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History of Centre ValBio
In 1986, primatologist Patricia Chapple Wright, PhD, was
given a seemingly impossible task: to travel to the rainforests of Madagascar and find the greater bamboo lemur, a species that hadn't been seen in the wild by scientists for thirty years. Not only did Dr. Wright discover that the primate still existed, she proved that it lived alongside a completely new species, the golden bamboo lemur. What followed was a love affair with an animal and a country that continues to this day. Dr. Wright is best known for her study of lemurs in Ranomafana National Park, which she helped establish in 1991.

Centre ValBio was created by Dr. Patricia C. Wright in 2003 under Stony Brook University's Institute for the Conservation of Tropical Environments in agreement with the Madagascar Ministry of Foreign Affairs. The richness of the critically endangered plants and animals, contrasted with the poverty of the people, inspired her to help both survive in harmony.

#### The Mission of Centre ValBio is:

- To promote world-class research and biodiversity training opportunities in one of the world's most biologically diverse and unique ecosystems.
- To promote environmental stewardship by providing conservation education and ecologically sustainable economic opportunities within local communities.
- To provide the local people with knowledge and tools to improve their quality of life.

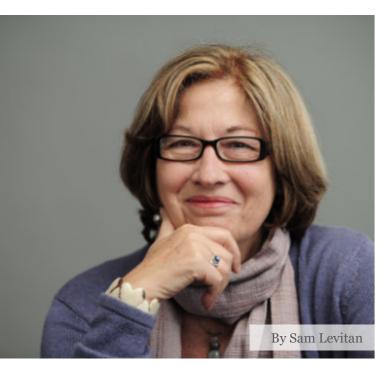
#### Goals

- To inspire innovative approaches to biodiversity research and conservation, and provide training opportunities in one of the world's most biologically diverse and unique environments.
- To support environmental stewardship in conjunction with ecologically sustainable economic development for local Malagasy communities.

- To fully understand the complete ecosystem dynamics of a tropical rainforest, including mapping an entire ecosystem's genomics, and connect this with climate, environmental, and household health data to inform local practices, public policies, and global debates.
- To be the coordination center of a network of field sites facilitating comparative research within Madagascar and across the tropics to better understand regional and global biodiversity dynamics.
- To integrate ecological restoration, education, human health, agricultural improvement, natural resource conservation, and empowerment of local communities in a One Health framework.

• To develop comprehensive natural history collections representing the biodiversity of Ranomafana National Park.





Dear Centre ValBio friends and supporters,

Centre ValBio (CVB) has made significant strides in 2024—progress marked not only by scientific advancement and community engagement, but by growing philanthropic commitment to our long-term sustainability.

Collaboration with partners remained strong throughout the year. Our biodiversity team joined Madagascar National Parks and the Tour Guide Association of Ranomafana for a three-month intensive course in biodiversity skill-building to train young environmentalists from the surrounding villages of Ranomafana National Park. It was funded partially by Re:wild and developed by CVB Head of Biodiversity and GIS Dina Andrianoely and myself

#### Letter from the Executive Director

in partnership with Mary Brown, Re:wild's Senior Manager of Africa Program & Rapid RESCUE Fund.

We also welcomed several visitors who play an essential role in CVB's future: We were honored to have a visit from Stony Brook University's Provost Carl Lejuez, the Dean of the School of Marine and Atmospheric Sciences Paul Shepson, and our Senior Director of Development Jennifer Levine. CVB Advisory Board member Tom Gillespie also came, as well as supporters Sue and Mark Panella, and Mary Brown of Re:wild. The group learned more about our efforts here in Madagascar and attended the inaugural graduation ceremony of the 15 Ecosystem Stewards at CVB.

Operationally, CVB reached a milestone with the successful implementation of new administrative and financial systems, thanks to the tireless efforts of Shin Shin Hsia, who concluded her role as Chief Operating Officer at year-end. We also acknowledged the retirement of longtime CVB National Director Pascal Rabeson, whose decades of service helped shape the organization we know today. Thank you, Pascal, for your years of dedicated service.

In the fall, Dr. Benjamin Andriamihaja and I were part of the Malagasy delegation to the COP16 UN Biodiversity Conference in Cali, Colombia. We gave a presentation on "The Conservation Value of Tropical Research Sta-

tions" organized by Campaign For Nature.

The goal of the presentation was to amplify the role community-based field stations play in implementing science-based conservation.

CVB joined Dr. Thomas Smith and Virginia Zaunbrecher of Congo Basin Institute, Dr. Iroro Tanshi of Small Mammal Conservation Organization in Nigeria, and Dr. Jordan Karubian and Fernando Castillo of Fundación para la Conservación de los Andes Tropicales. We will continue working together to amplify this message in 2025.

Also in 2024, I was able to attend the Association for Tropical Biology and Conservation (ATBC) meetings held in Rwanda. I hosted a dinner with over a dozen Malagasy students and professors, including Dr. Beth Kaplin, President of ATBC.

In October, I was honored to join the Paris premiere of the French documentary film, *Ivohiboro: La Forêt Oubliée (Ivohiboro: The Lost Forest*), produced by Emma Lepers and Julia Fangeaud of Haut et Court. The film, a beautiful portrayal of the potential discoveries and understanding to be gained as we continue investigating this incredibly unique ecosystem, was broadcast on France 5 and France.TV. Plans for 2025 will include screening the English version of the film.

Shawn Dunwoody, an award-winning artist

from Rochester, New York, came to Ranomafana under the auspices of CVB and organized painting a mural with over 100 school-children at the Nature Center in Ranomafana village. Seneca Park Zoo encouraged this mural as well the visit of Claudia Weber and her daughter, Stephanie, guided by Tom Snyder. Claudia sponsored the Conservation Warrior Award, which I received in 2022.

The end of 2024 turned out to be a stunner. On November 9, three CVB researchers—MJ Ingmanson, Michael Bliss, and Alicia del Prado-Rebordinos—climbed to the northern parcel of Ranomafana National Park to investigate a cave found by Florence Aghomo in July. Miraculously they discovered the cranium, mandible, jaw, humeri, femur, and canine of an extinct *Hippopotamus* sp. We thank The Leakey Foundation for sending us an emergency grant to support the reconnaissance.

The highlight at the end of the year was an extraordinary gift from The Herrnstein Family Foundation made to SBU in support of the newly launched Future of Centre ValBio Endowment Fund. This generous commitment will help CVB to secure our legacy, and I am deeply moved every time I reflect on its impact. I would like to give further thanks to Dr. Mark Krasnow and Dr. Patti Yanklowitz, as well as Mark and Susan Panella, for their generous support of endowment funding for CVB, as well. These donations triggered matches by the Simons Foundation and New York State's Governor Kathy Hochul.

Gifts toward the Endowment Fund will ensure CVB continues to operate throughout the year, even during the rainy season when income from researchers and visitors is low.

Sadly, long-time CVB supporter, Dorothy Lichtenstein, passed away in July 2024 after a long illness. Her kindness, style, grace, generosity, and wisdom are very much missed. We are grateful to Dorothy for her generous support to CVB, which has allowed us to perform renovations, purchase critical infrastructure, and maintain operations, especially during the COVID-19 pandemic. We will continue to remember Dorothy fondly for all she made possible for so many.

My best wishes to all for a productive and successful 2025.

Jan (Wast

Dr. Patricia C. Wright
Founder and Executive Director
Centre ValBio





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#### Future of Centre ValBio **Endowment Fund**

This past year, we took a critical step toward strengthening Centre ValBio's (CVB's) capacity as a hub of research excellence and a catalyst for positive change in Madagascar for decades to come.

With the support of several dedicated CVB champions and Stony Brook University (SBU) we developed a plan to launch an endowment campaign to secure CVB's future. Our goal is to create a \$17 million endowment that will permanently sustain CVB's operations and advance its research, education, and outreach mission.



Philanthropy is a cornerstone of this plan, and we are grateful to The Herrnstein Family Foundation for providing the lead gift in support of this initiative. At the same time, increased, ongoing support from SBU will provide a strong foundation for the future.

Fundraising to date has been successful, but to fully fund an endowment and ensure its longterm strength, we need to secure additional commitments. Efforts are actively underway to engage those who are passionate about strengthening CVB's work by contributing to this fund.

The plan includes the addition of a scientific director and research personnel, intended to reinforce CVB's position as a leader in the

global scientific community. With a sustainable funding strategy to support CVB's leadership team, the institute will be well-positioned to strengthen its infrastructure, expand its impact, and embark on new opportunities that align with its mission.

#### A Moment to Act

On June 1, 2023, SBU received a historic \$500 million gift from Jim and Marilyn Simons and the Simons Foundation – the largest-ever unrestricted endowment gift made to a U.S. institution of higher education. The first \$200 million of this transformational Simons Infinity Investment is structured as a matching challenge to inspire additional endowment support from other friends and alumni.

All endowment gifts over \$100,000 will unlock an equal amount from the Simons Infinity Investment for SBU's unrestricted endowment. Additionally, under New York State's 1:2 matching program, the state will provide an additional dollar for every two endowment dollars raised. These matches apply to both restricted and unrestricted endowments.

These two matching challenges triple the impact of every endowment gift of \$100,000 or more. This unprecedented opportunity is limited. The state has allocated \$500 million for its matching endowment program—a generous sum, but the program is open to all four SUNY university centers, and the public money sunsets in April 2026 or once the full amount is matched.

We are truly grateful for your interest in CVB and for your belief in the power of science, education, and community engagement to create lasting change.

We invite you to be part of this defining moment in CVB's story. Your support will not only sustain the vital work already underway, but also empower the next generation of researchers, conservationists, and changemakers who will shape Madagascar's future—and our world. With this unprecedented triple-match opportunity, your gift will go further than ever before.

Together, we can ensure that CVB remains a beacon of scientific discovery, education, and hope for decades to come.

To explore ways your support can make a lasting impact, contact:

Jennifer Levine Senior Director of Development Stony Brook University jennifer.levine@stonybrook.edu











To demonstrate our commitment to environmental preservation and sustainability, the Institute for the Conservation of Tropical Environments (ICTE) and Centre ValBio have continued to undertake extensive research and conservation efforts focused on biodiversity, ecosystem valuation, reforestation, and enhancement of the well-being of local communities. This comprehensive approach supports a deeper understanding of environmental issues, providing critical insights for both the scientific community and policymakers.

Our participation in two major international conferences—the Africa Conservation Forum hosted by IUCN in Kenya and the COP16 UN

Biodiversity Conference in Cali, Colombia—has been pivotal in fostering global dialogue and collaboration. We presented research findings, shared best practices, and learned from the experiences of other conservation organizations, creating a foundation for knowledge exchange and network building that strengthens our impact. We call on authorities, government organizations, and decision-makers to support and leverage our work to make informed decisions that advance global conservation goals. Together, we can make significant strides toward preserving our planet's precious ecosystems for future generations.

- Dr. Benjamin Andriamihaja ICTE Country Director

It has been quite a year. It was an amazing opportunity to be back in Ranomafana and to work with the phenomenal teams at Centre ValBio (CVB), the Institute for the Conservation of Tropical Environments (ICTE), and the Madagascar Institut pour la Conservation des Écosystèmes Tropicaux (MICET).

As Chief Operating Officer, I spent most of the year building on the goal of creating a solid operational foundation for CVB centering research, community, and conservation to continue the legacy that Dr. Wright started over 40 years ago. The team at CVB embraced the new systems with enthusiasm.

A few highlights in 2024 include hosting stu-

dents from the American School of Antananarivo for a week-long science immersion program, brainstorming about CVB's future with Stony Brook University's Provost, facilitating strategic planning retreats with department heads, nerding out on systems for better financial oversight, and embracing opportunities to strengthen partnerships at CVB.

After reflection and long hours, I decided to transition out of my role as Chief Operating Officer at the end of November. I am proud of the work the team accomplished and look forward to ways to stay engaged.

- Shin Shin Hsia ICTE/CVB Chief Operating Officer



### Pascal Rabeson Retires as National Director

This year marks the retirement of Pascal Rabeson, Centre ValBio (CVB) National Director since 2015. Pascal was responsible for overseeing the happenings at CVB. He managed relations with the staff and handled CVB's internal workings. He also represented CVB on a local, regional, and national level. He said his role incorporated both managing and leading.

"I am a person who likes challenges," said Pascal. "To me, life is full of problems, and finding solutions is something that makes me happy." Pascal earned his first master's degree in ich-

By Melanie Formosa

thyology and fish farming in Russia, and he started working at CVB in 1993 as a freelance assistant to an American researcher studying ants.

He traveled to the U.S. in 1998 to earn his second master's degree in ecology. In 2003, he returned to CVB as a project consultant and joined the CVB staff in 2006 as the Coordinator of Partnerships and Monitoring. He held that role until 2015, when he was promoted to the position of National Director.

Since March 2024, Pascal has worked as CVB's National Advisor. Pascal has been an anchor at CVB. We wish him the best in his retirement.



By Johanna Mitra

#### Highlights of the Year

External Visitors | Activities Attended by Centre ValBio Staff Workshops and CVB Activities | External Events

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March 8

March for Interna-

tional Women's

Day in Ra-

nomafana

, - - - - - - - - - - - - - - - - , January 4–20

Arrival of seven Stony **Brook University** Study Abroad students

January 12

Meeting between NGOs with Chef de Ré gion about the Development of the Vatovavy region

February 20–23

Fish farming training is attended by Education Department staff and organized by the APCT project

February 27

School day celebration in Ranomafana

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Arrival of 17 American School of Antananarivo students

April 24

Phelsuma quadriocellata By Iason Avramidis

April 22–27

Workshop meeting about Conservation of Biodiversity with the E-POP VARUNA project at the University of Fianarantsoa

*May 14–17* 

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Food transformation workshop is attended by Education Department staff and 50 participants

*May 25–July 3* 

Arrival of six Stony Brook Uni versity Study Abroad students

May 27-31

Stony Brook University Provost visits Centre ValBio



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Devastating fire in Ifanadiana

June 7–8

World Environment Day is held in Tsaratanana



Arrival of 13 Colorado State University Study Abroad students

July 14–21

July 14–18

Dr. Patricia C. Wright attends the ATBC Conference in Kigali, Rwanda and CVB researcher Julieanne Montaquila presents her research

August 19–23

Environmental education training with eachers is held in collaboration with the APCT project and is attended by Education Department staff and 50 participants

Jiménez as Fulbrigh

September 18–20

Reforestation training is attended by Education Department staff and 47 participants November 4

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Artist Shawn Dunwoodv and over 100 Malagasy children paint a mural at the Nature Center in Ranomafana

November 9

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Discovery of Florence's Cave and fossil hippopotamus bones in north Ranomafana National Park

------*November 9–26* 

Ecosystem Stewards embark on a cross-country trip for an English practicum with ICTE/ CVB Program Officer Patricia Paladines, and Jeanne and Michael Compitello

November 12-14

Over 60 members of conservation clubs from six villages attend a workshop focused on sustainable farming techniques and opportunities for small businesses

November 23

Ecotourism celebration in Ranomafana

October 3

Film premiere of *Ivohiboro: The Lost* Forest in Paris, and Dr. Patricia C. Wright is interviewed on FRANCE 24 English 

October 7

on France 5 and France.TV

,-----, October 7–19

Members of Centre ValBio Advisory Board and scientific tourists visit Madagascar,

October 23

Dr. Patricia C. Wright and ICTE Country Director Dr. Benjamin Andriamihaja attend COP16 in Cali, Colombia as members of the Mala gasy delegation

October 25–26

Centre ValBio hosts World Lemur Day activities for local students

September 10

**Public Affairs Office** 

of U.S. Embassy in

congratulates Stony

postdoctoral fellow

Dr. Beatriz Otero

including Ivohiboro Protected Area

#### Research Department

I first visited Ivohiboro in 2019 with Dr. Patricia C. Wright and was immediately struck by its biodiversity. Now, as a Fulbright Scholar with the Africa Regional Research Program, I am using lemur genetic data to understand the history of forest cover in the region and guide reforestation efforts. By analyzing genetic connectivity between lemur populations in Ivohiboro and nearby protected areas, we can determine how long this forest has been isolated and in which direction forest loss has occurred.

My research assistant Rota Andriantsoa and I, along with our field team, spent five weeks in Ivohiboro (September-October). We tracked three ring-tailed lemur groups to collect behavioral data and gather fecal samples for genetic analysis. We also trapped dwarf and mouse

# By Dr. Beatriz Otero Jiménez

lemurs to gather morphometric and genetic data. We will process these samples at Centre ValBio's molecular lab and collect from other protected areas during another expedition.

This research will help us piece together the past and shape conservation strategies for the



#### Molecular Ecology of the Mouse Lemur Niche and **Environmental Educa**tion in Local Lycées

Dr. Caitlin Karanewsky, Zeph Pendleton

Molecular ecology is blossoming at Centre Val-Bio. The already well-characterized ecosystem of Ranomafana National Park is now being studied at the genetic level as well. Our focus is on the niche of the mouse lemur, the smallest and most abundant primate in the forest. The mouse lemurs of Ranomafana have been studied by us and other researchers for nearly three decades. In 2024, we conducted our research from July to September.

We have performed deep phenotyping on nearly 500 individuals, many of which we have followed over the years, recapturing them and repeating our measurements. By collecting fecal samples and sequencing the DNA and RNA found within, we are able to characterize this animal's interactions with its environment at an unprecedented level of detail. We can identify plants and insects an individual has eaten, gut bacteria which compose the microbiome, and even viruses and bacteriophages.

Combining this with our existing knowledge of mouse lemur behavior and location will provide new insights into the interactions

between them and their environment, as well as potential transmission of disease. We have also continued to develop our high school education initiative, working with Professor Hantanirina Rasamimanana and Assistant Professor Saotra Solonirina Rakotonomenjanahary to bring hands-on science to local

students. We use the Foldscope, a paper-based microscope developed by the Prakash Lab at Stanford, to introduce students to exploratory learning. It is our goal over the next few years to expand this program to include more schools, and to include lessons on habitat characterization and restoration.



#### **Understanding Forest His**tory Through Lemur DNA

Dr. Beatriz Otero Jiménez

Ivohiboro Protected Area was established in 2023 and is home to an isolated patch of humid forest in southeastern Madagascar. Nestled in a valley, the forest has been shielded from fires that have turned the surrounding landscape into human-made savanna. This unique refuge supports a rich variety of plants and animals, including 34 species threatened with extinction—among them, ring-tailed lemurs (Lemur catta), two dwarf lemur species (Cheirogaleus sp.), and a mouse lemur species (*Microcebus* sp.).



#### Investigating the Impact of Anthropogenic Disturbance on Tenrecs

Sarah Vaccaro

Madagascar represents one of the world's "hottest" biodiversity hotspots with 90% of its species found nowhere else. However, its unique ecosystems are highly vulnerable to climate change and habitat loss, making conservation efforts critical. Among the species at risk are tenrecs (Tenrecidae), one of Madagascar's most diverse and abundant mammalian families. With 31 recognized species, tenrecs exhibit remarkable ecological, behavioral, and physiological adaptations, al-

lowing them to thrive in various niches. However, habitat destruction poses a significant threat, particularly for shrew tenrecs, many of which depend on forested environments.

In September 2024, I traveled to Madagascar to collect tissue samples for genomic analysis to assess the impact of anthropogenic disturbance on tenrecs. Working alongside Centre ValBio research technicians François Zakamanana also known as Zaka, and Rémi Rakotovao, as well as research assistant, Tiavina Rakotoarizafy (University of Antananarivo), we live-trapped tenrecs in and around Ranomafana National Park. We obtained tissue samples from 37 individuals, encompassing nine distinct species. Notably, different shrew tenrec species appeared to be associated with distinct habitat types: Microgale drouhardi was found exclusively in forested sites, whereas Microgale majori was trapped only in an agricultural transect. It is possible that *M. majori* may have a higher tolerance for habitat disturbance—a key focus for further

Tenrecs are a fascinating vet understudied group, remarkable for their incredible diversity and specializations that enable each one to thrive in unique environmental niches. I hope my research provides valuable insights into tenrec biology and inspires further scientific exploration of these species. 1 am deeply grateful to my advisor, Dr. Krishna Veeramah, and my committee members, Dr. Patricia C. Wright and Dr. Tara Smiley, for providing unwavering support throughout my field season and beyond

Assessing the Vulnerability of *Propithecus edwardsi* and Identifying Conservation Strategies in Ranomafana National Park

Florence Aghomo

Madagascar's biodiversity is unique and shaped by millions of years of isolation from Africa and India. Among its most iconic and threatened species is the Milne-Edwards's sifaka (Propithecus edwardsi), an endangered lemur (IUCN Red List, 2020). My research aims to inform conservation strategies by investigating the species's interactions with human-modified landscapes.

One of my research chapters will specifically examine the influence of human trail networks on P. edwardsi. Human activities, whether direct, such as hunting, or indirect, such as habitat fragmentation, pose significant threats to lemurs.

Nonlethal disturbances, including increased human presence, can significantly affect animal behavior by altering feeding, mating, and movement patterns. This study will investigate how these lemurs respond to human trails by providing more information on their perceived predation risk and informing conservation efforts.

From June to July 2024, I conducted a preliminary field study in the northern region of Ranomafana National Park focusing on identifying new P. edwardsi groups. Over a period of a month and a half, I surveyed 15 transects (each 1.5 km long), set up camera traps, and recorded six groups and a solitary male. The study revealed significant behavioral variations among the groups:

- Increased alarm calling and vigilance in areas with more human activity.
- Higher Flight Initiation Distances (FID). indicating avoidance behavior.
- Territorial alarm calls when encountering conspecifics.

• Infants were present in five of the six observed groups.

It is crucial to understand how P. edwardsi adapts to human-altered landscapes to create effective conservation plans. This study adds to the field of human-wildlife interactions by offering information on how primates perceive and respond to human-related disturbances. My ongoing work will examine population density, genetic diversity, and movement patterns to inform habitat protection initiatives.

Florence is a doctoral student at the Interde-

partmental Doctoral Program in Anthropolo-

sity. She is part of the Institute for the

Conservation of Tropical Environments

gical Sciences (IDPAS) at Stony Brook Univer-



Microgale sp.

# Infant Care and Behavioral Flexibility in Endangered *Propithecus* edwardsi

MJ Ingmanson

The Milne-Edwards's sifaka (*Propithecus edwardsi*) is the largest lemur in Ranomafana National Park and faces habitat destruction and deterioration. Long-term demographic data beginning in 1986 indicates that adult females have one offspring every two years and face infant mortality rates reaching 50% in the first year.

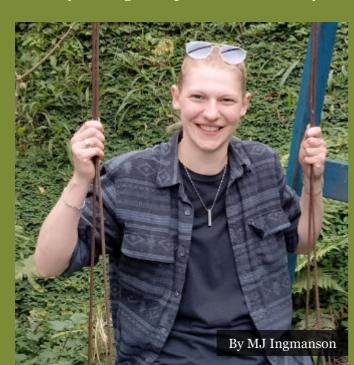
I am interested in infant development and survival with a focus on conservation implications and behavioral flexibility. *P. edwardsi* lives in groups ranging from 2-9 individuals: a breeding male, 1-2 breeding females, and their young offspring. This range in sociality, in addition to documented diet differences by habitat, shows a proclivity for flexibility that may also extend to infant care.

During a 6-month field study at Centre ValBio from June to December 2024, I followed sifaka groups with 0, 1, or 2 infants in both pristine and disturbed forests. I found that the 2-infant group in Talatakely (disturbed by logging in the late 1980s) engaged in extensive allomaternal care, or group individuals besides the mother providing infant care. Contrary to previous records that show little to no cooperative

care, this study indicates that *P. edwardsi* can adjust their behavior in accordance with environmental deficiencies to ensure infant survival.

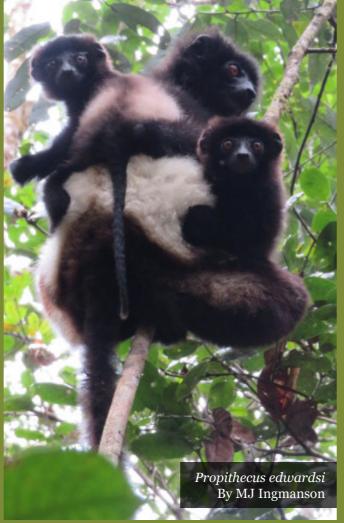
The two mothers in this group would take turns carrying, nursing, and resting with the infants. This likely allowed for more energetically efficient feeding and resting for the mom with no infant. As a result of shared care, the infants spent more time playing together than in groups with no allomaternal care, opposing the typically decreased sociality found in degraded forests.

While many questions remain about when and how this behavior occurs, it is clear that this critically endangered species has the ability to



adjust to changing habitats. As climate change intensifies, the island of Madagascar is increasingly vulnerable, and this behavioral flexibility may be key to survival.

Many thanks to Dr. Patricia C. Wright and the Centre ValBio technicians I work with, without whom none of this would be possible.



## The Impact of Touristic Exposure on the Behavior of *Propithecus edwardsi*

Alicia del Prado-Rebordinos

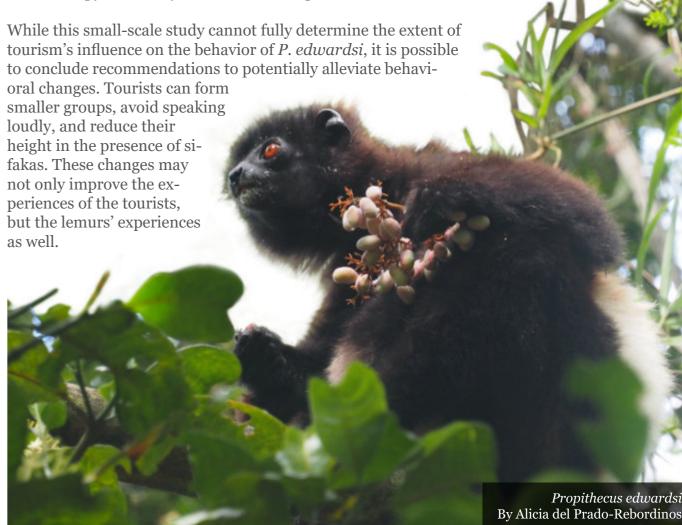
Ecotourism has been on the rise over the past many years, which generates revenue for local communities and helps raise funds for conservation all while remaining environmentally and culturally conscious. This tourism practice may appear ideal for everyone involved, but research reveals tourists could be a source of stress for wild primates.

A study conducted more than 10 years ago in Ranomafana National Park presented some concerning correlations between the endangered Milne-Edwards's sifaka (*Propithecus edwardsi*) and tourism, such as population decline, weight reduction and behavioral differences. However, no further research has been published on the topic, and tourism has done nothing but increase.

For my bachelor's thesis, I studied the behavior of sifaka groups across three forests from October to December 2024. Each forest had a different level of tourism exposure: Talatakely (highly touristic), Sahamalaotra (mildly touristic), and Valohoaka (non-touristic). The sifakas' height in trees and activity budgets were compared relative to the study site and to the number of tourists. Data indicate that environmental variables, such as weather, have the greatest influence on behavior, and that

higher tourist disturbance slightly decreases locomotion and resting time.

The sifakas would not allow tourists to come closer than 2 m. They would instead climb higher in the trees the larger the tourist group. *P. edwardsi* in Talatakely were on average 2 m higher than in the neighboring forest of Valohoaka. This may be a form of avoidant behavior and suggests these animals prefer to keep a distance from tourists. Interestingly, researchers were able to be as close as 1 m to the sifakas. They were at significantly lower levels in the canopy when only researchers were present.





#### Bakerella and Viscum Nutrients and Biodiversity Research

Julieanne Montaquila

I am studying the effects of rare, endemic mistletoe species on local biodiversity and nutrient cycling in Ranomafana National Park (RNP). Mistletoes are aerial hemiparasitic shrubs, both creating their own sugars through photosynthesis and depending on a host tree for water and minerals. In RNP, mistletoes of the genera *Bakerella* (Family: Loranthaceae) and *Viscum* (Family: Santalaceae) are commonly found on many different trees and known to be a source of food for lemurs, birds.

and other wildlife. Many studies show that mistletoes can be keystone species, mediating interactions between different species and altering key ecological processes, including seed dispersal, pollination, and nutrient cycling. Some studies indicate that mistletoe causes local increases in arthropod and plant diversity, despite their role on their host tree as a parasite. Few studies, however, have investigated the role of mistletoe in highly biodiverse rainforests such as RNP.

Different nutrients and biodiversity levels in tropical rainforests may influence mistletoes' role in the ecosystem. Given deforestation, invasive species, climate change, and other pressing issues threatening tropical rainforests, researching endemic species that could be highly influential for biodiversity should be a priority.

Seeking to understand endemic mistletoes in Madagascar, Seheno Randriamiarantsoa (University of Antananarivo), Bell Scherick (undergraduate at Rice University), and I began setting up an experimental removal study in May 2024 to test if the species *Bakerella poissoni* or *Viscum multiflorum* impact nutrient cycling, soil arthropod biodiversity, and seedling biodiversity.

Seheno Randriamiarantsoa is a master's student in the Mention of Zoology and Animal Biodiversity and has taken on the role of project manager for this ongoing study. Their team in the field includes many talented Centre ValBio technicians, including botanists

Albert Telo and Georges Razafindrakoto, entomologist Stanislas Jean Tojonirina, and local guide Bienvenue Patrice Randriantsiferana, also known as Tsiferana. Already, preliminary results show that contrary to mistletoes found in temperate forests, mistletoes in RNP may decrease seedling and large arthropod abundance on the ground directly below itself.

Soil phosphorus and nitrogen decrease with mistletoe parasitism, which may be the main source of decreases in plant abundance in the understory. Still, further data on litter decomposition rates and seed dispersal have yet to be analyzed and seasonal changes may influence how either *B. poissoni* or *V. mutliflorum* interact with their local community.





We conducted biodiversity surveys in lowland forest fragments southeast of Ranomafana in November 2024. During our studies, we documented four unidentifiable lemur species, including a brown lemur with a distinctive white head.

We are drafting grants to study the lemur species of this region. We aim to identify these lemurs to the species level, assess their conservation statuses, and develop a community-driven fire-safety team to protect the forest.

We plan to collaborate with local partners and the community to create short- and long-term action plans to preserve this newly identified lemur biodiversity hotspot.

**By Michael Bliss** 



#### Lemurs in Marotandrano Special Reserve

F. Tre Lawrence

From June to July 2024, my team and I embarked on a three-week expedition to Marotandrano Special Reserve (MSR), which comprises 43,000 ha of continuous unexplored rainforest in northeastern Madagascar. Our study aimed to obtain estimates of lemur species richness and abundance within MSR, set the groundwork for research on parasite dynamics affecting these primate communities, and provide a current description of the overall habitat within the reserve, as well as the impact of anthropogenic activity.

We completed line transects across four sites within MSR, created vegetation plots, and collected fecal samples. We installed camera traps and audio recorders to collect information on lemur activity and the reserve's broader biodiversity. We identified 11 lemur species, with all major taxonomic groups represented, including the aye-aye (*Daubentonia madagascariensis*), and three critically endangered species: the diademed sifaka (*Propithecus diadema*), the black-and-white ruffed lemur (*Varecia variegata*), and Madagascar's heaviest extant primate species, the indri (*Indri indri*), which apparently reach their largest recorded body masses in this habitat.

We are comparing our population density results to transect data collected nearly twenty





years ago (Ralison, 2006) to determine if lemur populations are stable. François Sariaka Ravelontsoa (University of Anatananarivo) is analyzing fecal samples to measure the health of these populations. Results obtained suggest lemur populations are stable and healthy, and reiterate the status of MSR as a stronghold of Malagasy biodiversity.

Future research will target biodiversity surveys with botanists, ornithologists, and herpetologists. Trappings/live captures should be performed on all species within the reserve to collect baseline data on precise species/subspecies status, morphometrics, and population genetics. We also plan to compare our findings on intestinal parasite diversity and abundance with available data in conspecific or closely related lemur species from other localities.

This study constitutes Tre's master's thesis. Beginning in fall 2025, he will continue his conservation biology studies in Madagascar for his doctoral research under the supervision of Dr. Steig Johnson at the University of Calgary.

# Exploring Lesser Known Organism Groups from Ranomafana: Diversity studies of Bryophytes and Arthropods

Konrad Wiśniewski

In November 2024, a team from Poland led two research projects in Ranomafana National Park (RNP) with support from Centre ValBio and Madagascar Institut pour la Conservation des Écosystèmes Tropicaux (MICET).

The first project focused on the diversity of liverworts and mosses in the forests of RNP. The aim of the inventory was identifying known species, finding new species, and analyzing abundance and distribution patterns of different taxa. The bryophyte species composition and diversity will be referred to several environmental factors, including microhabitat and forest type, or disturbance regime. The study was conducted by Robert Zubel (Maria Curie-Skłodowska University) and Katarzyna Dobrowolska (Pomeranian University in Słupsk) and supported by Rence Aimée Randrianindrina (University of Antananarivo) and research technician August Pela (Centre ValBio).

The second project's aim was to study the diversity of select arthropod groups in RNP forests. The focal animal groups were spiders and springtails. A sampling protocol incorpor-



Phyllogonium sp.
By Katarzyna Dobrowolska,
Robert Zubel

ated methods such as sweep net, beating sheet, litter sifter, and pitfall traps to maximize knowledge of species richness, composition of different taxonomic or ecological groups, and species. Most of the sampled animals belong to still undescribed species.

The same set of methods was used in Ivohiboro Protected Area research, so the results will be comparable. The study was conducted by Konrad Wiśniewski, Illia Uharov (both Pomeranian University in Słupsk) and Michał Furgoł (The Angelus Silesius University of Applied Sciences). Field work was supported by Tsiky Rasolobera (University of Antananarivo) and the invaluable research technicians: Albert Telo, Toussaint Georges Raherinirina, and Rinah Njakamampiadana (all Centre ValBio).



#### Researchers

Florence AGHOMO (Stony Brook University) assessed the vulnerability of *Propithecus edwardsi* and identified appropriate conservation strategies for Ranomafana National Park.

Dr. Andrea BADEN, Josephine DELANEYSO-ESMAN (both Hunter College), Dr. Randall JUNGE (Columbus Zoo), Juliette NYE (Ohio State University), Charline RASOANARIM-ALALA (University of Fianarantsoa), Mihary Fanantenana RASOAVOLANDRAINY, and Harizo Georginnot RIJAMANALINA (both University of Antananarivo) continued to study *Varecia variegata* demography, life history, and behavior in Mangevo as part of the Ranomafana Ruffed Lemur Project (RRLP).

Dr. Christina BERGEY (Rutgers University), Beauriche ANDRIAMBOLAHARIJAONA, and Dr. Rindra RAKOTOARIVONY (both University of Antananarivo) continued a pilot study on the genetic basis of host preference in mosquitoes in villages around Ranomafana National Park.

Evangelia Linda CHRONOPOULOU (German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig) and Hery Fenosoa Ekena RANDRIAMAHARO (University of Antananarivo) investigated the role of microbes in fruit chemical signaling to seed dispersers as part of biotic and abiotic drivers of variation in fruit traits.



Becca DECAMP (Rutgers University), Stephie RAVELOSON (University of Antananarivo), Miaro FALIARIVOLA (University of Anataravino), and Dr. Rindra RAKOTOARIVONY (University of Antananarivo) continued to compare male fertility related genes between two mouse lemur species living in and around Ranomafana National Park.

Alexis Amparo DIAZ (Stanford University) and Noa Elosmie RASOANAIVO (University of Antananarivo) studied food preference and diet ecology in female *Propithecus edwardsi*.

Dr. Amy DUNHAM and Dr. Matt MCCARY (both Rice University) investigated the effects of invasive guava on understory invertebrate and plant communities, and soils in Rano-

mafana National Park.

Dr. Mai FAHMY (Fordham University) digitized Centre ValBio's Christmas River crocodile subfossil collection to build out an online repository of diverse crocodile-related data.

F. Tre LAWRENCE (Stony Brook University) and François S. RAVELONTSOA (University of Antananarivo) with logistic and technical support from Dina ANDRIANOELY, Laurent RANDRIANASOLO, George Rene RANDRIANIRINA, and Jean Baptiste RANDRIANASOLO (all Centre ValBio) launched an expedition to an understudied field site in northeastern Madagascar.

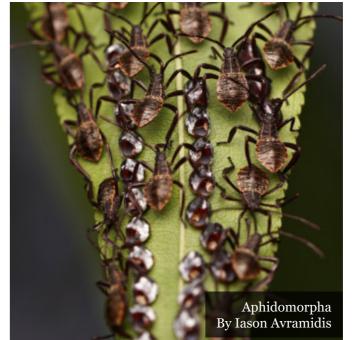
Eric GREENLEE (Georgia Institute of Techno-



logy) and Dave KLINGES (Yale University) joined Nicolas RASOLONJATOVO (Centre ValBio) and the Restoration Ecology Department investigated how wireless sensors and other conservation technology may assist ongoing restoration research in and near Ambodivoahangy.

Quinn GEORGIC (Rice University) continued to research the science and politics of endangered species conservation, specifically focusing on lemur conservation in native habitats of Madagascar.

Maythee GERMAN (Stony Brook University) assisted with the Forest Corridor Project, specifically DNA isolation of plant-soils lemurs have been observed foraging upon, as well as



collecting samples from the Arboretum and Talatakely for the purpose of conducting a cross sectional comparison of forest and plant recovery on these sites.

Lindsey HAUFF (Rutgers University), Noa Elosmie RASOANAIVO (University of Antananarivo), and Jean Patrique RAHERIM-ANJATO (University of Antananarivo) continued sample collection and molecular work associated with investigating rapid evolutionary change in *Eulemur* spp. in southeastern Madagascar.

MJ INGMANSON (Independent Researcher) studied the social and ecological effects on infant and juvenile development and survival in *Propithecus edwardsi*.

Angelica INTAN (Hong Kong University of Science and Technology), Michael (Feifan) LI (Hong Kong University of Science and Technology), Jeremia RAVELOJAONA (University of Antananarivo), Dr. Angela WU (Hong Kong University of Science and Technology) studied the terrestrial arthropod and plant genomics of Ranomafana National Park, including those that contribute to the diet of mouse lemur.

Dr. Mark KRASNOW, Dr. Caitlin KARANEWSKY, Chinmay LALGUDI, Sasha WINTER, Zeph PENDLETON (all Stanford University), Andrianirina Mihajatiana TAN-JONA (University of Antananarivo), Hajanirina Noëline RAZAFINDRAKOTO, and Andriamahery RAZAFINDRAKOTO (both Centre ValBio) continued their study of mouse lemur





genetics in and around Ranomafana National Park.

Dr. Adelaide MIARINJARA and Dr. Thomas GILLESPIE (both Emory University), and Annick RAVELOSON (Institut Pasteur Madagascar & University of Antananarivo) studied opportunities and challenges for plague vector control in Madagascar.

Julieanne MONTAQUILA (Rice University) and Seheno Harilala RANDRIAMIARANTSOA (University of Antananarivo) explored the role of native hemiparasitic mistletoes *Bakerella poissoni* and *Viscum multiflorum* on soil ecology and tropical forest regeneration.

Dr. Stephen MUGEL and Dr. Thomas



GILLESPIE (both Emory University), and Andres GARCHITORENA (IRD & PIVOT) studied geographic and demographic surveillance gaps for malaria and schistosomiasis among children in underserved communities in Madagascar.

Dr. Beatriz OTERO JIMÉNEZ (Stony Brook University), Rota ANDRIANTSOA (University of Antananarivo), and Dr. Rindra RAKO-TOARIVONY (University of Antananarivo) continued sample collection and molecular work associated with this project.

Veronarindra RAMANANJATO (University of California, Berkeley), Gaetan RAKOTONDRA-SOA and Sidonie RAKOTOARISOA (both University of Antananarivo) studied the ecology of

mouse lemurs in Valohoaka and several fragments.

Dr. Onja RAZAFINDRATSIMA and Dr. Sabine CUDNEY-VALENZUELA (University of California, Berkeley), Dr. Steig JOHNSON (University of Calgary), Dr. Kerry BROWN (Kingston University), Ginot KAVA, Prisca RASOANOROLALA, Claude RANDRIANTOANDRO, and Nirintsoa RAHARINOMENA (all University of Antananarivo) studied the cascading impacts of landscape structure on forest regeneration in several regenerating fragments in and around Ranomafana National Park.

Dr. Onja RAZAFINDRATSIMA and Veronarindra RAMANANJATO (University of California, Berkeley), Dr. Serge WICH (Liverpool John Moores University), Dr. Denise SPAAN (University of Veracruz), Hasinavalona RAKOTOARISOA, Finaritra RANDIMBIARISON, Nancia RAOELINJANAKOLONA, Rindra NANTENAINA, Fabrice RAZAFINDRABE, Mamitiana RAKOTOHARY (all University of Antananarivo), and Dr. Tsiory ANDRIANAVALONA (ExplorerHome Madagascar Science Center) conducted a biodiversity assessment in a non-protected area near the village of Kelilalina using conservation technology.

Dr. Onja RAZAFINDRATSIMA, Jessica STUBBS, Dr. Jadelys TONOS LUCIANO, Raine ZULUETA (all University of California, Berkeley), Hasinavalona RAKOTOARISOA (University of Antananarivo), and Diary RANDRIAMORA (Institut d'Enseignement Supérieur d'Antsirabe Vakinankaratra) studied lemur frugivory and movement ecology in Valohoaka.

Sara RUANE (Field Museum of Natural History), Fandresena RAKOTOARIMALALA (University of Antananarivo), and Arianna KUHN (University of Illinois) surveyed for giant tree boas (*Sanzinia*) in Ranomafana National Park as part of a study that will investigate the evolutionary history of this group.

Alina SELLIEN (Friedrich-Schiller-University Jena) studied the olfaction of mouse lemurs in relation to fruit quality.

Claire TOMLINSON (University of the West of England) and Alba SCHIELEN (Leiden University) documented the effects of social isolation on the last remaining *Prolemur simus* in Ranomafana National Park.

Dr. Jadelys TONOS and Dr. Onja RAZAFIND-RATSIMA (both University of California, Berkeley), and Hasinavalona RAKOTOAR-ISOA (University of Antananarivo) studied lemur frugivory and movement ecology in Valohoaka.

Sarah VACCARO (Stony Brook University) and Ny Tiavina RAKOTOARIZAFY (University of Antananarivo) investigated the impact of anthropogenic disturbance on the epigenetic potential of tenrec species.

Linus VON BODENHAUSEN (Technische



Universität Dresden) conducted research for Qimpexx in collaboration with Catholic Relief Services (CRS) and Centre ValBio to empower smallholder farmers by conducting a socioeconomic analysis of *Cinchona* integration in highland compared to lowland agroforestry systems in southeast Madagascar.

Dr. Konrad WIŚNIEWSKI, Illia UHAROV (Pomeranian University in Słupsk) and Dr. Michał FURGOŁ (The Angelus Silesius University of Applied Sciences) studied the diversity of arthropods in Ranomafana

> Spinomantis aglaver By Daniel Nicholson

National Park with a focus on various spider and springtail groups. Field work was supported by Tsikim-Pahasoavana RASOLOBERA (University of Antananarivo) and Albert TELO, Toussaint Georges RAHERINIRINA, and Rinah NJAKAMAMPIADANA (all Centre Val-Bio).

Jacob ZINN (Stony Brook University), assisted by Henri RAHERINJATOVO (University of Antananarivo), Irene LEÓN (Polytechnic University of Catalonia), and Miloš IVANČIĆ (Pompeu Fabra University), investigated the effect of habitat disturbance and forest regeneration on the diet and activity budgets (e.g., sociality, movement, foraging time) of *Propithecus edwardsi*.

Dr. Robert ZUBEL (Maria Curie-Skłodowska University) and Katarzyna DOBROWOLSKA (Pomeranian University in Słupsk) conducted a preliminary study on the diversity of Bryophytes (mosses and liverworts) in Ranomafana National Park. The research was supported by Veloniarivony Rence Aimée RANDRIANINDRINA (University of Antananarivo) and August PELA (Centre ValBio).

#### Interns

Thritha ANAND (Yale University) worked with the Mobile Health Unit to investigate indicators of water, sanitation, and hygiene in six villages surrounding Ranomafana National Park.

Sandratra ANDRIAMAMPIONONA (University of Fianarantsoa) assessed and updated the density of *Propithecus edwardsi* in Ranomafana National Park.

Fanirininony ANDRIATOMBONTSOA (Ecole Nationale d'Informatique) assisted the IT Department with the design and development of an employee leave management system.

#### Alicia DEL PRADO-REBORDINOS

(Maastricht University) studied the influence of tourist group size and touristic disturbance on the behavior of *Propithecus edwardsi*.

Remi Herman RAZAFIMANDIMBY (University of Fianarantsoa) studied parasites in bamboo lemurs.

Fetra Avosoa RAZAFINDRAZAKA (University of Fianarantsoa) conducted a bird inventory in disturbed sites (Vohiparara) and less disturbed sites (Talatakely).

Floris STÜLKE (Utrecht University) investigated alloparental preferences in *Propithecus edwardsi* and behavioral tendencies with different parental figures.

#### Volunteers

We'd like to extend our gratitude to all the volunteers who support our research, conservation, and community outreach programs each year. From working alongside our teams onsite to providing expedition support in remote villages, your help is sincerely appreciated.

Jeanne and Michael COMPITELLO provided funding for and embarked on an English practicum cross-country trip for the Ecosystem Stewards.

Shawn DUNWOODY painted a mural at the Nature Center in Ranomafana with over 100 Malagasy children, encouraged by Seneca Park Zoo, of a black-and-white ruffed lemur (*Varecia variegata*) and the words, "Ny fianarana no lova tsara indrindra," which is Malagasy for "Education is the best legacy."

Kay HURLEY worked with Jean Christophe RANDRIATSILAVINA and Jacob RAZA-FIDRATO (both Centre ValBio) on the lichens of Ranomafana and launched the lichen collection in the Centre ValBio Herbarium.

Laura MEULENDIJKS worked with the Centre ValBio Mobile Health Unit during one of their expeditions and participated in a training on malnutrition.

Scott LEONHART photographed mammals, especially lemurs.

Jack SCHEUTZOW (Renaissance School of

Medicine at Stony Brook University) worked with the Mobile Health Unit on an expedition in the three villages of Ambodivoangy, Anjaka, and Mandrivany.

Emma STARINK (Peace Corps Agriculture Extension Volunteer) worked primarily with the Restoration Ecology Department to review and write grant proposals, plant trees at field sites, and monitor the health of nurseries.

Dr. Rhonda STEIN (The Explorers Club) provided administrative support, accompanied Dr. Patricia C. Wright to the launch of *Lemurs of Madagascar* (Fifth Edition) in Antananarivo, accompanied the Mobile Health Unit on a 10-day expedition to Ampasipotsy, Ranovao, and Menarano, and collaborated with the Education Department.

Joseph WARFEL photographed spiders and helped collect spiders with researchers.









# Education Department



#### Conservation Club

This year, 69 members from eight villages visited Ranomafana National Park (RNP), and 90% of members prioritized reforestation after park visits. In a two-day training, they learned about biodiversity and conservation as they explored RNP's unique wildlife and engaged with staff to understand ongoing conservation efforts. The participants learned about the role Centre ValBio plays in protecting biodiversity and watched a documentary on conservation. Suggestions from the group included planting more trees, adopting sustainable farming practices, and sharing seeds to support reforestation and gardening. The visit highlighted the power of community involvement and local knowledge in conservation.

Over 60 Conservation Club members from six villages took part in a special three-day training in Ampitambe. The workshop focused on farming, small businesses, and positive education, giving participants new skills to improve their lives while helping the environment. During the training, they learned new ways of farming, discovered opportunities for small businesses, and talked about how education can help bring hope and progress to their com munities. The training showed how growing the economy can coexist with protecting nature as well as helping the villages thrive in a sustainable way. This event highlighted Centre ValBio's dedication to empowering rural communities, encouraging better living practices, and inspiring hope for the future.

#### My Rainforest My World & Rainforest Class

The Education Department aims to bring conservation education directly to the classroom. There are 42 participating schools with 32 primary, five secondary, and five high schools. This reaches 1,852 students.

Lessons on biodiversity and conservation are helping third- and fourth-grade students in remote villages, including Ambohimila, Antaralava, Ampitambe, Ambodivoangy, Mandrivany, Ambohinihaonana, and Kianjanomby. Park visits are a successful way to help students learn about the environment, and 205 students visited RNP through this program. Twenty students also attended an eco-focused art class to cultivate environmental awareness.

By improving the biodiversity curriculum, providing more resources, and training 58 teachers this year, this program is helping to build stronger environmental awareness and encourage students in rural Madagascar to care for nature. We are grateful to the Apenheul Primate Conservation Trust for funding My Rainforest My World.

#### Madaworks

Madaworks aims to change girls' lives by providing them with scholarships to pursue their studies through high school. This year, ten girls completed a Comprehensive Sexuality Education training, organized by the Madaworks project and the Education Department in collaboration with Fianakaviana Sambatra (FISA) Fianarantsoa. Over the course of five

days, the participants took part in interactive workshops, open discussions, and practical activities. They gained essential knowledge about reproductive health, their rights, and how to manage interpersonal relationships.

The students took part in workshops and visits to RNP, allowing them to develop critical-thinking skills, positive peer-to-peer relationships, and an appreciation for the natural environment. To date, three students have become teachers, one student is a midwife, two students have graduated from university, and six are pursuing bachelor's degrees.



Conservation Club Impact Numbers

69

members visited Ranomafana National Park

90

percent of members prioritized reforestation after park visit

11

expeditions and follow-ups

**564** *kg* of vegetables produced





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#### Health Department



The Mobile Health Unit is led by a team of two general practitioners, four nurses, and a midwife. The team serves 30 remote villages around Ranomafana National Park. The unit provides free essential medical care to a population of 14,179. For remote communities, basic health services pose a constant challenge due to distance from medical facilities.

This year, 5,598 people in intervention zones were consulted and treated, representing 33.2% of the total population, an increase of 12.3% compared to 2023. This rise can be attributed to population growth and a decrease in self-medication and traditional treatments. Villagers are increasingly visiting the Mobile Health Unit's healthcare access points, indicating a growing confidence in the Unit's services.

As in previous years, respiratory diseases were the main reason for patient consultations, and this year saw a considerable increase compared to last. This is largely due to the living conditions of the villagers: nearly 98% live in small, one-room houses. They use this space to prepare meals and sleep, and the wood fires they burn produce smoke that pollutes the air they breathe. Villagers are being encouraged to build a small outdoor cottage for cooking.

The Health Department has recorded 791 malaria cases this year across all villages, showing remarkable growth compared to last year. Unlike 2023, malaria was present throughout the year, which indicates the disease is no longer limited to specific seasons. In 2024, cardiovascular disease was one of the top five reasons

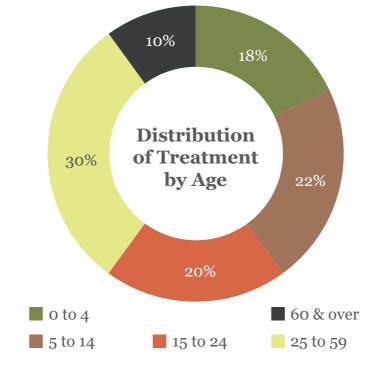
for consultation. This could be linked to the stress of poverty, the difficulty of providing for one's family, and the relentless rise in the cost of living.

As part of the Health Department's commitment to combating malnutrition, 73 culinary skills training sessions utilizing local resources were conducted this year, reaching 777 women across four zones. After each session, children ages 1 to 14 were invited to enjoy the prepared meals, benefiting a total of 2,368 children.

Since the partnership agreement between Centre ValBio and Marie Stopes Madagascar was established to implement long-term birth control methods, such as implants and intrauterine devices, the collaboration has successfully reached 26 of the 30 villages, with 18% of women of childbearing age voluntarily choosing these methods.

Centre ValBio and the District Public Health Department signed a partnership agreement to implement child immunizations and provide pre- and post-natal consultations for pregnant women in the Health Department's intervention villages. Since then, two paramedics from Basic Health Center Level II have been working alongside the Health Department to deliver these services during field expeditions.

This year saw a major advancement in hygiene awareness. Four metal sheets, which covers two latrines, were supplied to each of the 30 remote villages in intervention zones.





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#### Centre ValBio Interventions

Centre ValBio is active in over 75 communities around Ranomafana National Park conducting research, providing environmental education, supplying access to healthcare, and supporting income-generating opportunities through restoration ecology to promote sustainable agroforestry.

# Ambalakindres

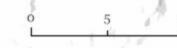


- \* Conservation Club
- \* Conservation Club & Restoration Ecology Department
- & Restoration Ecology Department
- 👙 Forest Corridor Project
- + Health Department
- Education Department
- Q Participatory Ecological Monitoring
- O TEAM
- Boreholes/Wells

District









#### Restoration Ecology Department



This year, the Restoration Ecology Department was involved in four main projects, including Centre ValBio, TerraMatch, TSIRO/SPICES, and the Forest Corridor Project in collaboration with the Education Department. There were 758 days of expeditions and 136 days of missions.

These activities work toward restoration of degraded landscapes in mitigating deforestation, scaling up the size of remnant forests, and restoring forests in deforested areas. The activities also provide socioeconomic support by reinforcing capacity development of local communities in sustainable agriculture practices.

#### Regular Activities at Centre ValBio

The production of seedlings in the upper campus tree nursery amounted to 7,432 this year, of which 5,118 were transplanted and 2,314 will be in the 2025 reforestation campaign. These reforestation sessions were conducted by the Ranomafana Tour Guides Association, Centre ValBio staff, and the primary school of Ambodiaviavy. As nurseries rely on seeds to produce the number of seedlings needed for each project, 2,172 kg of native tree species seeds were collected.

One student interned with the Restoration Ecology Department to study banana association with native forest and agricultural lands.

#### TerraMatch Project

TerraMatch Afr100 is an agroecology project that works to ensure forests, wildlife, and local communities are all impacted in a positive and balanced way. Upon its launch, 43 restoration sites were identified, and several nurseries were constructed. For the project's implementation, 798,000 pots were set in 40 nurseries.

This year, 583,147 saplings were transplanted in restoration sites targeted for this project, which includes 70% native tree species and 30% valuable cash crops requested by local communities. The communities where the Restoration Ecology Department works requested this project be brought to their lands.

#### Forest Corridor Project

The Forest Corridor Project aims to contribute to the ecological restoration of forest ecosystems and preservation of biodiversity in deforested villages within the rural commune of Kelilalina to connect Vohimasina (an area in Ranomafana National Park) and Ambarimena (an unprotected forest near Ampitambe village).

The initiative seeks to ensure sustainable development for local communities by creating a vast forest corridor. Reviving the forests not only preserves biodiversity, but also improves living conditions of the local population by creating opportunities for sustainable development.

#### SPICES/TSIRO Project

For this project, 210 kg of seeds were distributed to SPICES/TSIRO nurseries. Approximately 26,968 seedlings of native tree species were transplanted this year. Local farmers are becoming increasingly more interested in the combination of native tree species and their crops, and they are beginning to see the importance of native tree species in farmlands. This year's activities were focused on biodiversity monitoring of forest fragments and the mapping of the envisioned restoration sites.

As part of the TSIRO Alliance project, funded by USAID, four biodiversity surveys were conducted. Two study sites representing distinct habitats were targeted: Ambodivoangy and Ambodimarohita. The surveys focused on forest fragments as well as agricultural sites within the respective landscapes. Eight disciplines were studied to observe the different species present at each site.

During the surveys conducted in November and December, an unusual lemur was observed in the Ambodimarohita forest fragment, but its identification remains uncertain for the team. This lemur requires further investigation to determine its species accurately.



Findings of Biodiversity Surveys

**256** plant species

12 lemur species

10 small mammal species

*3* other mammal species

**60** bird species

**20** reptile species

**56** amphibian species

**39** insect families



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# Training Ecosystem Stewards for the Future of Madagascar

The Ecosystem Stewards program, developed at Centre ValBio, is a transformative initiative designed to train the next generation of conservation leaders. With support from Re:wild, this program is helping cultivate a new generation of conservation leaders—equipped with the skills, knowledge, and networks needed to protect Madagascar's biodiversity and drive systemic change.

By strengthening local capacity, the program ensures that those most connected to Madagascar's unique ecosystems—Indigenous Peoples and local communities—are empowered to lead conservation efforts.

The Ecosystem Stewards pilot program was designed to:

- Train 15 young adults (ages 18-25) from local communities to become conservation leaders and biodiversity experts.
- Leverage the knowledge of over 50 local biodiversity experts, who have been working in the field for decades, to mentor and train the next generation.
- Develop a curriculum and training model that can be expanded across Madagascar's protected areas.
- Provide hands-on experience with cuttingedge conservation tools (camera traps, GIS,

drone monitoring, and biodiversity assessments).

• Foster connections between communities and conservation organizations, ensuring that the next generation of conservationists is embedded in local systems.

The three-month training program covered:

- Biodiversity research skills (species identification, monitoring, and habitat assessments).
- Conservation technology training (camera traps, GIS mapping, and drone monitoring).
- Ecotourism and park management skills to provide economic incentives for conservation.
- Public speaking and leadership training to empower participants as conservation advocates.

- Launch of a 10-day Habitat Field Course where participants visited four diverse protected areas across Madagascar to broaden their understanding of ecosystem dynamics (rainforest, deciduous dry baobab forest, endemic spiny thicket, mangroves, and coral reefs).
- Community engagement initiatives where participants were encouraged to become more involved in local conservation advocacy by sharing their learning with their home communities and inspiring broader support for conservation action.

By January 2025, all participants in the Ecosystem Stewards program obtained jobs related to their training with the exception of one participant who enrolled in University of Fianarantsoa for environmental management.





#### Ecosystem Stewards English Practicum

In November, the Ecosystem Stewards embarked on their second cross-country journey—this time not as students, but as guides. They accompanied ICTE/CVB Program Officer Patricia Paladines and her two friends, Jeanne and Michael Compitello, who joined the trip to support the Stewards' continued development in English communication.

The Stewards, all recent graduates of a threemonth biodiversity training workshop at Centre ValBio, had previously expressed a strong desire to further improve their English language skills. In response, Patricia organized

an immersive, real-world learning experience With the support of her friends, the three Americans funded and joined the group on a trip modeled after Centre ValBio's Study Abroad programs.

Having completed a similar route during their 10-day Habitat Field Course, the Stewards were already familiar with the landscapes and ecosystems they would revisit. This time, however, their role had shifted—they now acted as guides, showcasing the beauty and ecological richness of Madagascar to English-speaking visitors while practicing their language skills in a practical setting.

Centre ValBio's Study Abroad Teaching Assistant Franck Naina Rabenahy also participated

in the trip, providing support along the way. The experience gave the Stewards valuable opportunities to apply their knowledge, build confidence, and enhance their ability to communicate in English—skills essential for future roles in conservation, research, and ecotourism.

"It is inspiring to be here with these young people who show such dedication to understanding and protecting the unique wildlife of their beautiful Madagascar," said Patricia Paladines.





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Stony Brook University

In May, we were honored with a visit from

Stony Brook University (SBU) Executive Vice

President and Provost Carl W. Lejuez and a

group of SBU administrators, including Paul

Atmospheric Sciences, and Jennifer Levine,

Institute for the Conservation of Tropical En-

vironment's (ICTE's) Senior Director of Devel-

opment. Centre ValBio (CVB) Advisory Board

member Tom Gillespie accompanied the SBU

team, supporters Sue and Mark Panella, and

Mary Brown of Re:wild.

Shepson, the Dean of the School of Marine and

**Provost Visits Centre** 

ValBio

Provost Lejuez visited CVB as part of a trip to visit SBU's African research centers: the Turkana Basin Institute (TBI) in Kenya and CVB in Madagascar. Over the course of five days, he took a tour of the research and training center, including the newly inaugurated SOS Biodiversity Centre Herbarium, and met with SBU researchers and students studying abroad. Provost Lejuez hiked through Ranomafana National Park, where he looked for various species of lemurs, including the golden bamboo lemur scientifically discovered by Dr. Patricia C. Wright. He also went on a birding trip in the highland forest of Vohiparara.

Provost Lejuez attended the closing ceremony of the Ecosystems Stewards program. He visited Ranomafana village to see CVB's education and health programs, the native tree reforestation program and arboretum, and medicinal plant gardens used by traditional healers. In Antananarivo, Provost Lejuez met with the U.S. Ambassador and officials from partner organizations and government agencies.

"Visiting our African research centers was something I've looked forward to since I arrived at SBU," said Provost Lejuez. "CVB, like the TBI, draws researchers from around the world to help protect incredible ecosystems and communities. SBU is a global campus with a global reach, thanks in part to our work in Madagascar and Kenya, and our partnership with SUNY Korea. We look forward to further collaboration with these outstanding sites to support our impact locally and globally."





mafana National Park, Ivohiboro Protected Area, Isalo National Park, a papermaking factory in Ambalavao, Anja Community Reserve, and other sites on their cross-country trip.

"You can read about what 90% deforestation means, but when you actually see and experience the expanse of it... It hits differently. And then it's almost thrown into even starker relief when you come back to your own community," said Kyra Tirana Barry.

Read about their journey and learn about additional opportunities to visit Madagascar organized by Centre ValBio.



#### Centre ValBio Board and Scientific Tourists Visit Madagascar

In October 2024, a group of scientists and professors, nonprofit leaders and advocates, and an international attorney traveled to Madagascar on a trip organized by Centre ValBio. Of the nine people who took the journey, two in the group were 13 years old and younger. They learned they all had much in common, but the first common denominator was their shared passion for adventure, exploration, and the environment. The travelers left from across the United States, ranging from the East Coast to the West, for their journey to Madagascar.

The travelers included Dr. Patrick O. Brown, Kyra Tirana Barry, Elizabeth Novogratz, Dr. William Ludington and his son, Dylan, Dr. KC Huang and his son, Jory, and Centre ValBio Advisory Board members Dr. Mark Krasnow and James Brumm.

"To see Madagascar through the eyes of first-time visitors, from our youngest travelers to our most experienced researchers, is always a powerful reminder of why we do this work: to inspire, to protect, and to connect people to Madagascar's beauty, its remarkable biodiversity, and the importance of conserving it for future generations," said Dr. Patricia C. Wright.

The group visited Centre ValBio and Rano-



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#### Seneca Park Zoo Visitors at Centre ValBio

Claudia Weber, Seneca Park Zoo sponsor of the Conservation Warrior Award won by Dr. Patricia C. Wright, and Claudia's daughter, Stephanie, visited Centre ValBio. Tom Snyder of Seneca Park Zoo accompanied them.

Over 100 children participated in the painting of a mural on the outside walls of Ranomafana's Nature Center. It was organized by Shawn Dunwoody, an award-winning artist. The mural features a black-and-white ruffed lemur (*Varecia variegata*) and the words, "Ny fianarana no lova tsara indrindra," which is Malagasy for "Education is the best legacy."







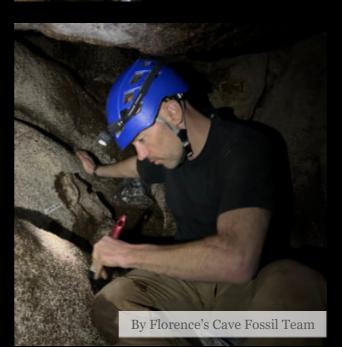
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#### Bones of Extinct Hippo Found in Cave in Ranomafana National Park

On November 9, three Centre ValBio (CVB) researchers—MJ Ingmanson, Michael Bliss, and Alicia del Prado-Rebordinos—climbed to the northern parcel of Ranomafana National Park to investigate a cave discovered by Stony Brook University (SBU) doctoral student Florence Aghomo in July. They found the cranium, mandible, jaw, humeri, femur, and canine of an extinct *Hippopotamus* sp. They mapped 13 adjacent caves in this mountainous pristine forest.





CVB lemur tech guide, Raherinirina Georges Toussaint, found a hippo canine in Cave 6 as well as promising deep mud deposits. Tanjononizaka William Kathy, a CVB biodiversity tech, led us to the cave. We were amazed to see a hippo skeleton in a pristine rainforest environment, which is notorious for poor fossil preservation. This is the first Malagasy fossil discovered in the ecosystem where it died.

In December, we invited two professors from the University of Antananarivo, Dr. Jean Freddy Ranaivoarisoa and Dr. Voajanahary Ranaivosoa; their two students, Mahazomila Raparitahina Andriamahery and Rakotonirainy Ny Kanto Sarobidy Tsiory; RNP staff and rangers; and the Chef de Cantonnement, Ministry of the Environment. As soon as his fall semester classes were finished, Dr. Dominic Stratford, SBU Professor and Director of Research at the Sterkfontein Caves in South Africa, joined us in Madagascar. Our CVB techs and the academics continued to explore the caves in the third week of December.

We thank The Leakey Foundation for sending us an emergency grant to support the reconnaissance. Seeing how fragile the mandible was, it was agreed that the hippo remains should be carefully removed and stored at CVB for further study. Ranomafana National Park and the Ministry gave us permission. We are anxious to date the fossil and the cave to see how long ago the hippos lived sympatric with our extant lemurs.

- Dr. Patricia C. Wright

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#### Winter Study Abroad

During the three-week winter session, seven students engaged in lectures and practical fieldwork at CVB while also participating in community-based activities. The program included a visit to Anja Community Reserve to observe ring-tailed lemurs and a cultural tour of the Queen's Palace in Antananarivo. Dr. Mónica A. Ramírez, a primatologist from Colombia, led the cohort, with Franck Naina Rabenahy as Teaching Assistant

As part of their academic training, students designed and conducted independent research projects and applied statistical and spatial analysis to their data. Amber Stephens studied Famadihana and elder care as Malagasy values. Akayda Spencer studied the future of conservation in Madagascar.

Other research topics included the difference, if any, of lemur conservation awareness for people living far from protected areas versus the awareness of people who live near lemurs; the feeding behavior of chameleons in Ranomafana; weather conditions and the frequency of vocalizations by Mantella baroni and Mantidactylus melanopleura; Mother and Infant Relationships of *Propithecus edwardsi*; and a film on lemurs in Ranomafana National Park (RNP). The program concluded with oral presentations, where students presented their research findings.

One of the SBU Winter Study Abroad students, Shawna Bonilavri, is returning to SBU as a graduate student in anthropology.

#### Summer Program

Six students joined us for the six-week summer course, which combined daily lectures with field exercises in primatology, focusing on habitat characterization, primate densities, spatial use, and social interactions. The students attended specialized lectures on Madagascar's geology, which enhanced their understanding of the island's biodiversity and ecological history. The Study Abroad program was led by Dr. Mónica A. Ramírez, a primatologist from Colombia, with Franck Naina Rabenahy as Teaching Assistant.

Students engaged in a cross-country trip to experience Madagascar's diverse ecosystems, conservation challenges, and cultural heritage. This journey provided a unique opportunity for field-based ecological training to strengthen their scientific research methodologies.

As part of the program, students had meetings with professors from SBU to share feedback and discuss potential program improvements. They also met with SBU Executive Vice President and Provost Carl Lejuez, emphasizing the importance of integrating more interdisciplinary studies and fieldwork opportunities into the curriculum.

Kamaria Josianna developed a website project on environmental awareness. Moon Khan focused on medicinal plants as an alternative to modern medicine. Anthony Ragone Moletteri studied the competition between frugivorous lemurs in RNP during periods of fruit scarcity.

Lydia Cuff researched the habitat disturbance effect on bird diets and biodiversity in the Madagascar rainforest.

Jack Obiol focused his project on testing the accuracy of the Family Biotic Index to assess water quality in and around RNP. Matthew McKenna studied secondary sightings and feeding strategies in June of the ave-ave (Daubentonia madagascariensis) in RNP.

The program culminated with oral presentations and scientific papers, allowing students to effectively communicate their findings and engage in academic discussions.

Both the winter and summer programs provided a multidisciplinary approach to conservation research by equipping students with essential skills in field methods, statistical analysis, and scientific communication.

With 13 students participating across both sessions, the 2024 SBU Study Abroad program at Centre ValBio successfully fostered academic growth, professional networking, and handson conservation experience. These programs continue to serve as a model for experiential learning and prepare students to become future researchers, conservationists, and global leaders in primatology and environmental sci-

- Dr. Mónica Ramírez



### Colorado State University Study Abroad

Centre ValBio (CVB) hosted 13 university students from Colorado State University (CSU) of Fort Collins, Colorado, U.S. in July 2024. The program was led by Dr. Jennie Willis, assisted by Suzie Halvorson, PSM, Brooke Squires, and the Madagascar branch of Raw Africa Eco Tours. The program, "Biology and Behavior of Primates in Madagascar," aims to allow students to perform academic field research focused on the lemur behavior. During their week at CVB, CSU students attended several guest lectures from current researchers, including a night of observing mouse lemur trapping and data collection. CSU students

performed ethograms on the Milne-Edwards's sifaka, golden bamboo lemur, and greater bamboo lemur in Ranomafana National Park (RNP). Each student used the information gathered to develop an observational behavior research project with the Lemurs of Palmarium. On one exceptional morning, the students spent their time observing and admiring Simone, the sole surviving greater bamboo lemur in RNP. An afternoon in Ranomafana village was complete with a swim in the local pool and a visit to the weavers. Night walks with Diamondra revealed the incredible diversity of chameleons, frogs, and invertebrate species; we were even able to spot several mouse lemurs with our red lights.

- Suzie Halvorson, PSM, LAT, CIG

#### CultureConnect

In the summer of 2024, a group of nine student ambassadors traveled to Madagascar for three weeks and visited Centre ValBio (CVB) as a part of MadagascarConnect, a program under CultureConnect. This was CultureConnect's fourth visit to Madagascar. The trip introduces high school freshmen and sophomores from Red Hook, New York, U.S. and Rhinebeck, New York, U.S. to the people, culture, environment, and economy of Madagascar. In the year leading up to the trip, students learned about the island nation through news articles, videos, and virtual collaboration with students from Zara Aina, a Madagascar-based NGO. The partnership would lead to further collaboration in Madagascar, with both groups

sharing culture through music, dance, the arts, and spending time together. Students also work closely with CVB, engaging with community leaders, teaching rudimentary English, participating in a reforestation project, and observing research. The students learned about conservation, took walks through the rainforest, and worked hands-on at CVB. Upon their return, the ambassadors developed art pieces based on their experiences, which were featured at Rhinebeck's Starr Library. Culture-Connect also works with Stony Brook University and Hay Kanto, a Madagascar-based NGO. "It taught me to have a different outlook on life, and how where you live every day is not an accurate representation of the world," a student said.

- Henry Frischknecht





#### American School of Antananarivo

Students from the American School of Antananarivo in Madagascar spent a week at Centre ValBio (CVB) in April 2024. Led by a group of parent volunteers, the twelve students ranged from grades 7 through 11 and were originally from China, Hong Kong, Japan, Madagascar, Switzerland, and the U.S. Before traveling to CVB, we hosted conversations with conservation biologists and natural resource management specialists to help the students appreciate the balance of economic development and environmental conservation and restoration. While at CVB, students explored the insectarium and research laboratories. They

also experienced the range of community activities that CVB supports. They visited CVB's tree nursery and planted seeds of endemic species to help with reforestation efforts, learned about agroforestry by visiting one of the SPICES project sites, met with women's cooperatives that support basketmaking and cloth weaving, and collaborated with CVB's Education Department to co-teach a lesson on environmental stewardship at one of the local primary schools. Day and night hikes in Ranomafana National Park were a highlight. where the students learned observation techniques and how to take field notes. On our last hike in the primary forest, we saw a greater bamboo lemur, which had not been sighted for over two months.

- Jessica Jester Quijada

#### Ecological and Epidemiological Modeling in Madagascar (E2M2)

E2M2 is an annual workshop that aims to introduce Malagasy graduate students in biology and medicine to the analysis and interpretation of epidemiological and ecological data in the programming language, R. A few interna-



tional students have also enrolled on several occasions. We hosted the sixth E2M2 for a week at Centre ValBio. While in class, students worked together, under the guidance of instructors, to learn how to describe their research ideas using mathematics and develop a plan to address them.

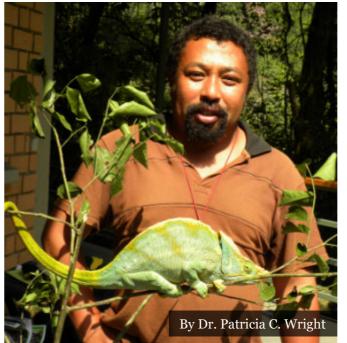
Several students who had previously studied in Ranomafana investigated the extent to which environmental variability in food access influences lemur foraging behavior. Another student hailing from Toliara questioned the local drivers of lobster population dynamics, while another residing in Antananarivo sought to explain

spatial variation in malaria seroprevalence.

Students worked hard on their science throughout the week but also enjoyed a morning hike in Ranomafana National Park and a night hike along the road to look for lemurs, chameleons, birds, and other wildlife. Lectures were interspersed with games, including one memorable afternoon in which we gathered in a circle by the Centre ValBio sign to play "Telephone" using English, French, and Malagasy

Though student research interests, instructor expertise, and general backgrounds may all be very different, at E2M2, we are always united by our love for nature and enthusiasm for new friends from around the world.









#### Highlighting Franck Naina Rabenahy

Franck Naina Rabenahy has been a part of Centre ValBio (CVB) since 2008. As Teaching Assistant, he handles the logistics for Stony Brook University's (SBU's) Study Abroad program at CVB. In his own words, Franck's job is "to make it work." He ties the program's details together such as calling restaurants, reserving hotel rooms, and teaching students basic words and sayings in Malagasy. "He's the dad in many ways," said Dr. Patricia C. Wright.

Franck was born in Antananarivo, Madagascar and received his master's degree at the University of Antananarivo in 2007. His thesis was on

fossil lemurs. "I like [my job] very much," said Franck. "I can share everything about my country. I can make [the students] happy."

Shawna Bonilavri, an SBU Study Abroad student in the winter program, reflected on her experience with Franck: "When I was in Madagascar, there was a day when I felt homesick. Franck was the first one to notice and cheer me up. He felt like an uncle, or a father figure, and was always there for me. He is always positive and fun to be around."

We are grateful to Franck for his commitment and enthusiasm. He has shaped the experiences of the many students who have participated in the Study Abroad program at CVB.



#### ATBC Conference

Dr. Patricia C. Wright attended the Association for Tropical Biology and Conservation's 2024 meeting in Kigali, Rwanda, where she hosted a dinner for over a dozen Malagasy students and professors.

Julieanne Montaquila, a third-year PhD candidate at Rice University, presented her research on the drivers of non-random host use by native hemiparasitic mistletoes in Ranomafana National Park (RNP). Mistletoes are aerial hemiparasitic shrubs, found in the canopies of woodlands worldwide. Hemiparasitic plants create their own energy with photosynthesis as a typical plant would, but also parasitize another plant for water and nutrients.



Bakerella is a genus of the showy mistletoe family (Loranthaceae), endemic to Madagascar. Researchers have emphasized this genus as a staple food source for lemurs and birds, but deeper research into the ecology and life history of *Bakerella* is rare.

In this poster presentation, Julieanne discussed preliminary findings that indicate:

- Even in the highly diverse rainforest of RNP, *Bakerella* mistletoes have very clear "preferences" for some tree species over others
- Some of the most common hosts of *Baker-ella* were among the more rare trees in the forest.

• Based on personal observation and pending results, lemur and bird dispersers may play an important role in directing the dispersal of *Bakerella* species to the host trees we see them on most often.

Alternatively, host compatibility may be more important than dispersal patterns in determining mistletoe parasitism of trees in RNP, indicated by the weak negative correlation between wood density and rates of infestation. Despite the public perception that parasites are "bad," mistletoes may actually be important for creating heterogeneity in the forest, altering nutrients and competition and contributing to biodiversity.

- Julieanne Montaquila



#### **COP16 Conference**

Dr. Patricia C. Wright and Dr. Benjamin Andriamihaja attended the 2024 COP16 UN Biodiversity Conference in Cali, Colombia as members of the Malagasy delegation. They also participated in a Side Event panel on the tropical research station model as an engine for conservation titled, "From Policy to Practice: The Role of Field Station Networks in Implementing Science-Based, Inclusive Conservation."

Research field stations like Centre ValBio are critical to conservation because they provide a dedicated, often long-term presence in unique ecosystems, enabling scientists to study environmental changes, biodiversity, and ecological processes in depth. These stations also play an important role in education and community engagement, functioning as hubs for training scientists, students, and local communities in conservation.



Calumma nasutum By Daniel Nicholson

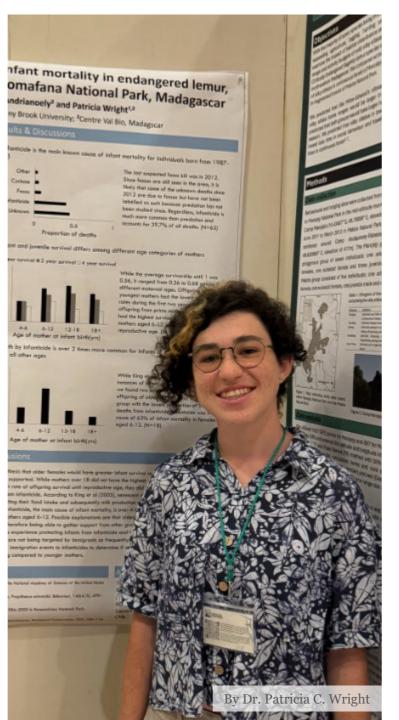
#### **ASP Conference**

I first worked with Ranomafana's Milne - Edwards's sifakas (*Propithecus edwardsi*) when I went to Centre ValBio in 2023 as part of the Study Abroad program. In 2024, I used Centre ValBio's long-term population data to study the causes and predictors of infant mortality in the sifakas. I particularly focused on cases of infanticide. I compiled 38 years of demographic data from the primary and secondary source datasets held by the Institute for the Conservation of Tropical Environments into a comprehensive and easily analyzable dataset that can be used by future researchers.

I am grateful for the support of Dr. Patricia C. Wright and Dina Andrianoely, Head of Biodiversity & GIS at Centre ValBio, along with the rest of the *Propithecus* team on this project. I was awarded a URECA travel grant to present a poster on my research at the American Society of Primatologists 2024 meeting in Mexico. This was my first ever academic conference, and I am honored I had the opportunity to attend and present at it.

I am excited to finalize this research and submit it for publication in 2025.

- Leah Schwarz









#### **AABA** Conference

It was a pleasure to attend the 93rd Annual Meeting of the American Association of Biological Anthropologists, held in Los Angeles, California, U.S. from March 20-23, 2024. This year's meeting brought together scholars from across the globe to share new insights into human and primate biology, evolution, and ecology. I presented research affiliated with Centre ValBio highlighting collaborative work involving students, researchers, and technicians from Centre ValBio.

Our study used DNA metabarcoding to investigate dietary niche partitioning among four sympatric species of cheirogaleid lemurs in Zombitse-Vohibasia National Park, Madagascar. The molecular data revealed fine-scale differences in arthropod consumption, with vertical forest strata emerging as a key driver of dietary divergence. These findings emphasize the value of high-resolution molecular tools in understanding species interactions and community ecology.

The conference offered a rich opportunity to share our work, connect with others in the field, and reflect on the broader implications of ecological research for conservation. I'm grateful to Stony Brook University, the Institute for the Conservation of Tropical Environments, and all of our collaborators for their support. I look forward to continuing this work in Madagascar and beyond.

- Dr. Amanda Rowe

Propithecus edwardsi

By Georges Rene Randrianirina

#### Alain Rasolo at The Safina Center Annual Celebration

Alain Rasolo, the Artist-in-Residence at Centre ValBio, returned to New York City, U.S. for the second year to present his work at The Safina Center 2024 Annual Celebration. This year marked his final year as a Safina Center Launchpad Fellow. Rasolo is one of the talented creators and connectors from around the world who address environmental concerns and social justice issues in unique ways ranging from film and art to writing and music.

Rasolo's achievements with The Safina Center this year include designing and supporting the construction of a 15-meter bridge within VOI Mitsinjo's forest; co-founding oloNala, a non-profit combining artistic expression and conservation in Ranomafana; and breaking ground at the site of what will soon be home to the oloNala Art Residency studio space, which will host Malagasy artists interested in using their art to promote conservation.

Erik Callender, founder of the Nature Center in Ranomafana, joined Rasolo at the celebration. Erik recorded his third season of his PBS children's series *Menghayati!* and launched the first issues of *Menghayati! Magazine* to connect children and families to the natural world. We applaud Rasolo, Erik, and the other Fellows for working toward the Center's mission to "advance the case for Life on Earth."











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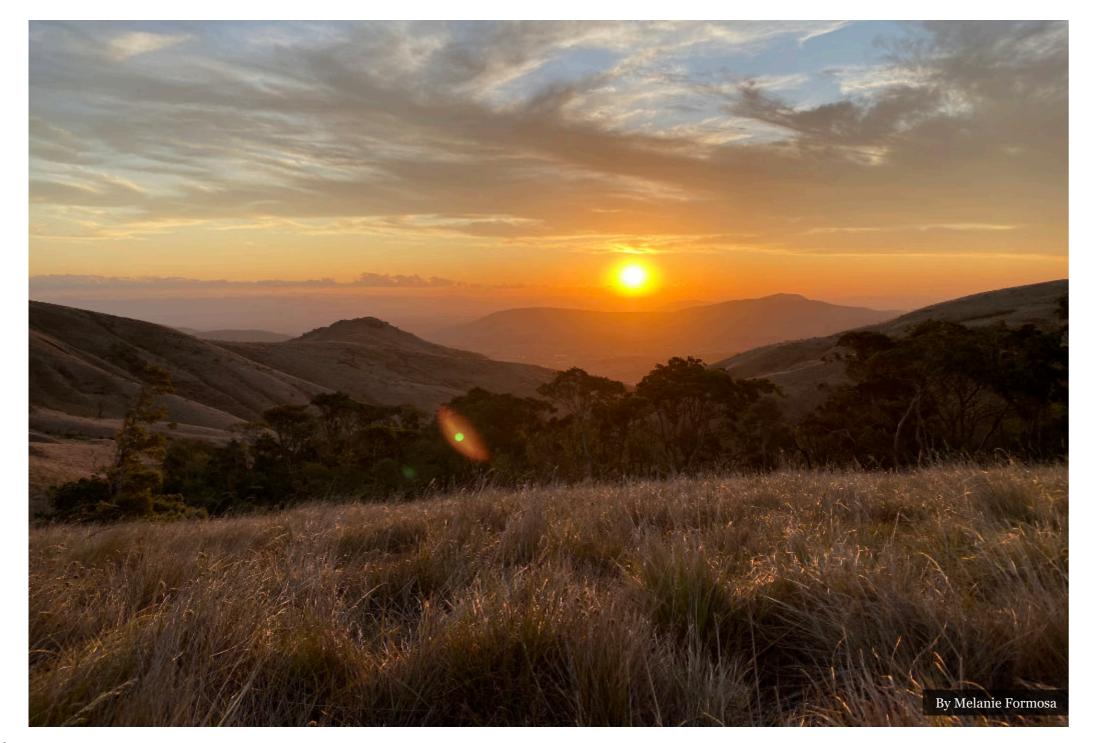
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#### Dorothy Lichtenstein October 26, 1939 – July 4, 2024

We are deeply saddened by the loss of our dear friend, Dorothy Lichtenstein, at 84 years of age. Dorothy was president of the Roy Lichtenstein Foundation and a philanthropist.

Dorothy Lichtenstein came to Madagascar in 2016 with her family, including Roy's sons, Mitch and David. Their enthusiasm for lemurs was delightful. Soon after we entered the trail at Vohiparara, a family of four sifakas leapt to the trail's edge and peered down curiously, less than ten feet from Dorothy. Then the sifakas reached down with their long arms to eat red fruits. She was enchanted.

Dorothy had come to my office at Stony Brook University to discuss this family trip. I could see she appreciated all that we had accomplished.

After her return, she graciously invited me to her home in Southampton. I had been in New York City in the 1960s when Roy and Pop Art were so influential. It was a privilege when Dorothy showed me Roy's studio where he worked for so many years.

Dorothy was a kind and gracious host. I remember when she was honored at the 19th Annual Stars of Stony Brook Gala in 2018, and she recounted her wonderful trip to Madagascar and Centre ValBio. She asked me to sit at her table of honor.

In the dark days of 2020, Dorothy's generous support helped us keep Centre ValBio afloat. Dorothy was wise, gracious, and always kind, but astute. We miss her.

– Dr. Patricia C. Wright







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- Ifanadiana and Lalangiana School Districts
- Mayors of the Communes of Ranomafana, Kelilalina, and Tsaratanana
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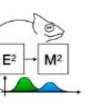


















































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