonia luteicapilla*
Thick-billed Euphonia, *Euphonia lanirostris*
Fulvous-vented Euphonia, *Euphonia fulvicrissa*
White-vented Euphonia, *Euphonia minuta*
Tawny-capped Euphonia, *Euphonia anneae*

Sparrows and Allies

Orange-billed Sparrow, *Arremon aurantirostris*
Common Chlorospingus, *Chlorospingus flavopectus*

Blackbirds and Allies

Chestnut-headed Oropendula, *Psarocolius wageri*
Scarlet-rumped Cacique, *Cacicus uropygialis*
Yellow-rumped Cacique, *Cacicus cela*
Yellow-backed Oriole, *Icterus chrysater*
Baltimore Oriole, *Icterus galbula*
Great-tailed Grackle, *Quiscalus mexicanus*

Wood-Warbler

Northern Waterthrush, *Parkesia noveboracensis*
Black-and-white Warbler, *Mniotilta varia*
Prothonotary Warbler, *Protonotaria citrea*

Tennessee Warbler, *Oreothlypis peregrina*
Mourning Warbler, *Geothlypis philadelphia*
Blackburnian Warbler, *Setophaga fusca*
Yellow Warbler, *Setophaga petechia*
Chestnut-sided Warbler, *Setophaga pennsylvanica*
Buff-rumped Warbler, *Myiothlypis fulvicauda*
Rufous-capped Warbler, *Basileuterus rufifrons*
Canada Warbler, *Cardellina canadensis*

Mitospringid Tanagers

Dusky-faced Tanager, *Mitrospringus cassinii*

Cardinals and Allies

Hepatic Tanager, *Piranga flava*
Summer Tanager, *Piranha rubra*
Scarlet Tanager, *Piranga olivacea*
Red-throated Ant-Tanager, *Habia fuscicauda*
Blue-black Grosbeak, *Cyanocompsa cyanooides*

Tanagers and Allies

Blue-gray Tanager, *Thraupis episcopus*
Palm Tanager, *Thraupis palmarum*
Golden-hooded Tanager, *Tangara larvata*
Plain-colored Tanager, *Tangara inorata*
Bay-headed Tanager, *Tangara gyro*
Emerald Tanager, *Tangara florida*
Silver-throated Tanager, *Tangara icterocephala*
Green Honeycreeper, *Chlorophanes spiza*
Black-and-Yellow Tanager, *Chrysothlypis chrysomelas*
Blue-black Grassquit, *Volatinia jacarina*
White-shouldered Tanager, *Tachyphonus luctuosus*
Tawny-crested Tanager, *Tachyphonus delatrii*
Flame-rumped Tanager, *Ramphocelus flammigerus*
Crimson-backer Tanager, *Ramphocelus dimidiatus*
Scarlet-thighed Dacnis, *Dacnis venusta*
Blue Dacnis, *Dacnis cayana*
Bananaquit, *Coereba flaveola*
Yellow-faced Grassquit, *Tiaris olivaceous*
Variable Seedeater, *Sporophila corvina*
Buff-throated Saltator, *Saltator maximus* (HO)



Broad-billed Motmot, Photo by Howard Topoff

MAMMALS (EXCLUDING BATS)

Opposums

Central American Woolly Opossum, *Caluromys derbianus*

Two-toed Sloths

Hoffman's Two-toed Sloth, *Choloepus hoffmani*

Three-toed Sloths

Brown-throated Three-toed Sloth, *Bradypus variegatus*

Tamarins/Marmosets

Geoffroy's Tamarin, *Sanguinus geoffroyi*

Cebid Monkeys

White-faced Capuchin, *Cebus capucinus*

Howler Monkeys

Mantled Howler, *Alouatta palliata*

Squirrels

Variegated Squirrel, *Sciurus variegatoides*

Red-tailed Squirrel, *Sciurus granatensis*

Spiny-rats

Rufous Tree Rat, *Diplomys labilis*

New World Porcupines

Rothchild's Porcupine, *Coendou rothschildi*

Capybara

Lesser Capybara, *Hydrochoerus isthmus*

Agoutis

Central American Agouti, *Dasyprocta punctata*

Raccoons and Allies

White-nosed Coati, *Nasua narica*

Deer

White-tailed Deer, *Odocoileus virginianus*

BATS

Submitted by Pete Siminski

CT = Canopy Tower, 14 October

CL = Canopy Lodge, 19 & 21 October

(?) = not certain

All detected with Wildlife Acoustics detector except Phyllostomidae.

Sac-winged Bats, Emballonuridae

Greater White-lined (Sac-winged) Bat, *Saccopteryx bilineata* – CT, CL

Lesser Dog-like Bat, *Perotpteryx macrotis* – CT, CL

Gray Sac-winged Bat, *Balantiopteryx plicata* - CL

Fishing Bats, Noctilionidae

Greater Fishing Bat, *Noctilio leporinus* - CL

Leaf-chinned Bats, Mormoopidae

Davy's Naked-backed Bat, *Pteronotus davyi* - CL

Big Naked-backed Bat, *Pteronotus gymnonotus* - CL

Leaf-nosed Bats, Phyllostomidae

Orange Nectar Bat, *Lonchophylla robusta* - Seen at the CL feeders, my detector would not pick up any calls of nectar or fruit eating bats, 21 October.

Great Fruit-eating Bat, *Artibeus lituratus* – Seen in day roost under palms leaves at Parque Municipal Summit, 15 October.

Plain-nosed Bats, Vespertilionidae

Black Myotis, *Myotis nigricans* - CL

Yucatan Yellow Bat, *Rhogeessa aeneus* - CL

Southern Yellow Bat, *Lasiurus ega* - CL

Northern Yellow Bat, *Lasiurus intermedius* (?) - CL

Hoary Bat, *Lasiurus cinereus* (?) - CT

Free-tailed Bats, Molossidae

Mexican Free-tailed Bat, *Tadarida brasiliensis* - CT

Western Mastiff Bat, *Eumops perotis* (?) – CT, CL

Underwood's Bonneted Bar, *Eumops underwoodi* - CT

Big Crested Mastiff Bat, *Promops centralis* - CL

Sinaloan Mastiff Bat, *Molossus sinaloae* - CL

Little (Velvety) Mastiff Bat, *Molossus molossus* – CT, CL



Caribbean Least Gecko, Photo by Hsin-Chih Perng



Fleischmann's Glass Frog, Photo by Howard Topoff

AMPHIBIANS AND REPTILES

Bufoidae Toads

South American Common Toad, *Rhinella alata*

Cane Toad, *Rhinella marina*

Centrolenidae Glass Frogs

Fleischmann's Glass Frog, *Hyalinobatrachium fleischmanni*

Slope-snouted Glass Frog, *Cochranella euknemos*

Craugastoridae Rain Frogs

Banded Rain Frog, *Pristimantis taeniatus*

Dendrobatidae Dart Poison Frogs

Rainforest (Striped) Rocket Frog, *Silverstoneia flotator*

Hylidae Treefrogs

Red-webbed (Canal Zone) Treefrog, *Hypsiboas rufitelus*

Leptodactylidae Foam Frogs

Tungara Frog, *Engystomops pustulosus*

American White-lipped Foam Frog, *Leptodactylus labialis*

Savage's Thin-Toed Frog, *Leptodactylus savagei*

Emydidae Pond Turtles

Meso-American Slider, *Trachemys venusta*

Corytophanidae Casque-headed Lizards
Common Basilisk, *Basiliscus basiliscus*

Dactyloidae Anoles
Stream Anole, *Anolis oxylophus*
Slender Anole, *Anolis limifrons*

Hoplocercidae Spiny-tailed and Wood Lizards
Dunn's Spiny Lizard, *Morunasaurus groi*

Iguanidae Iguanas
Common Green Iguana, *Iguana iguana*

Gekkonidae Geckos
DANILO RODRIGUEZ
Common House Gecko, *Hemidactylus frenatus*

Phyllodactylidae Geckos
Turnip-tailed Gecko, *Thecadactylus rapicauda*

Sphaerodactylidae Geckos
Yellow-headed Geckos, *Gonatodes albogularis*
Caribbean Least Gecko, *Sphaerodactylus homolepis*

Teiidae Whiptails and Tegus
Central American Ameiva, *Holcosus festivus*

Crocodylidae Crocodylians
Spectacled Caiman, *Caiman crocodilus*
American Crocodile, *Crocodylus acutus*



Long-wing Crimson-patched Butterfly, Photo by Howard Topoff



Velvet Ant, Photo by Howard Topoff