26-day wildlife trip to Madagascar September/October 2023

Jonas Livet & Rūta Vaicekauskaite



INTRODUCTION

Sometimes referred as the *eighth continent*, **Madagascar** is a unique destination situated in the Indian Ocean, off the east coast of Africa. It encompasses the island of Madagascar itself and numerous smaller peripheral islands, totalling 587,000 km². The human population is estimated as of 2023 to include almost 29 million inhabitants. It is also one of the less developed countries around the world, being classified 173rd on the latest 2021/2022 Human Development Report from the United Nations Development Programme (HDI 0.501).

Madagascar's **climate** is tropical along the coast, temperate inland and arid in the south. The island harbours numerous **habitats** including lush rain forests, tropical dry forests, plateaus and deserts. These are often classified in the following categories: lowland rainforest (0-700 m), midaltitude rainforest (700-1,200m), higher-elevation rainforest (1,200-2,000 m), eastern mid-altitude wetlands, western dry forest, southern spiny forest, western wetlands, and highland grassland and savanna. Approximately 20% of Madagascar is covered with **primary forest**. Of this, just under half is rainforest; western dry forest covers about one-third and the remainder is southern spiny forest. The rest of Madagascar is covered by a mixture of grassland, secondary forest, plantations, urban areas and tree savanna.

The Malagasy region contains one of the **most extraordinary concentrations of wildlife** in the world. It holds the most distinct assemblage of vertebrates, in terms of evolutionary history, after the Australian region, despite being the smallest of all the world's faunal regions. The hallmark of the flora and fauna of the Malagasy region is not necessarily their diversity, but their remarkable levels of **endemism**, which is marked not only at the species level (approximately 90% of all plant and animal species found in Madagascar are endemic!), but also at higher taxonomic levels. The islands support eight plant families, six bird families (two being also endemic orders) and eight mammal families that all live nowhere else on the planet!

The Malagasy **mammal** diversity is extraordinary with 219 native terrestrial species (of which 96.8% are endemic!) and some 34 marine species recorded in the surrounding waters. Eight mammal families are endemic to Madagascar, namely *Tenrecidae*, all five lemur families, a bat family (*Myzopodidae*) and the local carnivores (*Eupleridae*). The Malagasy region **avifauna** is striking in that, when compared to other island regions of similar size, it is relatively poor in species (382 bird species regularly occurring) but rich in endemics (41% of those species!). The native **amphibians** of Madagascar are all endemic, with 341 known species and an additional 200 possible species still under scrutiny. **Reptiles** are represented in Madagascar by 417 species, 98% of which are endemic, including two endemic families.

Madagascar's varied fauna and flora are **highly endangered** by human activity and this is strikingly visible when traveling around the island! Continuous deforestation and habitat fragmentation (mainly due to slash-and-burn agriculture, but also logging, mining, charcoal production, etc.), introduced invasive species, hunting and live capture (mainly of lemurs, but also of various reptiles and amphibians), and climate change (including severe droughts and desertification, especially in the southern areas) are some of the threats faced by the Malagasy biodiversity in the recent decades! The situation of many species is now dramatic and very few wildlife remain outside of the protected areas. Lemurs are considered one of the planet most threatened group of vertebrates with a quarter of all lemurs classified as Critically Endangered on the IUCN Red List and more than 90% of all 108 lemur species now endangered!

A resurgence of focus in view of **protecting major habitats** of Madagascar has been observed during the last two decades and the network of protected areas has dramatically evolved. Altogether some 120 officially decreed protected areas are now recognized and cover almost 72,000 km² (12% of Madagascar). These are managed by a wide range of organizations, the Malagasy government itself (43 protected areas managed through the Madagascar National Parks organization), but also national and international non-governmental organizations, as well as local community associations.



We travelled through Madagascar for 26 days from the very end of September well into October 2023. Wildlife activity in Madagascar is usually considered to be at its peak from the third week in September to the beginning of December. This is Madagascar's spring and when young lemurs are born, birds are on their breeding territories and the hibernating dwarf lemurs, tenrecs and majority of reptiles and frogs will be active and most visible.

We decided to focus on **five main areas** in view of the species we were hoping to observe and considering the logistics to reach these areas (see full travel itinerary below): Nosy Be in the north-west, Ranomafana, Kirindy (north of Morondava), Andasibe and Masoala. We added a



couple of days in Antananarivo at the end of the trip to have flexibility and back-up in case of any last-minute change along our itinerary and to visit some zoological institutions and birding sites near the capital city.

For the bulk of the trip from Ranomafana to Masoala, we travelled with two hardcore mammal-watchers: Alex Meyer and Tomer Ben-Yehuda. I would like to thank them both here for their dedication in finding mammals during our trip and for all the shared moments, discoveries, sightings, lengthy discussions and great fun!

During our stay in Madagascar, we were able to observe a total of **318 wildlife species**, including **78 mammal species**, **120 bird species**, 15 amphibian species and 51 reptile species.

We observed 42 lemur species (from the 47 species we were in the natural range, missing therefore only five species of the *Cheirogaleidae* family). The unique Indri, three species of Sifakas (*verreauxi*, *diadema* and *edwardsi*), the Aye-aye, seven species of Sportive Lemurs, three species of Woolly Lemurs and seven species of Mouse Lemurs were among the numerous highlights of our trip! We were also lucky to observe four of the eight endemic carnivores (Fossa, Spotted Fanaloka, Ring-tailed Vontsira, and Bokyboky were all seen), some seven species of Tufted-tail Rats, the Critically Endangered Malagasy Giant Jumping Rat and fourteen bat species!

Among the sighted birds, the **White-breasted Mesite** in Kirindy Forest was a highlight, been an Order lifer for us

(we missed the Brown Mesite both in Ranomafana and Masaoala). We saw **eight species of Couas** (all the ones we could potentially see on our itinerary) as well as **eleven species of Vangas** (including the stunning Helmet Vanga!), and two species of **Ground-Rollers**. The **Madagascar Flufftail** was a hard one to get: we heard it multiple times in Ranomafana and Andasibe, but it is only the very last morning we spent near Andasibe that we were actually able to observe this shy bird! Here are a **few other bird species** that made a special impression during out trip: the Endangered Malagasy Pond-Heron, the Madagascar Ibis (two birds seen in Kirindy Forest), the beautiful and endemic White-browed Owl (in Kirindy Forest), the two local species of Kingfishers, the Velvet Asity and the Common Sunbird-Asity, among many others!



Madagascar is home to about half the world's 200 or so species of chameleons. We encountered a total of **15 species of chameleons** in the various areas we visited from the Minute Leaf Chameleon (*Brookesia minima*) to the gigantic Parson's Chameleon (*Calumma parsonii*) and Oustalet's Giant Chameleon (*Furcifer oustaleti*). Boettger's Chameleon (*Calumma boettgeri*) on Nosy Be and Nicosia's Chameleon (*Furcifer nicosiai*) in Kirindy Forest were probably among the most rarely seen chameleons we were lucky to observe.







Transport may be challenging in Madagascar and available options will definitely shape one's itinerary. We used a combination of internal flights with **Air Tsaradia**, private drivers, and boat transfers. Road conditions are relatively poor and can be very bad in some areas, making road transportation long and exhausting. Air Tsaradia has a reputation of being unreliable. From our five booked internal flights with Air Tsaradia, one got cancelled (months in advance which gave us enough time to reschedule our itinerary, more on that later) and three were either advanced or delayed for a few hours (usually with announcement two to three days in advance). The pre-announcement of flight time change was actually efficient and mostly avoided us to have long wait at the airports.

Drive duration depends very much on where you are, the condition of the road, time of the drive, but also the vehicle itself and the driver's skills and abilities. In the specific case of the areas we visited, one should be expecting relatively long journeys in-between visited sites!

While we organized our stay on Nosy Be (and nearby Ambanja) and in Antananarivo on our own, we booked the service of **Patrick Randrianantenaina** for the core 18-day itinerary including Ranomafana, Kirindy, Andasibe and Masoala. Patrick can be directly contacted at patrickv7v@gmail.com or on WhatsApp at +261 34 71 864 33. See also https://www.instagram.com/patrick_madagascar_tourguide/. Patrick grew up near Ranomafana, and his father has worked for many years in the local national park (and in some other protected areas) helping numerous scientists with research projects. Patrick started as a local guide in Parc National de Ranomafana, while growing his interest for herps. He has gradually extended his guiding activities by organizing his own tours dedicated to finding herps, mainly around Ranomafana. It is a couple of years now that Patrick has extended further his services to include mammal-watching tours. Patrick speaks Malagasy, French and perfect English, and would be able to organise a trip anywhere in Madagascar, helping perfecting one's itinerary, arranging for vehicles,

accommodation and local guides and, of course, accompanying you around the country. Patrick is a dedicated young man, very friendly and a person with whom we really enjoyed spending time! His organization and support in Ranomafana was especially helpful and we could see that he knew very well the local context, the local guides, researchers and specific wildlife areas.

All in all, for the rest of the trip outside Ranomafana, logistics on the grounds, especially related with meals (when and where to eat) and accommodation, were somehow and in some instances quite chaotic and necessitated our active input more than once. The logistic related with local guides and the where and when to go was not always straightforward and definitely lacked flexibility along the way. I acknowledge that our wide interest for biodiversity as a whole (mammals and birds requiring sometimes conflicting approaches) and the fact we were four persons with different goals and needs may have not make things easy, but I would advise having a very clear plan and agreed schedule ahead, and checking the logistics at regular intervals.



At each visited location and in each national park or protected area, we connected with local guides whom guided us for various length of times, from a couple of hours walk to several days in a row in a particular area. Commitment and knowledge of local guides varied greatly from one person to the next, and from one area to another. Some of them stand out by their understanding of wildlife and their guiding abilities. I have written down in this report a few names and contact details of some of the guides we especially appreciated spending time with.

On another note, there is a general trend in Madagascar to attract mammals by food (especially mouse lemurs with banana smashed against tree trunk, for example along the road crossing Parc National de Ranomafana) and to approach birds in manners not always fully respectful for the animals. We are not supportive of such approaches and were in some instances distressed by behaviours of local guides. Similarly, we encountered at various occasions, especially in Ranomafana and Andasibe, large groups of tourists whom have no clue about how to approach wildlife and which distance to keep from the observed animals and whom clearly were impacting local wildlife negatively. All these are only adding to the existing numerous threats faced with wildlife on the island!

We were extremely happy to travel through Madagascar and to discover a small piece of its extremely interesting and unique biodiversity! It is really a very unique wildlife area where many amazing and special animal species can be seen. We felt lucky to observe a few of these and to learn more about their current situation in the wild, to hear about the on-going conservation actions to protect them and to meet some of the men and women involved on the ground for their preservation! We feel a urge to come back to see more while it will still be around and to try to help and to make this island and its unique biodiversity better known and respected.

Jonas Livet & Rūta Vaicekauskaite, jonaslivet@gmail.com Kehl, 18th December 2023

This report is organized as follows:

- ✓ Full travel itinerary with details of places visited and accommodation used (pages 5 and 6)
- ✓ Summarized list of the 78 mammal species observed (pages 7 and 8) and summarized list of the 120 bird species observed (pages 9 to 11)
- ✓ Brief illustrated **presentation and description of the areas visited**:
 - o Nosy Be & Ambanja (pages 12 to 15)
 - o Parc National de Ranomafana & Kianjavato (pages 16 to 20)
 - o Forêt de Kirindy (pages 21 to 24)
 - o Andasibe Area (pages 25 to 28)
 - O Parc National de Masoala & Farankaraina (pages 29 to 33)
 - o Antananarivo (pages 34 to 36)
- ✓ **Selected bibliography** and recommended readings (page 37)
- ✓ **Detailed list of all the species seen** (mammals, birds and others) with details and comments about the locations and the actual observations (pages 38 and 45)
- ✓ Selection of some pictures taken during the trip (out of the 35,600 pictures shot!) (pages 46 and 275)

TRAVEL ITINERARY MADAGASCAR SEPTEMBER / OCTOBER 2023 (1/2)

27/09/2023: Departure from Strasbourg and take-off from Paris CDG 19:30 28/09/2023: Arrival in Nosy Be NOS 10:05 (after stopover in La Réunion) + Visit Lemuria Land (Andoany) [14:45 to 17:00] Stay in Le Moya Beach (Nosy Be, 1 night) 29/09/2023: Whale watching with Les Baleines Rand'eau [8:30 to 16:30] + Night walk near **Ampasipohy / Parc National de Lokobe** [18:30 to 21:45] Stay in Zara Village (Nosy Be, 1 night) 30/09/2023: Morning walk near Ampasipohy / Parc National de Lokobe [6:30 to 8:45] + Boat ride and drive to Ambanja (9:30 to 13:00) + Night walk around **Antranokarany** [18:00 to 21:00] Stay in Khaïr Lodge (Ambanja, 1 night) 01/10/2023: Drive and boat ride to Nosy Komba (7:45 to 10:15) + Visit on Nosy Komba including Biby Havantsika [10:15 to 14:30] + Boat ride back to Nosy Be (15:00 to 16:00) Stay in Le Moya Beach (Nosy Be, 1 night) 02/10/2023: Bird walk along the beach near **Dzamandzar** [8:00 to 10:00] + Visit to **Mont Passot** [14:00 to 15:15] + Flight Nosy Be NOS > Antananarivo TNR (21:10 to 22:55) + Drive to south of Antananarivo (23:15 to 00:00) Stay in BG Tours (Antananarivo, 1 night) <u>03/10/2023:</u> Drive to Ranomafana (400 km / 6:00 to 19:00) + Night walk along main road near Parc National de Ranomafana [19:30 to 21:45] Stay in Setam Lodge (Ranomafana, 2 nights) 04/10/2023: Morning walk in Talatakely / Parc National de Ranomafana [7:00 to 13:00] + Afternoon walk in Vohiparara / Parc National de Ranomafana [15:30 to 18:30] + Night walk along main road near Parc National de Ranomafana [18:30 to 20:30] Stay in Setam Lodge (Ranomafana, 2 nights) 05/10/2023: Drive to Kianjavato (70 km / 8:30 to 10:45) + Afternoon and night walk in Sanga Sanga Forest near Kianjavato Ahmanson Field Station [14:15 to 20:00] Stay in Kianjavato Ahmanson Field St. (1 night) <u>06/10/2023:</u> Drive to Ranomafana (70 km / 6:15 to 8:15) + Morning walk in Vohiparara / Parc National de Ranomafana [8:45 to 12:45] + Afternoon walk in Talatakely / Parc National de Ranomafana [14:45 to 18:15] + Night walk near the village of Ranomafana in search of the Web-footed Shrew Tenrec [18:15 to 21:00] Stay in Setam Lodge (Ranomafana, 1 night) 07/10/2023: Drive to Antananarivo (400 km / 7:00 to 22:30) + Stopover in Forêt d'Ankazomivady [11:00 to 12:00] Stay in Gassy Country House (Antanan., 1 night) <u>08/10/2023:</u> Flight Antananarivo TNR > Morondava MOQ (10:40 to 11:55) + Drive to Marofandilia (50 km / 12:45 to 14:15) + Afternoon and night walk near **Akiba Lodge Marofandilia** [15:15 to 21:15] Stay Akiba Lodge Marofandilia (1 night) <u>09/10/2023:</u> *Drive to Kirindy Forest (15 km / 6:00 to 6:30)* + Morning walk in Forêt de Kirindy [6:45 to 10:15] + Bat catching in **Marofandilia** [16:15 to 20:15] + Night walk in Forêt de Kirindy in search of Giant Jumping Rat [20:45 to 1:00] Stay in Kirindy Eco Lodge (3 nights) 10/10/2023: Morning walk in Forêt de Kirindy [7:00 to 10:00] + Afternoon walk in Forêt de Kirindy [15:30 to 17:45] + Night walk in Forêt de Kirindy in search of Giant Jumping Rat [19:00 to 21:00] Stay in Kirindy Eco Lodge (3 nights) 11/10/2023: Morning walk in Forêt de Kirindy [10:00 to 12:30] + Afternoon walk in Forêt de Kirindy [15:45 to 18:00] + Night walk in Forêt de Kirindy [19:45 to 22:30] Stay in Kirindy Eco Lodge (3 nights) 12/10/2023: Drive to Morondava (60 km / 8:15 to 12:15) + Stopover at Akiba Lodge Marofandilia [9:00 to 10:00] and Avenue des Baobabs [11:00 to 11:30] + Flight Morondava MOQ > Antananarivo TNR (15:10 to 16:20) + Drive to Andasibe (150 km / 16:45 to 21:30) Stay in Marie Guesthouse Andasibe (1 night)

13/10/2023: Morning walk in Parc National d'Analamazaotra [7:00 to 13:00]

+ Afternoon in Parc Villageois V.O.I.M.M.A. [15:30 to 18:00]

+ Night walk in **Parc Mitsinjo** [18:00 to 21:00] Stay in Hotel Feon'ny Ala (Andasibe, 2 nights)

14/10/2013: Full day walk in Réserve de Ressources Naturelles de Maromizaha [8:45 to 21:00]

Stay in Hotel Feon'ny Ala (Andasibe, 2 nights)

TRAVEL ITINERARY MADAGASCAR SEPTEMBER / OCTOBER 2023 (2/2)

15/10/2023: Visit Vakona Forest Lodge [8:00 to 11:00]

- + Drive to Antananarivo (150 km / 13:30 to 20:00)
- + Stopover in Reserve Peyrieras Madagascar Exotic (Marozevo) [16:00 to 17:00]

Stay in Gassy Country House (Antanan., 1 night)

16/10/2023: Flight Antananarivo TNR > Maroantsetra WMN (11:35 to 12:50)

- + Boat ride to Farankaraina (14:15 to 16:15)
- + Afternoon and night walk in **Poste Forestier de Farankaraina** [16:30 to 22:45] Camping in Farankaraina (1 night)

17/10/2023: Boat ride to Masoala (6:30 to 10:00)

- + Morning walk around Chez Arol near Parc National de Masoala [10:45 to 12:30]
- + Afternoon walk day around Chez Arol near Parc National de Masoala [15:00 to 18:00]
- + Night walks around Chez Arol near Parc National de Masoala [18:00 to 19:45 & 20:45 to 23:30]

Stay in Ecolodge Chez Arol (Masoala, 2 nights)

18/10/2023: Morning walk in Parc National de Masoala [6:30 to 12:00]

- + Afternoon and night walk around Chez Arol near Parc National de Masoala [15:00 to 19:30]
- + Night walk around Chez Arol near Parc National de Masoala [20:15 to 22:45] Stay in Ecolodge Chez Arol (Masoala, 2 nights)

19/10/2023: Boat ride to Mananara (5:30 to 8:00)

+ Drive to Manakalana (135 km / 8:15 to 22:30)

Stay in unnamed hotel in Manakalana (1 night)

20/10/2023: Drive to Toamasina (155 km / 7:30 to 16:15)

- + Stopover in Parc Zoologique Ivoloina (Toamasina) [13:00 to 15:45]
- + Flight Toamasina TMM > Antananarivo TNR (19:00 > 20:00)

Stay in Lamina 3 (Antananarivo, 3 nights)

21/10/2023: Visit Lemurs' Park (Imerintsiatosika) [9:45 to 12:00]

+ Visit Parc Botanique et Zoologique de Tsimbazaza [14:00 to 17:00]

Stay in Lamina 3 (Antanananrivo, 3 nights)

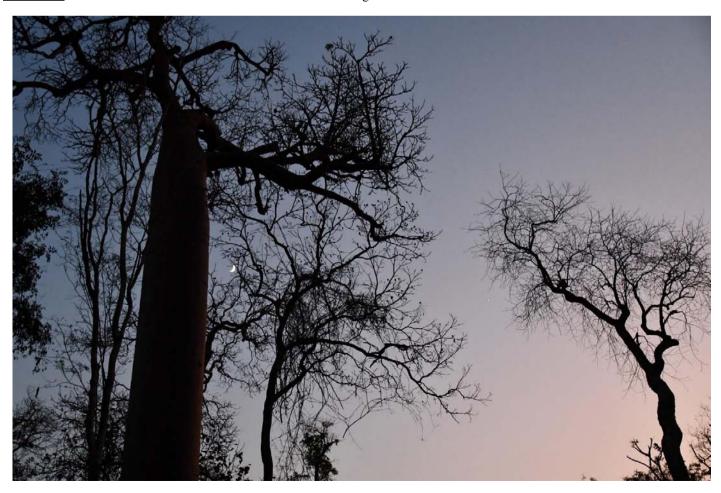
22/10/2023: Birdwatching in Parc Tsarasaotra [6:45 to 9:30]

- + Visit Croc Farm Ivato [11:00 to 13:30]
- + Late afternoon birding in **Parc Tsarasaotra** [16:00 to 17:00]

Stay in Lamina 3 (Antanananrivo, 3 nights)

23/10/2023: Departure from Antananarivo TNR at 11:55 + stopover in Saint-Denis (La Réunion)

24/10/2023: Arrival in Paris CDG at 5:30 and final arrival in Strasbourg at 11:05



LIST OF THE 78 MAMMAL SPECIES OBSERVED

Afrosoricida > Tenrecidae / Tenrecs (4 species)

- Greater Hedgehog Tenrec (Setifer setosus)
- Lowland Streaked Tenrec (Hemicentetes semispinosus)
- Dobson's Shrew Tenrec (Nesogale dobsoni)
- Pale Shrew Tenrec (Microgale fotsifotsy)

Primates > Cheirogaleidae / Mouse, giant mouse, dwarf and fork-marked lemurs (16 species)

- Grey Mouse Lemur (Microcebus murinus)
- Jolly's Mouse Lemur (*Microcebus jollyae*)
- Nosy Be Mouse Lemur (*Microcebus mamiratra*)
- Goodman's Mouse Lemur (*Microcebus lehilahytsara*)
- Madame Berthe's Mouse Lemur (Microcebus berthae)
- Rufous Mouse Lemur (*Microcebus rufus*)
- Mouse Lemur (Microcebus sp.) [undescribed species occurring in Masoala and Farankaraina]
- Northern Giant Mouse Lemur (Mirza zaza)
- Sibree's Dwarf Lemur (Cheirogaleus sibreei)
- Fat-tailed Dwarf Lemur (Cheirogaleus medius)
- Greater Dwarf Lemur (Cheirogaleus major)
- Groves's Dwarf Lemur (Cheirogaleus grovesi)
- Crossley's Dwarf Lemur (Cheirogaleus crossleyi)
- Dwarf Lemur (Cheirogaleus sp. [major] CCS5) [undescribed species occurring in eastern Madagascar]
- Pale Fork-marked Lemur (*Phaner pallescens*)
- Sambirano Fork-marked Lemur (*Phaner parienti*)

Primates > Lepilemuridae / Sportive lemurs (7 species)

- Masoala Sportive Lemur (Lepilemur scottorum)
- Seal's Sportive Lemur (*Lepilemur seali*)
- Weasel Sportive Lemur (*Lepilemur mustelinus*)
- Red-tailed Sportive Lemur (Lepilemur ruficaudatus)
- Small-toothed Sportive Lemur (Lepilemur microdon)
- Gray's Sportive Lemur (Lepilemur dorsalis)
- Nosy Be Sportive Lemur (Lepilemur tymerlachsoni)

Primates > Lemuridae / Bamboo, true and ruffed lemurs (11 species)

- Grey Bamboo Lemur (Hapalemur griseus griseus)
- Northern Bamboo Lemur (Hapalemur occidentalis)
- Golden Bamboo Lemur (Hapalemur aureus)
- Greater Bamboo Lemur (*Prolemur simus*)
- Brown Lemur (Eulemur fulvus)
- Red-fronted Brown Lemur (Eulemur rufifrons)
- White-fronted Brown Lemur (Eulemur albifrons)
- Black Lemur (*Eulemur macaco*)
- Red-bellied Lemur (*Eulemur rubriventer*)
- Black-and-white Ruffed Lemur (Varecia variegata editorum)
- Red Ruffed Lemur (Varecia rubra)

Primates > Indriidae / Wooly lemurs, sifakas and indri (7 species)

- Eastern Woolly Lemur (Avahi laniger)
- Masoala Woolly Lemur (Avahi mooreorum)
- Peyriéras's Woolly Lemur (Avahi peyrierasi)
- Verreaux's Sifaka (Propithecus verreauxi)
- Diademed Sifaka (Propithecus diadema)
- Milne-Edwards's Sifaka (Propithecus edwardsi)
- Indri (Indri indri)

Primates > Daubentonia / Aye-aye (1 species)

• Aye-aye (Daubentonia madagascariensis)













Rodentia > Nesomvidae / Pouched rats, climbing mice and fat mice (11 species)

- White-tailed Tree Rat (Brachytarsomys albicauda)
- Grandidier's Tufted-tail Rat (Eliurus grandidieri)
- Ellerman's Tufted-tail Rat (Eliurus ellermani)
- Tanala Tufted-tail Rat (Eliurus tanala)
- Western Tufted-tail Rat (Eliurus myoxinus)
- Lesser Tufted-tail Rat (Eliurus minor)
- Webb's Tufted-tail Rat (Eliurus webbi)
- Tufted-tail Rat (Eliurus sp.) [undescribed species recently found in Kirindy]
- Western Big-footed Mouse (Macrotarsomys bastardi)
- Malagasy Giant Jumping Rat (Hypogeomys antimena)
- Lowland Red Forest Rat (Nesomys audeberti)

Rodentia > Muride / True mice and rats, gerbils and relatives (1 species)

Roof Rat (Rattus rattus) Introduced

Chiroptera > Pteropodidae / Old world fruit bats (3 species)

- Madagascar Rousette (Rousettus madagascariensis)
- Madagascar Straw-coloured Fruit Bat (Eidolon dupreanum)
- Madagascar Flying Fox (Pteropus rufus)

Chiroptera > Hipposideridae / Old world leaf-nosed bats (1 species)

Commerson's Leaf-nosed Bat (Macronycteris commersonii)

Chiroptera > Emballonuridae / Sheath-tailed bats (1 species)

Peters's Sheath-tailed Bat (Paremballonura atrata)

Chiroptera > Myzopodidae / Madagascar sucker-footed bats (1 species)

Eastern Sucker-footed Bat (Myzopoda aurita)

Chiroptera > Molossidae / Free-tailed bats (4 species)

- Peters's Goblin Bat (Mormopterus jugularis)
- Grandidier's Lesser Free-tailed Bat (Mops leucogaster)
- Midas's Free-tailed Bat (Mops midas)
- Malagasy Large White-bellied Free-tailed Bat (Mops leucostigma)

Chiroptera > Miniopteridae / Long-fingered bats (1 species)

Major's Long-fingered Bat (Miniopterus majori)

Chiroptera > Vespertilionidae / Vesper bats (3 species)

- Racey's Pipistrelle (Pipistrellus raceyi)
- Dark Madagascar Pipistrelle (Hypsugo bemainty)
- Malagasy Mouse-eared Bat (Myotis goudotii)

Cetartiodactyla > Balaenopteridae / Rorquals (2 species)

- Humpback Whale (Megaptera novaeangliae)
- Omura's Whale (Balaenoptera omurai)

Carnivora > Eupleridae / Madagascar carnivores (4 species)

- Fossa (*Cryptoprocta ferox*)
- Spotted Fanaloka (Fossa fossana)
- Ring-tailed Vontsira (Galidia elegans elegans)
- Bokyboky (Mungotictis decemlineata decemlineata)













LIST OF THE 120 BIRD SPECIES OBSERVED

Anatidae / Ducks, Geese, and Waterfowl (6 species)

- White-faced Whistling-Duck (Dendrocygna viduata)
- Knob-billed Duck (Sarkidiornis melanotos)
- Muscovy Duck (Cairina moschata)
- Blue-billed Teal (Spatula hottentota)
- Meller's Duck (*Anas melleri*)
- Red-billed Duck (Anas erythrorhyncha)

Numididae / Guineafowl (1 species)

• Helmeted Guineafowl (Numida meleagris)

Columbidae / Pigeons and Doves (5 species)

- Rock Pigeon (Columba livia)
- Malagasy Turtle-Dove (Nesoenas picturatus picturatus)
- Namaqua Dove (Oena capensis aliena)
- Madagascar Green-Pigeon (Treron australis xenius & T. a. australis)
- Madagascar Blue-Pigeon (Alectroenas madagascariensis)

Mesitornithidae / Mesites (1 species)

• White-breasted Mesite (Mesitornis variegatus)

Cuculidae / Cuckoos (8 species)

- Crested Coua (Coua cristata dumonti)
- Blue Coua (Coua caerulea)
- Red-fronted Coua (Coua reynaudii)
- Coquerel's Coua (Coua coquereli)
- Giant Coua (Coua gigas)
- Red-breasted Coua (Coua serriana)
- Malagasy Coucal (Centropus toulou toulou)
- Madagascar Cuckoo (Cuculus rochii)

Caprimulgidae / Nightjars and Allies (2 species)

- Collared Nightjar (Gactornis enarratus)
- Madagascar Nightjar (Caprimulgus madagascariensis madagascariensis)

Apodidae / Swifts (1 species)

Malagasy Palm Swift (Cypsiurus gracilis gracilis)

Sarothruridae / Flufftails (2 species)

- Madagascar Wood-Rail (Mentocrex kioloides kioloides)
- Madagascar Flufftail (Sarothrura insularis)

Rallidae / Rails, Gallinules, and Coots (2 species)

- White-throated Rail (Dryolimnas cuvieri cuvieri)
- Eurasian Moorhen (Gallinula chloropus pyrrhorrhoa)

Charadriidae / Plovers and Lapwings (3 species)

- Black-bellied Plover (*Pluvialis squatarola*)
- Greater Sand-Plover (Charadrius 9ariegate9tia)
- White-fronted Plover (Charadrius marginatus tenellus)

Scolopacidae / Sandpipers and Allies (4 species)

- Whimbrel (Numenius phaeopus phaeopus)
- Sanderling (Calidris alba)
- Madagascar Snipe (Gallinago macrodactyla)
- Common Sandpiper (Actitis hypoleucos)

Turnicidae / Buttonquail (1 species)

Madagascar Buttonquail (Turnix nigricollis)

Glareolidae / Pratincoles and Coursers (1 species)

• Madagascar Pratincole (Glareola ocularis)

Laridae / Gulls, Terns, and Skimmers (5 species)

- Bridled Tern (Onychoprion anaethetus antarcticus)
- Roseate Tern (Sterna dougallii)
- Common Tern (Sterna hirundo hirundo)
- Great Crested Tern (Thalasseus bergii thalassinus)
- Lesser Crested Tern (Thalasseus bengalensis bengalensis)

Phaethontidae / Tropicbirds (1 species)

• White-tailed Tropicbird (Phaethon lepturus lepturus)













Fregatidae / Frigatebirds (2 species)

- Lesser Frigatebird (Fregata ariel iredalei)
- Great Frigatebird (Fregata minor aldabrensis)

Phalacrocoracidae / Cormorants and Shags (1 species)

• Long-tailed Cormorant (Microcarbo africanus pictilis)

Scopidae / Hamerkop (1 species)

• Hamerkop (Scopus 10ariegat 10ariegat)

Ardeidae / Herons, Egrets, and Bitterns (10 species)

- Humblot's Heron (Ardea humbloti)
- Purple Heron (Ardea purpurea madagascariensis)
- Great Egret (Ardea alba melanorhynchos)
- Little Egret (*Egretta garzetta dimorpha*)
- Black Heron (Egretta ardesiaca)
- Cattle Egret (Bubulcus ibis ibis)
- Squacco Heron (Ardeola ralloides)
- Malagasy Pond-Heron (Ardeola I)
- Striated Heron (Butorides striata rutenbergi)
- Black-crowned Night-Heron (Nycticorax nycticorax nycticorax)

Threskiornithidae / Ibises and Spoonbills (1 species)

Madagascar Ibis (Lophotibis cristata urschi)

Accipitridae / Hawks, Eagles, and Kites (5 species)

- Madagascar Harrier-Hawk (Polyboroides radiatus)
- Malagasy Harrier (Circus macrosceles)
- Frances's Sparrowhaw (Accipiter francesiae francesiae)
- Black Kite (Milvus migrans parasitus)
- Madagascar Buzzard (Buteo brachypterus)

Tytonidae / Barn-Owls (1 species)

• Barn Owl (Tyto alba poensis)

Strigidae / Owls (2 species)

- Madagascar Scops-Owl (Otus rutilus rutilus & O. r. madagascariensis)
- White-browed Owl (Athene superciliaris)

Leptosomidae / Cuckoo-roller (1 species)

• Cuckoo-roller (Leptosomus discolor discolor)

Upupidae / Hoopoes (1 species)

• Madagascar Hoopoe (*Upupa marginata*)

Alcedinidae / Kingfishers (2 species)

- Malagasy Kingfisher (Corythornis vintsioides vintsioides)
- Madagascar Pygmy Kingfisher (Corythornis madagascariensis madagascariensis)

Meropidae / Bee-eaters (1 species)

• Madagascar Bee-eater (Merops superciliosus superciliosus)

Brachypteraciidae / Ground-Rollers (2 species)

- Pitta-like Ground-Roller (*Atelornis pittoides*)
- Rufous-headed Ground-Roller (Atelornis crossleyi)

Falconidae / Falcons and Caracaras (1 species)

• Malagasy Kestrel (Falco newtoni newtoni)

Psittaculidae / Old World Parrots (3 species)

- Greater Vasa Parrot (Coracopsis vasa vasa & C. v. drouhardi)
- Lesser Vasa Parrot (Coracopsis nigra nigra & C. n. libs)
- Gray-headed Lovebird (Agapornis canus canus)

Philepittidae / Asities (2 species)

- Velvet Asity (Philepitta castanea)
- Common Sunbird-Asity (Neodrepanis coruscans)

Campephagidae / Cuckooshrikes (1 species)

• Madagascar Cuckooshrike (Coracina cinerea cinerea & C. c. pallida)













Vangidae / Vangas, Helmetshrikes, and Allies (12 species)

- Common Newtonia (Newtonia brunneicauda brunneicauda)
- Tylas Vanga (*Tylas eduardi eduardi*)
- Red-tailed Vanga (Calicalicus madagascariensis)
- Nuthatch-Vanga (*Hypositta corallirostris*)
- Chabert Vanga (Leptopterus chabert chabert)
- Crossley's Vanga (Mystacornis crossleyi)
- Madagascar Blue Vanga (Cyanolanius madagascarinus)
- Hook-billed Vanga (Vanga curvirostris curvirostris)
- Rufous Vanga (Schetba rufa rufa & S. r. occidentalis)
- Helmet Vanga (Euryceros prevostii)
- Sickle-billed Vanga (Falculea palliata)
- White-headed Vanga (Artamella viridis viridis & A. v. annae)

Dicruridae / Drongos (1 species)

Crested Drongo (Dicrurus forficatus forficatus)

Monarchidae / Monarch Flycatchers (1 species)

• Malagasy Paradise-Flycatcher (*Terpsiphone mutata mutata & T. m. singetra*)

Corvidae / Crows, Jays, and Magpies (1 species)

• Pied Crow (Corvus albus)

Cisticolidae / Cisticolas and Allies (2 species)

- Common Jery (Neomixis tenella decaryi & N. t. orientalis)
- Stripe-throated Jery (Neomixis striatigula striatigula)

Acrocephalidae / Reed Warblers and Allies (2 species)

- Malagasy Brush-Warbler (Nesillas typica typica)
- Madagascar Swamp Warbler (Acrocephalus newtoni)

Bernieridae / Malagasy Warblers (5 species)

- White-throated Oxylabes (Oxylabes madagascariensis)
- Long-billed Bernieria (Bernieria madagascariensis madagascariensis & B. m. incelebris)
- Yellow-browed Oxylabes (Crossleyia xanthophrys)
- Spectacled Tetraka (*Xanthomixis zosterops ankafanae & X. z. andapae*)
- Gray-crowned Tetraka (*Xanthomixis cinereiceps*)

Hirundinidae / Swallows (1 species)

• Mascarene Martin (Phedina borbonica madagascariensis)

Pycnonotidae / Bulbuls (1 species)

• Malagasy Bulbul (Hypsipetes madagascariensis madagascariensis)

Zosteropidae / White-eyes, Yuhinas, and Allies (1 species)

• Malagasy White-eye (Zosterops maderaspatanus maderaspatanus)

Sturnidae / Starlings (2 species)

- Common Myna (Acridotheres tristis)
- Madagascar Starling (Hartlaubius auratus)

Muscicapidae / Old World Flycatchers (2 species)

- Madagascar Magpie-Robin (Copsychus albospecularis albospecularis, C. a. inexspectatus & C. a. pica)
- African Stonechat (Saxicola torquatus sibilla)

Nectariniidae / Sunbirds and Spiderhunters (2 species)

- Souimanga Sunbird (Cinnyris sovimanga sovimanga)
- Malagasy Sunbird (Cinnyris notatus notatus)

Ploceidae / Weavers and Allies (4 species)

- Nelicourvi Weaver (Ploceus nelicourvi)
- Sakalava Weaver (Ploceus sakalava sakalava)
- Red Fody (Foudia madagascariensis)
- Forest Fody (Foudia omissa)

Estrildidae / Waxbills and Allies (1 species)

• Madagascar Munia (Lepidopygia nana)

Passeridae / Old World Sparrows (1 species)

• House Sparrow (Passer domesticus)

Motacillidae / Wagtails and Pipits (1 species)

• Madagascar Wagtail (Motacilla flaviventris)













NOSY BE & AMBANJA (4 days / 4 nights)

10 mammal species + 37 bird species + 3 amphibian species + 18 reptile species seen

Nosy Be ("big island" in Malagasy language) is a 312-km² volcanic island off the northwest coast of Madagascar. It is located about 8 km from the main coast of Madagascar, within the Mozambique Channel, and is surrounded itself by several smaller islands including Nosy Komba, Nosy Mitsio, Nosy Sakatia and Nosy Tanikely. Nosy Be is a busy touristic destination and it has one of the few airports in Madagascar with international connections.

We stayed at Le Moya Beach (https://le-moya-beach.business.site/) which is a beach hotel with a dozen luxury bungalows. Settled in green surroundings, it has direct access to the beach (where we did also great birding!) and is a very good base to explore the island. Food is amazing, rooms are comfortable and well maintained, and staff is very professional!

Se May Beach

The main reason for us to add Nosy Be to our Malagasy itinerary was the opportunity to observe **Omura's Whale** (*Balaenoptera omurai*). This cetacean species was described in 2003 and was found around Nosy Be in 2015 by a team of researchers led by Dr. Salvatore Cerchio¹. The global geographic range of Omura's Whales (which is classified as Data Deficient on the IUCN Red List) is poorly known and sightings are rare. The population around Nosy Be is the only confirmed and regularly observed resident breeding population in the world, thus giving us a chance to actually try our luck with that whale species! In the meantime, there have been ongoing discussions about the possibility that the Omura's Whale population in Madagascar may genetically differ from other Omura's Whale populations and may therefore be a specific taxon on its own!

Two professional and registered whale watching operators are based in Nosy Be: **Les Baleines Rand'eau** (https://baleinesrandeau.com/, based in Madirokely) and Safari Baleine (https://safaribaleine.com/, based on Nosy Komba). Both are offering various tours and excursions, but with a strong focus on whale shark diving tours. We initiated discussions with both companies and ultimately decided to charter a day-trip with Les Baleines Rand'eau specifically targeted to search for Omura's Whales. Les Baleines Rand'eau have worked with scientists and researchers in the recent past and our captain on that day knew very well where to look for that species, how to navigate and how to position the boat for the best observation vantage, while being particularly respectful of the animals itself. The Omura's Whales around Nosy Be are apparently easier to find at certain periods of the year, especially from October and November. Our tour on the 29th of September was relatively early in the season and whales had not been regularly seen over the previous weeks. Departing from Madirokely at 8.30am, it took us more than six hours of dedicated search to actually find and be able to observe an Omura's Whale. An amazing sighting to start our Malagasy discoveries!





While at sea, we had many other interesting encounters during our quest including two subadults Humpback Whales (which are usually around from August until October or November, migrating from their Antarctic feeding-grounds), a very

impressive Giant Oceanic Manta Ray (*Mobula birostris*), numerous sea birds including a White-tailed Tropicbird, as well as both Lesser Frigatebird and Great Frigatebird.



We would very highly recommend a tour with Les Baleines Rand'eau whose team is particularly professional and committed. Being lucky and during the right season, a more traditional whale shark excursion may bring an Omura's Whale sighting but a dedicated chartered tour would definitely highly increase the chance of seeing this rare species. Take note that numerous "beach boys" offer unofficial sea excursions from Nosy Be to observe whale sharks and other marine creatures, including whales. These are rarely registered, do not have the experience to find cetaceans, and besides do not respect basic safety and ethical approach to the animals.

¹ Cerchio, S. *et al.* (2015) Omura's whales (*Balaenoptera omurai*) off northwest Madagascar: ecology, behaviour and conservation needs. Royal Society 2: 150301.



Parc National de Lokobe is a national park situated in the eastern part of Nosy Be. Covering 848 ha (0.3% of the total surface of Nosy Be Island!), it was gazetted in 1927 and protects the last remnants of lowland moist evergreen forest in the area. The usual approach and access to Lokobe is to start at the village of Ambatozavavy, to go 20–30 minutes by outrigger canoe (or motorized boat) to the village of Ampasipohy, and from there into the forest a few minutes away. While traditional tourists would usually take a half-day trip during the day, hardcore mammal-watchers go in the late afternoon and come back after dark to be able to observe the nocturnal lemurs of Lokobe, including the near-endemic Nosy Be Mouse Lemur and Nosy Be Sportive Lemur (both occurs on Nosy Be and on the main island of Madagascar nearby). One will have to pay attention to the tides though and check tide charts as low tide may complicate access to Ampasipohy. At ebb tide on our way out, we had to walk through mud and water for some 800 meters both to reach the boat departing from Ampasipohy and again on arrival in Ambatozavavy (something one would definitely not want to do in the dark!).

To increase our chances of seeing Lokobe's biodiversity, we decided to start overnight at **Zara Village** (http://zaravillage.e-monsite.com/), situated directly in Ampasipohy. At least one other option in terms of accommodation exist in the village but we were very happy with our choice and can definitely recommend Zara Village. The manager of the lodge organized for us transport from Ampasipohy as well as a guide for the night walk during which we saw several of the above mentioned nocturnal lemurs (very many Nosy Be Sportive Lemurs and a few Nosy Be Mouse Lemurs) as well as many reptiles, including the Minute Leaf Chameleon (*Brookesia minima*), amphibians, insects and some birds. Before departure back to Ambatozavavy the next day, we did a morning walk focused on observing Black Lemurs and birds.







We decided to reach the main island and to spend a night in **Ambanja** where we had read in advance some particular lemurs may be found. Regular scheduled boat rides are offered between Hell-Ville on Nosy Be and Ankify on the main island. We hoped at one point to be able to organize a direct boat from either Ampasipohy (near the Parc National de Lokobe) or Ambatozavavy but that was not possible for us and may have ended quite expensive anyway! The complete journey from Ampasipohy to Ambanja took us some three and a half hours, considering the ebbing tide and attached difficulties mentioned above (which costed us a lot of time).

In Ambanja, we stayed at **Khaïr Lodge** (https://www.facebook.com/khairlodgehotel) which offers comfortable rooms and which was the most responsive of the different hotels we contacted. Food in Khaïr Lodge was a huge disappointment though and among the worst we had during our time in Madagascar! The management in Khaïr Lodge organized for us transport from and to Ankify as well as the night walk near **Antranokarany** (situated some 12 km south of Ambanja; parking spot / usual meeting point for night walk there: 13°43'31.70"S 48°23'10.09"E).

From Jon Hall's 2022 trip report (https://www.mammalwatching.com/2022/12/27/northern-madagascar-2022/), we were extremely curious to be able to see Northern Giant Mouse Lemurs and to visit the village's sacred forest. Patrick Randrianantenaina connected us with a local villager named Kenny (who also guided Jon and his group in 2022). Kenny unfortunately does not speak neither English nor French so we still had to use the service of Khaïr Lodge for transportation and translation. We ended up having four persons with us in the forest that evening (Kenny and three drivers/translators/guides from Khaïr Lodge). None of them had much experience in guiding and/or wildlife sightings but we had a great evening with several sightings of the rarely seen Northern Giant Mouse Lemur, a couple of Sambirano Fork-marked Lemurs and a few Gray's Sportive Lemurs.

Two more nocturnal lemur species are known to occur in the area: an undescribed Dwarf Lemur (*Cheirogaleus sp. [major] CCS2 or UCS4*) and the Sambirano Mouse Lemur (*Microcebus sambiranensis*). While the first has been seen by several mammal-watchers visiting the area, the mouse lemur remains elusive for most visitors and is very rarely observed!

Another likely suggested area to visit by Khaïr Lodge's management is the forest fragments along Sambirano River (13°42'26.88"S 48°28'53.24"E), leaving Ambanja south-east in the direction of the village of Benavony. Both Giant Mouse Lemur and Fork-marked Lemur have been seen in that area too, and it is suggested that Northern Bamboo Lemur may be also encountered during the day. We had unfortunately no time to check ourselves!



While on Nosy Be, we did also a morning walk along the beach near our hotel Le Moya Beach. The tide just started to ebb and this brought a lot of birds! We visited as well **Mont Passot** (with its 360° observation platform at an elevation of 329 m) where we saw our only Nile Crocodile of the whole trip in Madagascar (in Lac Bemapaza). We spent a couple of hours on our arrival day at **Lemuria Land** which is a zoological institution where a dozen lemurs' species are maintained on islands or roam freely around the ground (including a pair of Van Der Decken's Sifaka which a species very rare in captivity, even in Madagascar!). On our way back from Ankify, we had a stopover of a few hours on **Nosy Komba** (which is a touristic destination, at least the village of Ampangorinana and it direct surroundings). We visited the local zoo Biby Havantsika, also named Nosy Komba Maki Park, where a few captive reptiles are exhibited and where a semi-wild (introduced?) population of Black Lemurs also occurs. Our Biby Havantsika's young guide named Flavio (Tel. +261 32 67 178 77) happened to be a keen birder, pointed for us quite a few birds and made a very good impression! With time available, a nice walk towards the interior and higher elevations of Nosy Komba, especially guided by someone like Flavio, may bring some nice sightings.

Mammal species observed on Nosy Be (6 species):

- Nosy Be Mouse Lemur (*Microcebus mamiratra*)
- Nosy Be Sportive Lemur (Lepilemur tymerlachsoni)
- Black Lemur (*Eulemur macaco*)
- Roof Rat (*Rattus rattus*)
- Humpback Whale (Megaptera novaeangliae)
- Omura's Whale (Balaenoptera omurai)

Mammal species observed in Antranokarany (4 species):

- Northern Giant Mouse Lemur (*Mirza zaza*)
- Sambirano Fork-marked Lemur (*Phaner parienti*)
- Gray's Sportive Lemur (*Lepilemur dorsalis*)
- Malagasy Mouse-eared Bat (Myotis goudotii)

Bird species observed on Nosy Be (35 species):

- Rock Pigeon (Columba livia)
- Malagasy Turtle-Dove (*Nesoenas picturatus picturatus*)
- Madagascar Green-Pigeon (*Treron australis xenius*)
- Malagasy Coucal (*Centropus toulou toulou*)
- Madagascar Cuckoo (Cuculus rochii)
- Malagasy Palm Swift (Cypsiurus gracilis gracilis)
- Black-bellied Plover (*Pluvialis squatarola*)
- Greater Sand-Plover (Charadrius leschenaultia)
- White-fronted Plover (*Charadrius marginatus tenellus*)
- Whimbrel (*Numenius phaeopus phaeopus*)
- Sanderling (Calidris alba)
- Bridled Tern (Onychoprion anaethetus antarcticus)
- Roseate Tern (Sterna dougallii)
- Great Crested Tern (*Thalasseus bergii thalassinus*)
- Lesser Crested Tern (Thalasseus bengalensis bengalensis)
- White-tailed Tropicbird (*Phaethon lepturus lepturus*)
- Lesser Frigatebird (Fregata ariel iredalei)
- Great Frigatebird (*Fregata minor aldabrensis*)
- Humblot's Heron (*Ardea humbloti*)
- Striated Heron (*Butorides striata rutenbergi*)
- Madagascar Buzzard (Buteo brachypterus)
- Madagascar Scops-Owl (Otus rutilus madagascariensis)
- Malagasy Kingfisher (Corythornis vintsioides vintsioides)
- Madagascar Pygmy Kingfisher (Corythornis madagascariensis mad.)
- Malagasy Kestrel (Falco newtoni newtoni)
- Chabert Vanga (Leptopterus chabert chabert)
- Crested Drongo (*Dicrurus forficatus forficatus*)
- Malagasy Paradise-Flycatcher (*Terpsiphone mutata singetra*)
- Pied Crow (*Corvus albus*)
- Malagasy Bulbul (Hypsipetes madagascariensis madagascariensis)
- Malagasy White-eye (*Zosterops maderaspatanus maderaspatanus*)
- Common Myna (*Acridotheres tristis*)
- Souimanga Sunbird (Cinnyris sovimanga sovimanga)
- Red Fody (Foudia madagascariensis)
- Madagascar Munia (*Lepidopygia nana*)













PARC NATIONAL DE RANOMAFANA & KIANJAVATO (3 days / 4 nights)

27 mammal species + 39 bird species + 7 amphibian species + 11 reptile species seen

Parc National de Ranomafana was established as Madagascar's fourth national park in 1991 following the rediscovery of the Greater Bamboo Lemur and the discovery of the Golden Bamboo Lemur by the primatologist Dr. Patricia Wright. Ranomafana is situated some 400 km south of Antananarivo and one should expect a full day of drive to reach that area. It took us 13 hours on the way in including an hour lunch break in Ambositra and 15 hours and a half on the way back including two stops: one hour at Forêt d'Ankazomivady and one hour lunch at the same spot in Ambositra.

With a surface of some 416 km², Parc National de Ranomafana is visited by some 20,000 visitors annually. Two areas are accessible for daily visitors with various trails: **Talatakely** (at mid-elevation, ranging from 930 to 1,040 m) is situated near the park reception office and **Vohiparara** (at higher elevation, from 1,130 to 1,220 m) some 5 km north-west along the national road RN25.



We stayed at the **Setam Lodge** (https://setam-madagascar.com/) which is situated one kilometre away from the national park reception, towards the village of Ranomafana. It has some 20 bungalows nestled on a slope facing a forested area. Food was fantastic and we really enjoyed our stay in that accommodation. Timing for early breakfast and/or late dinner may require some negotiation and should be organized in advance though!

The Ranomafana river, which the national road RN25 follows for most of its trajectory through the national park, actually dissects the national park in two areas (the Talatakely trails been in the southern section and the Vohiparara in the northern one). That river may act as a natural barrier for some species and it has been discussed recently that local mouse lemur population south of the Ranomafana may differ from the one north of it (both are currently considered to be Rufous Mouse Lemur [Microcebus rufus]). An on-going research is trying to assess the soundness of that assumption.

Ranomafana is considered one of the premier lemur-watching sites in Madagascar with up to 16 lemur species recorded here! The **Golden Bamboo Lemur** (*Hapalemur aureus*) is a Critically Endangered lemur having a very limited range in south-east Madagascar. Occurring at low densities, it is estimated that some 600-1,000 individuals survive with the vast majority of them being in Parc National de Ranomafana.

The situation of the **Greater Bamboo Lemur** (*Prolemur simus*) does not look much better with a patchy distribution in eastern Madagascar. The estimated number of Greater Bamboo Lemurs in the wild has grown from less than 100 individuals though to exist in 2007 to some 1,000 individuals in 2015 but the situation in Ranomafana is currently dire with a very small population and only one last single individual believed to exist and to be visible in the areas accessible for tourists. We were lucky to see both that last Greater Bamboo Lemur and several groups of Golden Bambook Lemurs but we failed at finding the third usually seen bamboo lemur in Ranomafana: Ranomafana Bamboo Lemur (*Hapalemur griseus ranomafanensis*).

Three more taxa of **bamboo lemurs** have indeed been reported from Parc National de Ranomafana but their presence remains to be confirmed: Ranomafana Bamboo Lemur (*Hapalemur griseus ranomafanensis*), Beanamalao Bamboo Lemur (*Hapalemur griseus gilberti*) and Southern Bamboo Lemur (*Hapalemur meridionalis*). There seems to be still some scientific disagreement on that and the likelihood of visitors being able to observe the two former within the usually accessible areas of the national park is extremely low!



There are also on-going discussions concerning the **local dwarf lemurs** with up to three species believing to occur sympatrically in Ranomafana: Sibree's Dwarf Lemur (*Cheirogaleus sibreei*), Groves's Dwarf Lemur (*Cheirogaleus grovesi*) and Crossley's Dwarf Lemur (*Cheirogaleus crossleyi*). While Sibree's Dwarf Lemur is expected to occur at higher elevation (above 1,000 m), Groves's Lemur is encountered usually at lower elevation (700 to 1,000 m); Crossley's may be found from sea level to 1,800 m. Exact distribution of these three species is unclear at this point. We were ourselves able to observe dwarf lemurs both at lower altitudes near the national park reception area but also at higher elevation near the trailhead of the Vohiparara area. We noticed slight phenotypical differences between some of the animals observed and believed we have seen both Sibree's and Grove's Dwarf Lemurs.

Including the above mentioned bamboo lemurs and dwarf lemurs, we saw a total of **nine lemur species in Ranomafana** and **five species at Kianjavato** (more on that later), adding for a total of 13 lemur species observed within that region. Greater Bamboo Lemur was seen at both locations. Small-toothed Sportive Lemur, Peyriéras's Woolly Lemur, Milne-Edwards's Sifaka are all notable species seen in Ranomafana!

The **Talatakely area** is usually getting busy, especially in the morning, when large groups of tourists are literally running from one lemur sighting to the next. Trackers are actually moving ahead of the

tourists to locate the lemur groups and then calling the main guides to share the lemur location before moving to their next search, and so forth. It was at first a puzzling approach for us: running from one spot to the next, we found less time to actually observe and enjoy the forest and its inhabitants in between. Coming back during a later afternoon gave us the opportunity to enjoy the area almost alone and to have somehow more natural encounters and observations. The **Vohiparara area** seems to be much less visited (at least by larger groups), is great for birding and the only area where we observe a Small-toothed Sportive Lemur (*Lepilemur microdon*) at its day roost.

There is a well-known small rock cavity along the RN25 road (21°14'45.25"S 47°23'53.22"E) where **long-fingered bats** are usually recorded. While visiting that roost during the day, we saw some 40 bats which we identified as Major's Long-fingered Bats (*Miniopterus majori*).

While mammal-watching and **birdwatching** may be sometimes conflicting and the main purpose of our stay in Ranomafana was to find the local lemurs, we tried our luck with several bird species. Brown Mesite, Pollen's Vanga and Madagascar Flufftail all remained invisible for us but we had great sightings of numerous Pitta-like Ground-Rollers, Velvet Asities, a female Common Sunbird-Asity and a total of seven vanga species (Tylas, Chabert, Crossley's, Madagascar Blue, Hook-billed, Rufous and White-headed Vangas)!







Like in all other national parks in Madagascar, **night walks** are forbidden within the national parks' grounds. In Ranomafana, one is left with the only option to look for nocturnal wildlife along the main road



which dissects the national park in its northern and southern sections. Quite a few species are actually visible from the main road (and some animals like mouse lemurs are attracted to trees along the road by the guides placing smashed banana on tree trunk). General conditions for these night walks are nevertheless tricky with high traffic on that same road and some sightings been too far to be fully appreciated or even identified.

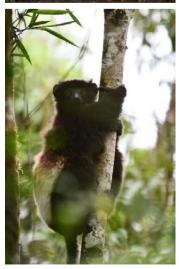
Web-footed Shrew Tenrecs (*Microgale mergulus*) have been seen along the stream in the village of Ranomafana and we targeted that species one

evening. We searched without success mainly around 21°14′49.02″S 47°25′29.43″E, some 600 m from the village. The area directly north of the village (21°14′55.52″S 47°25′47.86″E) may be good as well and easier to access.

Among the nine reptiles species we encountered in Parc National de Ranomafana, **five were chameleons species**: Brown Leaf Chameleon (*Brookesia superciliaris*), Cryptic Chameleon (*Calumma crypticum*), O'Shaughnessy's Chameleon (*Calumma oshaughnessyi*), Glaw's Chameleon (*Calumma glawi*) and Ranomafana Nosed Chameleon (*Calumma tjiasmantoi*).







The Kianjavato Ahmanson Field Station (KAFS) (https://madagascarpartnership.org/field-sites/kianjavato/) is situated some 70 km east of Ranomafana, easily accessible after a two-hour drive along a well maintained road. It is situated at an elevation ranging from 50 m above sea level to 250-300 m for some of the higher hills. It is a community-based conservation project run by Madagascar Biodiversity Partnership (founded in 2010 in the USA), and supported by numerous American zoological institutions including the Omaha's Henry Doorly Zoo and Aquarium. The conservation programme is entailing grassroots reforestation effort to connect forest fragments through habitat corridors, several lemur monitoring programmes, and a community outreach initiative working with a dozen nearby villages (population 12,000). Several Greater Bamboo Lemurs, Black-and-white Ruffed Lemurs as well as Aye-ayes are radio-collared and regularly followed and studied by local villagers hired by the station. We were lucky to observe the first two species (during a walk through the area named Sanga Sanga Forest) while we decided not to track for the collared Aye-aye which was supposedly some three to four hours hike away.

One of the main reason for us to reach Kianjavato was also the opportunity to be able to see **Eastern Sucker-footed Bats** (*Myzopoda aurita*) which is a very unique bat with small suction cups on its wrists and ankles. Two species of *Myzopoda* are known to exist in Madagascar and they form a unique locally-endemic family (*Myzopodidae*).



We stayed overnight at Kianjavato Ahmanson Field Station (KAFS) in wooden huts where very comfortable tents were installed. We also participated directly in their reforestation efforts with each of us helping to plan one young tree from their nursery.



For that part of the itinerary, Patrick had booked for us a **driver named Mickaël Chabbatah** (WhatsApp: +261 33 04 778 70, based in Antsirabe) who collected us in Antananarivo, drove us to Ranomafana, stayed the whole time with us there and drove us back to the capital city. Mickaël and his co-driver Fameno were also with us in Andasibe a few days later. Both were very kind and professional, and we would highly advise using their services.

Mammal species observed in Parc National de Ranomafana (20 species):

- Dobson's Shrew Tenrec (Nesogale dobsoni)
- Pale Shrew Tenrec (Microgale fotsifotsy)
- Rufous Mouse Lemur (*Microcebus rufus*)
- Sibree's Dwarf Lemur (Cheirogaleus sibreei)
- Groves's Dwarf Lemur (Cheirogaleus grovesi)
- Small-toothed Sportive Lemur (*Lepilemur microdon*)
- Golden Bamboo Lemur (Hapalemur aureus)
- Greater Bamboo Lemur (*Prolemur simus*)
- Red-bellied Lemur (*Eulemur rubriventer*)
- Peyriéras's Woolly Lemur (Avahi peyrierasi)
- Milne-Edwards's Sifaka (Propithecus edwardsi)
- White-tailed Tree Rat (*Brachytarsomys albicauda*)
- Tanala Tufted-tail Rat (*Eliurus tanala*)
- Lesser Tufted-tail Rat (*Eliurus minor*)
- Webb's Tufted-tail Rat (Eliurus webbi)
- Lowland Red Forest Rat (Nesomys audeberti)
- Roof Rat (*Rattus rattus*)
- Major's Long-fingered Bat (Miniopterus majori)
- Spotted Fanaloka (Fossa fossana)
- Ring-tailed Vontsira (Galidia elegans elegans)















Mammal species observed in Kianjavato (9 species):

- Greater Hedgehog Tenrec (Setifer setosus)
- Jolly's Mouse Lemur (*Microcebus jollyae*)
- Dwarf Lemur (undescribed) (Cheirogaleus sp. [major] CCS5)
- Greater Bamboo Lemur (*Prolemur simus*)
- Red-fronted Brown Lemur (Eulemur rufifrons)
- Black-and-white Ruffed Lemur (Varecia variegata editorum)
- Roof Rat (*Rattus rattus*)
- Peters's Sheath-tailed Bat (Paremballonura atrata)
- Eastern Sucker-footed Bat (Myzopoda aurita)







Bird species observed in Parc National de Ranomafana (34 species):

- Malagasy Turtle-Dove (Nesoenas picturatus picturatus)
- Madagascar Blue-Pigeon (Alectroenas madagascariensis)
- Blue Coua (Coua caerulea)
- Red-fronted Coua (Coua reynaudii)
- Madagascar Cuckoo (Cuculus rochii)
- Madagascar Wood-Rail (Mentocrex kioloides kioloides)
- Madagascar Buzzard (*Buteo brachypterus*)
- Pitta-like Ground-Roller (*Atelornis pittoides*)
- Velvet Asity (*Philepitta castanea*)
- Common Sunbird-Asity (Neodrepanis coruscans)
- Madagascar Cuckooshrike (Coracina cinerea cinerea)
- Common Newtonia (Newtonia brunneicauda brunneicauda)
- Tylas Vanga (*Tylas eduardi eduardi*)
- Chabert Vanga (*Leptopterus chabert chabert*)
- Crossley's Vanga (Mystacornis crossleyi)
- Madagascar Blue Vanga (Cyanolanius madagascarinus)
- Hook-billed Vanga (Vanga curvirostris curvirostris)
- Rufous Vanga (Schetba rufa rufa)
- White-headed Vanga (Artamella viridis viridis)
- Crested Drongo (Dicrurus forficatus forficatus)
- Malagasy Paradise-Flycatcher (*Terpsiphone mutata mutata*)
- Common Jery (Neomixis tenella orientalis)
- Malagasy Brush-Warbler (Nesillas typica typica)
- Long-billed Bernieria (Bernieria madagascariensis madagascariensis)
- Yellow-browed Oxylabes (*Crossleyia xanthophrys*)
- Spectacled Tetraka (*Xanthomixis zosterops ankafanae*)
- Gray-crowned Tetraka (Xanthomixis cinereiceps)
- Mascarene Martin (Phedina borbonica madagascariensis)
- Malagasy Bulbul (*Hypsipetes madagascariensis madagascariensis*)
- Madagascar Magpie-Robin (Copsychus albospecularis inexspectatus)
- Souimanga Sunbird (Cinnyris sovimanga sovimanga)
- Malagasy Sunbird (Cinnyris notatus notatus)
- Nelicourvi Weaver (*Ploceus nelicourvi*)
- Madagascar Wagtail (Motacilla flaviventris)

Bird species observed in Kianjavato (7 species):

- Blue Coua (Coua caerulea)
- Striated Heron (*Butorides striata rutenbergi*)
- Black Kite (Milvus migrans parasitus)
- Greater Vasa Parrot (Coracopsis vasa vasa)
- Crested Drongo (Dicrurus forficatus forficatus)
- Common Myna (Acridotheres tristis)
- Red Fody (Foudia madagascariensis)









FORÊT DE KIRINDY (3.5 days / 4 nights)

19 mammal species + 39 bird species + 1 amphibian species + 13 reptile species seen

The **Site d'Intérêt Biologique de la Forêt de Kirindy**, also known as Forêt de Kirindy, Kirindy Forest or Kirindy Reserve (Kirindy means in Malagasy "dense forest with wild animals"), should not be confused with the Parc National de Kirindy Mitea which is situated south of Morondava. Kirindy Forest lies some 60 km northeast of Morondava (where Air Tsaradia is flying twice weekly from Antananarivo) and is part of the **Menabe Antimena Protected Area** (which was created in 2015). Historically, Kirindy Forest was a Swiss forestry concession which developed an experimental sustainable timber harvesting scheme (hence the title "La Forêt des Suisses" which is still used in some instances).

The Site d'Intérêt Biologique de la Forêt de Kirindy covers some 125 km² at lower elevation (20-50 m) and is one of the largest areas of protected dry deciduous forest in Madagascar with a unique level of biodiversity. Dry season usually spans from March to December and rainy season from December to March when access is much more difficult.

The area accessible for tourists is managed by the Centre National de Formation, d'Études et de Recherche en Environnement et Foresterie (CNFEREF) where is situated also their ecolodge. **Kirindy Eco Lodge** (where we stayed for three nights) was constructed in 1996, partly renovated and extended in 2017, and has currently some 12 bungalows and 6 dorms. It is the only accommodation situated right in the middle of the forest and it is offering a

fantastic location for wildlife watching (other options are mainly situated outside of the forest, at Kirindy Village or nearby).





The Göttingen Deutsches Primatenzentrum (https://www.dpz.eu/en/unit/sociobiology-homepage/study-sites/madagascar.html) has been operating a research station here since 1993, where numerous scientific researches and surveys have been realized over the last decades (see later about Madame Berthe's Mouse Lemur among other species studied).

With our booked flights to Morondava giving us three full days and four nights, our initial plan was to stay one night near Kirindy (at Akiba Lodge Marofandilia), drive the next day to Parc National de Tsingy de Bemaraha (situated some eight to ten-hour drive further

north), have a full day and two nights at Tsingy de Bemaraha, and then drive back to Kirindy for the final night at the Kirindy Eco Lodge before flying back to Antananarivo the following day. A few days earlier, and in view of the very long driving distances between Kirindy and Tsingy de Bemaraha, Rūta and myself decided to stay in Kirindy for the full time we had between our flights while Alex and Tomer would proceed with the initial plan! Tsingy de Bemaraha seems to be a very impressive and rewarding destination and our initially devised plan was totally feasible but we thought giving more time and credit to Kirindy was important for us. We definitely enjoyed extremely our stay in Kirindy and would highly suggest to have a few nights dedicated to that area. The best schedule would probably be a two to three nights stay at Kirindy Eco Lodge before driving to Tsingy de Bemaraha (with two full days and three nights there) and a final night on the way back (for example at Akiba Lodge Marofandilia). The Air Tsaradia schedule remains the constraint here and one will have to adapt to available flights and transport options!

After arriving in Morondava Airport and meeting our driver for that leg of the itinerary, our first stop was at **Akiba Lodge Marofandilia** (https://www.akiba-lodge.mg/nos-lodges/akiba-lodge-marofandilia/). Originally named Camp Amoureux, this place was renamed and renovated in 2022 and is now managed by Association Fanamby (https://association-fanamby.org/), which manages as well the Avenue des Baobabs. It offers for now four bungalows but plan envisions the addition in the near future of a dozen additional bungalows. Akiba Lodge Marofandilia is situated four kilometres past Marofandilia and nine kilometres before the Kirindy Forest entry. While the lodge itself is kind of overrated and quite pricy, the whole setting is nice and the abundance of wildlife directly around camp and in the direct surroundings is

extremely impressive! Right after our arrival, during a six-hour combined afternoon and night walk, we were able to observe numerous animals, including seven lemur species (from the eight occurring in that area) and about fifteen bird species. Coquerel's Coua, Madagascar Buttonquail, White-browed Owl and Hook-billed Vanga gave us beautiful sightings among others!

Menabe Antimena Protected Area not being a national park as such, **night walks** are on offer at both Kirindy Forest and Akiba Lodge Marofandilia and these activities are a unique opportunity to observe some of the nocturnal biodiversity occurring here! Among the **eight lemur species occurring in the area**, six are nocturnal. During our stay (and actually right from our first night walk near Akiba Lodge), we sighted numerous Grey Mouse Lemurs, a couple of possible Madame Berthe's Mouse Lemurs (more on that later), some Fat-tailed Dwarf Lemurs, a few Pale Fork-marked Lemurs, and Red-tailed Sportive Lemurs. During the day, both



Red-fronted Brown Lemurs and the beautiful Verreaux's Sifakas were relatively common (at Akiba Lodge and in Kirindy Forest). Only the Coquerel's Giant Mouse Lemur (*Mirza coquereli*) eluded us! This endangered species has a relatively limited range in eastern Madagascar and Kirindy Forest has historically been the very best site to observe this species in Madagascar, but the population here has undergone a major decline recently and is now very rarely encountered, at least within the areas accessible for tourists. There may be also seasonal patterns. Some of our guides mentioned though having seen or heard Giant Mouse Lemurs few weeks before our stay in Kirindy.

We spent the following three days and three nights at the **Kirindy Eco Lodge** which was very comfortable and uniquely settled right in the middle of the dry forest. Alfred was our assigned guide for most of our walks and he was very committed to find our mammal and bird targets. We did various walks of different lengths and at different times of the day. It was though somehow difficult to motivate Alfred (or any other guides) for early walks and in retrospect we should have insisted and try departing the lodge earlier at 5:30/6:00 in the morning. This time is definitely better for birding (as it can get really warm by 9:00/10:00, at least in October while we were staying there) and may allow for longer hike to deeper areas inside the forest.

Many guides were around at the eco lodge and we had time to talk and get acquainted with a few of them. One named Theo stood apart with his knowledge of birds. He suggested as well a few birding locations along the coast which seems reachable on a day trip from Vising to Execut (which was not appropriate to talk the for Tripper (which was not appropriate to talk and get acquainted with a few tripsectors).

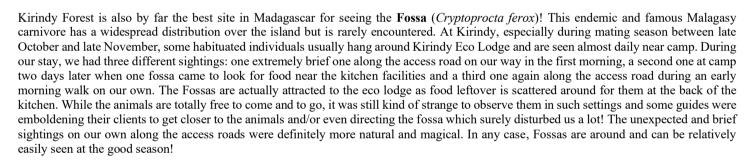


While in Kirindy, we had the extreme privilege of meeting and spending some time with **Dr. Steve Goodman**, field scientist from the Field Museum of Natural History in Chicago (https://www.fieldmuseum.org/about/staff/profile/steven-goodman), who was in Kirindy for some field

survey when we were there ourselves. Steve Goodman is a reputed scientist who has been deeply involved in studying wildlife and biodiversity in Madagascar for the last three decades. He has published a huge amount of papers on Malagasy wildlife as well as numerous books and field guides (see also selected bibliography and recommended readings on page 37). Steve Goodman is also a founding member and the scientific counsellor of the Vahatra Association (http://www.vahatra.mg/) which objective is to develop an educational and research program focused on the biodiversity of the terrestrial fauna of Madagascar and the advancement of national field scientists properly trained in the modern aspects of conservation biology. Having an

Vahatra Association (http://www.vahatra.mg/) which objective is to develop an educational and research program focused on the biodiversity of the terrestrial fauna of Madagascar and the advancement of national field scientists properly trained in the modern aspects of conservation biology. Having an opportunity to get to know Steve, to talk and to exchange together on species diversity and conservation was really a highlight of our trip!

The **bird diversity** around Kirindy Forest is very unique and we were able to see most of our targets including several groups of White-breasted Mesites, the three locally occurring couas (Crested, Coquerel's and Giant Couas), Madagascar Buttonquails, and seven species of vangas (Red-tailed, Chabert, Madagascar Blue, Hook-billed, Rufous, the beautiful Sickle-billed and White-headed Vangas)!



A second carnivore species endemic to Madagascar is also present in Kirindy Forest: the **Bokyboky** (*Mungotictis decemlineata decemlineata*)! Also named Narrow-striped Mongoose, this species is Endangered (IUCN Red List 2015) and is to be found only in a relatively limited range in western dry deciduous forests of Madagascar. While this species is supposed to be common, it took us quite some efforts to find a pair (which actually gave us a wonderful sighting!). We encountered that species only once during a total of more than thirteen hours and a half of diurnal walks around Kirindy Forest!





The Malagasy Giant Jumping Rat (*Hypogeomys antimena*) is a Critically Endangered species (IUCN Red List 2022) restricted to the west of Madagascar in a narrow coastal zone. It has lost significant portions of its range in the recent decades and is now found only in two isolated pockets within the Menabe-Antimena Protected Area (one being Kirindy Forest). Numerous threats remains in the wild, including habitat loss through slash and burn agriculture, but also predation from feral dogs, as well as global climatic change and increase aridification of the ecosystem its inhabits! The situation of that unique rodent looks today more than dire and one may wonder if that species will survive the coming decades. Giant Jumping Rats used to be commonly seen around Kirindy Eco Lodge but securing a sighting requires now some effort and a guide knowing an active burrow. When we were in Kirindy in October 2023, two active burrows were still known in relative proximity to the eco lodge. We spent some four hours (from 21:00 to 1:00 in the morning) at one of these on our first night in Kirindy. While we could hear some grunting from deep inside the burrow, we didn't see any jumping rat that night (but very many Western Big-footed Mouses from which the population seems to have unexplainedly exploded in the recent years!). Going against the usual recommendation and information that these animals are being active late at night (which was also the fact given by Alfred on site), we decided to get to the burrow earlier the following night and we actually walk into a giant jumping rat right outside of its burrow at 19:30. We spent some 10 minutes observing the animal wandering around and left it to its activities after that. What an amazing species and truly a unique sighting! The following night, Alex and Tomer went back to the same burrow and saw probably the same individual around approximately the same time.





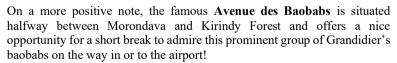
Finally, Kirindy Forest is also home for the smallest primate in the world: **Madame Berthe's Mouse Lemur** (*Microcebus berthae*). This species weights around 30 g and was discovered here in 1992! It is now Critically Endangered (IUCN Red List 2022) and the local subpopulation of Kirindy Forest monitored on a regular basis the last decades has been declining to what is believed to almost zero individual²! Extensive survey efforts have been deployed in 2022/2023 and have not been able to record any Madame Berthe's Mouse Lemur, at least in the historical area near Kirindy Eco Lodge.

Madame Berthe's Mouse Lemur occurs in sympatry with Grey Mouse Lemur (*Microcebus murinus*), the latter being very common both around Kirindy Forest and Akiba Lodge. Differentiation in the field may be difficult and size alone seems not to be a character distinctive enough. The most reliable characteristic may be the warmer rufous back and flanks of *berthae* but this is again sometimes difficult to judge at night. We had the opportunity to consult both Prof. Dr. Peter Kappeler (https://www.soziobio.uni-goettingen.de/en/team/kappeler.html) who has studied this species for many years now, and Dr. Steve Goodman. As stated above, identification of mouse lemurs from pictures alone may be complicated, but it appeared that a couple of individuals we sighted at Akiba Lodge may have actually been Madame Berthe's Mouse Lemur population in Kirindy Forest is probably not unique in Madagascar and may be just one well-



studied example among many others. Numerous endemic species may be disappearing fast these days without even been noticed! The crisis during the COVID outbreak period and the associated renewed logging

pressure in many areas of Madagascar are just additional factor in the threats faced already by all these species in their naturel habitats.



23

² Kappeler, P. M., Markolf, M., Rasoloarison, R. M., Fichtel, C., & Durbin, J. (2022) Complex social and political factors threaten the world's smallest primate with extinction. Conservation Science and Practice 4 (9), e12776.

Mammal species observed in Kirindy Forest and near Akiba Lodge Marofandilia (19 species):

- Grey Mouse Lemur (*Microcebus murinus*)
- Madame Berthe's Mouse Lemur (*Microcebus berthae*)
- Fat-tailed Dwarf Lemur (*Cheirogaleus medius*)
- Pale Fork-marked Lemur (*Phaner pallescens*)
- Red-tailed Sportive Lemur (Lepilemur ruficaudatus)
- Red-fronted Brown Lemur (*Eulemur rufifrons*)
- Verreaux's Sifaka (Propithecus verreauxi)
- Western Tufted-tail Rat (*Eliurus myoxinus*)
- Tufted-tail Rat (*Eliurus sp.*) [undescribed species recently found in Kirindy]
- Western Big-footed Mouse (Macrotarsomys bastardi)
- Malagasy Giant Jumping Rat (Hypogeomys antimena)
- Roof Rat (*Rattus rattus*)
- Commerson's Leaf-nosed Bat (Macronycteris commersonii)
- Grandidier's Lesser Free-tailed Bat (Mops leucogaster)
- Midas's Free-tailed Bat (Mops midas)
- Racey's Pipistrelle (*Pipistrellus raceyi*)
- Dark Madagascar Pipistrelle (*Hypsugo bemainty*)
- Fossa (*Cryptoprocta ferox*)
- Bokyboky (Mungotictis decemlineata decemlineata)

Bird species observed in Kirindy Forest and near Akiba Lodge Marofandilia (39 species):

- Helmeted Guineafowl (Numida meleagris)
- Malagasy Turtle-Dove (Nesoenas picturatus picturatus)
- Namaqua Dove (*Oena capensis aliena*)
- Madagascar Green-Pigeon (Treron australis xenius)
- White-breasted Mesite (*Mesitornis variegatus*)
- Crested Coua (Coua cristata dumonti)
- Coquerel's Coua (Coua coquereli)
- Giant Coua (Coua gigas)
- Madagascar Cuckoo (Cuculus rochii)
- Madagascar Nightjar (Caprimulgus madagascariensis madagascariensis)
- Madagascar Buttonquail (Turnix nigricollis)
- Madagascar Ibis (Lophotibis cristata urschi)
- Madagascar Harrier-Hawk (Polyboroides radiatus)
- Frances's Sparrowhaw (Accipiter francesiae francesiae)
- Madagascar Buzzard (Buteo brachypterus)
- Madagascar Scops-Owl (Otus rutilus madagascariensis)
- White-browed Owl (*Athene superciliaris*)
- Madagascar Hoopoe (*Upupa marginata*)
- Malagasy Kestrel (Falco newtoni newtoni)
- Greater Vasa Parrot (Coracopsis vasa drouhardi)
- Lesser Vasa Parrot (Coracopsis nigra libs)
- Gray-headed Lovebird (Agapornis canus canus)
- Madagascar Cuckooshrike (Coracina cinerea pallida)
- Common Newtonia (Newtonia brunneicauda brunneicauda)
- Red-tailed Vanga (Calicalicus madagascariensis)
- Chabert Vanga (Leptopterus chabert chabert)
- Madagascar Blue Vanga (Cyanolanius madagascarinus)
- Hook-billed Vanga (Vanga curvirostris curvirostris)
- Rufous Vanga (Schetba rufa occidentalis)
- Sickle-billed Vanga (Falculea palliata)
- White-headed Vanga (Artamella viridis annae)
- Crested Drongo (Dicrurus forficatus forficatus)
- Malagasy Paradise-Flycatcher (*Terpsiphone mutata singetra*)
- Common Jery (Neomixis tenella decaryi)
- Long-billed Bernieria (Bernieria madagascariensis incelebris)
- Malagasy Bulbul (Hypsipetes madagascariensis madagascariensis)
- Madagascar Magpie-Robin (Copsychus albospecularis pica)
- Souimanga Sunbird (Cinnyris sovimanga sovimanga)
- Sakalava Weaver (Ploceus sakalava sakalava)







ANDASIBE AREA (2.5 days / 3 nights)

15 mammal species + 39 bird species + 5 amphibian species + 10 reptile species seen

The area around Andasibe is known for its exceptional fauna and its proximity to Antananarivo (four to five hours drive east of the capital city). Andasibe is actually a small rural municipality with some 15,000 inhabitants and is surrounded by several national parks and other protected area.

Parc National d'Analamazaotra is probably the most famous one and the most visited (with an average of 26,500 visitors annually during the period 2012-2016). It was gazetted in 1970, encompasses a total surface of 874 ha and is managed by Madagascar National Parks (MNP). Parc National d'Analamazaotra is also sometimes wrongly named Andasibe-Mantadia National Park, and sometimes also heard of under its other name Périnet-Analamazaotra. This national park has an elevation ranging from 900 to 1,040 m and its habitat is mainly a medium altitude moist evergreen forest. This forest was selectively logged in the 1960s and many of the largest trees have been removed back then; the canopy rarely exceeds 20-25 m in that area. It is also one of the



most frequently visited natural sites in the country, one of the easiest to reach, and one of the best places to observe lemurs in Madagascar! It can therefore get terribly overcrowded and we did indeed experience that on our visit, while searching for Indris and Diademed Sifakas!

Parc Mitsinjo, also called Station Forestière d'Analamazaotra, is situated west of the access road leading to Andasibe, opposite of Parc National d'Analamazaotra. It is a continuation of the forest in the national park but is managed by the conservation non-governmental organization Association Mitsinjo (https://associationmitsinjo.wordpress.com/) which was formed by local villagers in 1999 and which gained management of Analamazaotra Forest Station in 2003. In addition to the expected nature trails, Parc Mitsinjo also has on offer more adventurous and sportive structures, including a tree climbing park. Parc à Orchidées (Orchid Garden in English) is also situated within Parc Mitsinjo, a few hundred meters north of the main entrance to the reserve.

The **Parc Villageois V.O.I.M.M.A.** is by far the smallest of the protected areas in the region, totalling only 28 ha. It is managed by guides from the local community under the name *Vondron'Olona Ifotony Miaro sy Mitia ny Ala* (V.O.I.M.M.A., in English "local community group loves the forest", https://geeco5.wixsite.com/park-voimma).

The **Réserve de Ressources Naturelles de Maromizaha** is situated south of the national road RN2, three kilometres after the junction to Andasibe. It was created in 2015 and is now managed by Groupe d'Étude et de Recherche sur les Primates de Madagascar (GERP,



d by Groupe d'Etude et de Recherche sur les Primates de Madagascar (GERP, http://www.gerp.mg/). It is larger than the Parc National d'Analamazaotra with a total surface of 1,880 ha and it has an ecosystem where taller and larger trees are existing, compared to the former.

Additionally to these four protected areas which are the closest to Andasibe itself and the main lodging options, several other exist in the surrounding area. The **Parc National de Mantadia** is situated one hour drive north of Andasibe and is by far the largest and the more natural of all, with 15,500 ha currently protected. Created in 1989, this area is also managed by Madagascar National Parks. It is supposed to be a virtually untouched primary forest with high canopy and rugged but rewarding trails.

Vohimana Reserve is situated further east (https://www.vohimana.com/english/). It was founded in 2005 by the non-governmental French-Malagasy organization

L'homme et l'Environment as some kind of experimental reserve and is now protected through a partnership between local villagers and this NGO. It is known among herpetologists to be a good site to observe the uncommon Lance-nosed Chameleon (*Calumma gallus*). Lastly, both **Torotorofotsy Reserve** and **Iaroka Forest** are well known among birders. Situated some 11 km west of Andasibe, the former is a Ramsar Wetland of International Importance since 2005, famous for its rare Golden Mantella (*Mantella aurantiaca*), the locally rare Greater Bamboo Lemur and numerous bird species. Iaroka Forest has been opened for tourism since 2015 and is a relatively reliable alternative site to observe the spectacular Helmet Vanga for one not having time to get to the north-east of Madagascar. Situated 10 km south of the RN2 junction for Andasibe, it is included within the larger Réserve de Ressources Naturelles du Corridor Ankeniheny-Zahamena and managed by the local community organization VOI Firaisankina since 2008.

With our limited time (arriving late from Antananarivo on the 12th of October and having to leave three days later) and considering our targets of specific mammals and birds, we decided to focus on the four former areas: Parc National d'Analamazaotra, Mitsinjo, V.O.I.M.M.A. and Maromizaha.

A total of **13 lemur species** are known to occur around Andasibe. The most iconic and sought-after is probably the famous **Indri**. With its unmistakable black and white coat, it is the largest living lemur, with a head-body length of 64-72 cm and a body weight ranging from 6 up to 9 kg. It is restricted to tropical moist lowland and montane forest of eastern Madagascar and is considered Critically Endangered on the IUCN Red List since 2014. Like for most of other lemurs, habitat destruction remains the main negative threat in its natural range! We observed several groups of Indris in all visited areas, including V.O.I.M.M.A. and Maromizaha, and could even hear its very unique call right from our room in Hotel Feon'ny Ala.

The **Diademed Sifaka** was another lemur species we were very keen to observe in Andasibe. Also Critically Endangered (IUCN Red List 2018), this sifaka species is readily distinguished from all the other lemur species by its characteristic colourful markings and its large physical size, rivalling with the Indri for the title of largest living lemur!

We observed a total of eight lemur species while in Andasibe with the **Weasel Sportive Lemur** and the **Eastern Woolly Lemur** being the least encounter ones (the former seen only once in Maromizaha and the latter twice at the entrance of Mitsinjo and on the Hotel Feon' ny Ala's ground, all during night walks).

Among the few lemur species we missed, most were not targeted as such as we had already seen them and/or we would have better chance of seeing them in other areas (Greater Bamboo Lemur, Red-bellied Lemur, Black-and-white Ruffed Lemur and Aye-aye). The **Hairy-eared Dwarf Lemur** (*Allocebus trichotis*) is unregularly seen near Andasibe but this area remains probably one of the best site to find this species in Madagascar. We put some effort in finding it, during both our night walks around Mitsinjo and Maromizaha, but without success! Another naturalist was able to observe



one Hairy-eared Dwarf Lemur on the exact same main path in Maromizaha during the same time we were in Andasibe and guides were mentioning having seen that species recently. One would probably have to dedicate some more efforts than we did and spend some additional nights in the area and/or organize their night walk in Maromizaha differently (more on that later).



One **Lowland Streaked Tenrec** which we located one late afternoon in V.O.I.M.M.A. (with the use of our thermal camera) was another highlight among the mammals we observed in Andasibe. Both our night walks in Mitsinjo and Maromizaha brought numerous sightings of multiple **Tufted-tail Rats**, which we identified as from three species: Tanala, Lesser and Webb's Tufted-tail Rats.

We divided our two full days in Andasibe between a morning walk in Parc National d'Analamazaotra (7:00 to 13:00), an afternoon in Parc Villageois V.O.I.M.M.A. (15:30 to 18:00), directly followed by a night walk in Parc Mitsinjo, including Parc à Orchidées (18:00 to 21:00), and finally a full day walk in Réserve de Ressources Naturelles de Maromizaha (8:45 to 21:00). I should admit that this is probably the area where I felt there was the most confusion around planning our days and the general logistics. While the morning in Parc National d'Analamazaotra is a straight forward approach and gave us unique opportunities for firth sightings of Indris and Diademed Sifakas, and our only Grey Bamboo Lemurs for the full trip, I feel in retrospect we didn't take full advantage of the night walk opportunities in the areas allowing them (which is a rare thing in Madagascar!). We should have definitely extended our night walk in Mitsinjo, also looking longer for the missed Hairy-eared Dwarf Lemur. The full day in Maromizaha was a foolish idea with us arriving there far too late for good birding, walking very long along rugged stretches without many sightings in the heat of the day, having a limited packed lunch and therefore also starting our night walk not in the best shape. Maromizaha has the potential for very good early morning birding and I would suggest rather to get there early, come back to the lodge for a well-deserved lunch break before heading back into the forest in mid-afternoon and exploring the forest longer into the night.

While I was personally unhappy with our guide in Analamazaotra, I would highly advise Étienne who guided us in Maromizaha. It seems Étienne is not (yet) registered to guide

in the national parks and/or in Mitsinjo or V.O.I.M.M.A. but gave us a very good impression during the day we spent together in Maromizaha (even when the conditions were far from ideal as I mentioned above). Étienne can be contacted on WhatsApp at +261 34 40 248 29.

Our initial idea was to book at **Hotel Feon' ny Ala** (https://www.feonnyala-hotel.com/) which is located 1.3 km south of the entrance to Parc National d'Analamazaotra and close to the junction with the road RN2 but there was some confusion after we confirmed our itinerary with Patrick and we ended being booked in Marie Guesthouse, situated opposite along the same street (http://guesthousemarieandasibe.com/). We arrived in Andasibe late the first night, after a delayed flight from Morondava, and we could only endure the horrendous conditions of our rooms at Marie Guesthouse, being promised we would get a better room the next day. This didn't not happen the following day and the other room offered was hardly better. I had to take action and I was lucky to find available bungalows at the nearly Hotel Feon' ny Ala for the remaining two nights. In short: do not stay at Marie Guesthouse (at least in its current conditions in October 2023, but to be fair some parts of

the hotel were looking potentially under reconstruction/extension when we were there) and make sure to have a booked room in advance at the fantastic Hotel Feon' ny Ala. Feon' ny Ala is a largish place with some 50 bungalows but all cleverly settled in a prime location facing the national park. It never gave us the feeling of being overcrowded as such and we enjoyed a lot the settings, the option to hear the morning calls of the Indris from our balcony, and the very nice food on offer! Late dinner may be an issue though or even not possible as in most places in Madagascar.

Three species of **Free-tailed Bats** are regularly found in urban structures within Andasibe: Peters's Goblin Bat (*Mormopterus jugularis*), Malagasy Large White-bellied Free-tailed Bat (*Mops leucostigma*) and Malagasy Eastern Free-tailed Bat (*Chaerephon atsinanana*). We were able to observe a few of the former in small crevices under the roof of one of our (awful and smelly!) rooms at Marie Guesthouse. The attic at a nearby hotel, named Chez Luc, was occupied by a large population of Large White-bellied Free-tailed Bats. There is also a known roost of **Madagascar Rousettes** (*Rousettus madagascariensis*) near the entrance of Réserve de Ressources Naturelles de Maromizaha (18°57'41.50"S 48°27'10.03"E). Access requires some effort and the bats are hardly visible, roosting very high above in various crevices and deep cavities, but it is worth the effort as this Vulnerable species is not so commonly encountered.

Before driving back to Antananarivo, we spent our last morning at **Vakona Forest Lodge**. This accommodation is situated five kilometres north of Andasibe, on the way to Parc National de Mantadia. It is a relatively expensive and fancy lodging option but our main reason to get there was to visit their captive facilities. In addition to various trails and other touristic entertainments (including a horse ride centre), Vakona Forest Lodge has two sub-locations with captive animals: five islands with a population of some 100 lemurs from five different species (18°53'23.20"S 48°25'52.87"E) and a large crocodile lake surrounded by several aviaries, open pits and other enclosures (18°53'38.67"S

48°26'1.21"E). I didn't expect much from that institution and we hesitated to actually go for another bird walk on that morning instead of making it to Vakona Lodge. We were positively surprised both with the knowledge of the guides we met during our visit, but also by the conditions given to the captive animals and the general approach. It may remain one of the best captive institution we visited in Madagascar and it is situated in natural surroundings which actually give a chance for interesting wild sightings at the very same time. The captive group of Diademed Sifakas (5 individuals) is worth mentioning, the other four lemur species kept here being Grey Bamboo Lemur, Blackand-white Ruffed Lemur, Red Ruffed Lemur and a mixed hybrid group of Brown Lemurs (with phenotypical traits of Brown, Rufous Brown, Red-fronted Brown and Red-collared Brown lemurs at least). Tourists usually visit Vakona Forest Lodge in the afternoon while we were there earlier in the day and had the place almost for ourselves, which may have impacted our impression as well.



At as a general comment, Andasibe is definitely an area we would consider to come back at one point while in Madagascar, as it is relatively easily reached, it offers a great opportunity to see the amazing Indris and also especially as we missed the Hairy-eared Dwarf Lemur!



Mammal species observed in Andasibe Area (15 species):

- Lowland Streaked Tenrec (Hemicentetes semispinosus)
- Goodman's Mouse Lemur (*Microcebus lehilahytsara*)
- Crossley's Dwarf Lemur (*Cheirogaleus crossleyi*)
- Weasel Sportive Lemur (*Lepilemur mustelinus*)
- Grey Bamboo Lemur (Hapalemur griseus griseus)
- Brown Lemur (*Eulemur fulvus*)
- Eastern Woolly Lemur (Avahi laniger)
- Diademed Sifaka (*Propithecus diadema*)
- Indri (*Indri indri*)
- Tanala Tufted-tail Rat (Eliurus tanala)
- Lesser Tufted-tail Rat (*Eliurus minor*)
- Webb's Tufted-tail Rat (*Eliurus webbi*)
- Madagascar Rousette (Rousettus madagascariensis)
- Peters's Goblin Bat (*Mormopterus jugularis*)
- Malagasy Large White-bellied Free-tailed Bat (Mops leucostigma)

Bird species observed in Andasibe Area (15 species):

- Madagascar Green-Pigeon (Treron australis australis)
- Malagasy Coucal (Centropus toulou toulou)
- Madagascar Nightjar (Caprimulgus madagascariensis madagascariensis)
- Madagascar Wood-Rail (Mentocrex kioloides kioloides)
- Madagascar Flufftail (Sarothrura insularis)
- White-throated Rail (*Dryolimnas cuvieri cuvieri*)
- Striated Heron (Butorides striata rutenbergi)
- Madagascar Buzzard (Buteo brachypterus)
- Barn Owl (*Tyto alba poensis*)
- Cuckoo-roller (*Leptosomus discolor discolor*)
- Malagasy Kingfisher (Corythornis vintsioides vintsioides)
- Madagascar Pygmy Kingfisher (Corythornis madagascariensis madagascariensis)
- Pitta-like Ground-Roller (*Atelornis pittoides*)
- Rufous-headed Ground-Roller (Atelornis crossleyi)
- Lesser Vasa Parrot (Coracopsis nigra nigra)
- Velvet Asity (*Philepitta castanea*)
- Common Sunbird-Asity (*Neodrepanis coruscans*)
- Madagascar Cuckooshrike (Coracina cinerea cinerea)
- Common Newtonia (Newtonia brunneicauda brunneicauda)
- Tylas Vanga (Tylas eduardi eduardi)
- Red-tailed Vanga (Calicalicus madagascariensis)
- Nuthatch-Vanga (Hypositta corallirostris)
- Chabert Vanga (Leptopterus chabert chabert)
- Madagascar Blue Vanga (Cyanolanius madagascarinus)
- Crested Drongo (Dicrurus forficatus forficatus)
- Malagasy Paradise-Flycatcher (Terpsiphone mutata mutata)
- Common Jery (Neomixis tenella orientalis)
- Stripe-throated Jery (Neomixis striatigula striatigula)
- Madagascar Swamp Warbler (Acrocephalus newtoni)
- Long-billed Bernieria (Bernieria madagascariensis madagascariensis)
- Mascarene Martin (*Phedina borbonica madagascariensis*)
- Malagasy Bulbul (Hypsipetes madagascariensis madagascariensis)
- Madagascar Magpie-Robin (Copsychus albospecularis inexspectatus)
- African Stonechat (Saxicola torquatus sibilla)
- Souimanga Sunbird (Cinnyris sovimanga sovimanga)
- Nelicourvi Weaver (Ploceus nelicourvi)
- Forest Fody (Foudia omissa)
- Madagascar Munia (*Lepidopygia nana*)
- Madagascar Wagtail (Motacilla flaviventris)











PARC NATIONAL DE MASOALA & FARANKARAINA (2.5 days / 3 nights)

19 mammal species + 47 bird species + 2 amphibian species + 7 reptile species seen

The last main area we visited in Madagascar was **Masoal**a in the north-east of the country. Our initial plan was to fly to Maroantsetra, to spend one night in Farankaraina to look for Aye-aye, and then spend three nights in Masoala before flying back to the capital city. When we booked our internal flights with Air Tsaradia back in March 2023, the airline was offering two flights a week to Maroantsetra. A few weeks later, things changed and the Air Tsaradia schedule went down to one flight a week, our return flight to Antananarivo been simply cancelled. We had to adapt and find an alternative way to come back (more on that later).

Parc National de Masoala is the largest protected area in Madagascar (with a surface of 223,415 ha) but is poorly visited (average of just over 3,000 visitors annually during the period 2012-2016). It remains relatively complicated to access and the city of Maroantsetra is the usual only entry point. It is one of the largest and most diverse areas of virgin rainforest in Madagascar and it protects altogether tropical rainforest, coastal forest, flooded forest, marsh and mangrove. The Complexe d'Aires Protégées de Masoala encompasses actually the national park itself, three marine parks (Tampolo, Ambodilaitry and Ifaho), plus the Nosy Mangabe Special Reserve. We considered visiting Nosy Mangabe on our way in, instead of Farankaraina, but decided for the latter in view of our better chance to observe Aye-aye in that area and to get to know more about the conservation actions developed there.







The east coast of the national park is dotted with various accommodation and lodging options, especially around the Tampolo area. We selected Chez Arol Ecologe (https://www.arol-ecolodge.com/) which offer rustic palm-thatched huts, set back from the beach. Patrick actually booked a full package from the owner of Chez Arol (Olivier Fournajoux, ecolodgechezarol@gmail.com) for our full stay in the region. Olivier provided obviously rooms within Chez Arol, but also organized our stay in Farankaraina (including all the camping equipment, cooking and logistics there), as well as our guide and all the transport, from Maroantsera airport to Farankaraina, then to Masoala and even our crossing to Mananara on our way out. He provided as well contact of a driver for our drive further south (named Jean, whom I would actually advise for anyone looking for a driver Mananara, https://www.facebook.com/jeanerick.chrysostome).

I was really delighted and impressed by the whole organization deployed by Olivier's team in Farankaraina and we enjoyed extremely our night in a tent there as well as dinner and breakfast, which were delicious! Chez Arol Ecolodge itself was slightly disappointing or we may have had too high expectations. Notwithstanding it was a good lodge with comfortable structures and a fantastic location! The flexibility about meals and their timing were also definite assets which is usually uncommon elsewhere in Madagascar. Masoala Forest Lodge (https://www.masoalaforestlodge.com/), situated a kilometre further south on the same beach, appears an alternative option if needed.

A young man named Claudio was our assigned guide for the full stay, both in Farankaraina and Masoala. He was kind and committed to the task of finding us many mammals and birds but somehow sometimes missing that little something that would make him a great guide! Maybe simply the experience still to be acquired?! While we were in Farankaraina and Masoala, another group of four Americans were following more or less the same itinerary, also booked with Olivier. Their guide was much older, wise and having some 25 years of experience in Masoala.

Over the years, Armond has seen Brown-tailed Vontsira, Broad-striped Vontsira and Falanouc (!), all around Chez Arol. He is also a very experienced bird person knowing the habits and behaviours of many species. Based in Maroantsetra, Armond is apparently not only guiding in Masoala but also in nearby other national parks and natural areas. He is clearly the guide to be with when visiting Masoala and I would highly advised his services (Armond's phone number: +261 34 50 726 96).

Landing in Maroantsera on the 16th of October just after midday, we met Olivier's team on the grounds and started directly our way to **Farankaraina**. The area can be reached after a two-hour canoe ride (along small channels through the marshes) and a two-kilometre walk along the beach. What I name here Farankaraina and which we visited is actually the **Poste Forestier de Farankaraina**, also known under the name Station de Farankaraina or Farankaraina Tropical Park in English. This stretch of forest has been managed by the organization Antongil Conservation since 2006.



Further north and linked with it, one would find the community forest named Réserve de Rabondro or Forêt classée de Farankarain, managed by the non-governmental organization ONG Fandroakando (https://www.fandroakando.ong/). Both together form a unique forest of some 3,000 ha. Antongil Conservation was actually created in 1999 and is supported by a collaboration of British and French zoos, led by Bioparc de Doué la Fontaine since the inception (https://www.bioparc-zoo.fr/projetnature/madagascar-foret-tropicale-vari-roux). We were fortunate to meet Alexis Thorel who is the director of Antongil Conservation and detailed us the current on-going actions: site monitoring and maintenance, monitoring of forest cover and wildlife survey, permanent contact with environmental authorities to manage observed crimes (illegal logging and poaching among others). A reinforcement program of the local Red Ruffed Lemur population with both translocated and captive born lemurs has been initiated since 2018 and is on-going.

Up to **ten lemur species** have been actually recorded in Farankaraina but our main target here was the iconic **Aye-aye** (*Daubentonia madagascariensis*). While this endangered species is widespread around the island of Madagascar, it is actually very rarely seen in the wild! It evidently occurs in fragmented habitats, at very low population densities with large individual home ranges. In Farankaraina, our patience and persistence were rewarded by an Aye-aye sighting, close to camp where the animal was feeding high in the canopy, at some 20-25 m above our head! What an amazing species!

There is a lot of shared and common biodiversity between Farankaraina and Masoala but there exist also some natural barriers between the two and a few species differs. The local mouse lemur (which is still to be described scientifically) appeared to us phenotypical very similar in both locations. Similarly, the Greater Dwarf Lemur, the Masoala Woolly Lemur, and all three diurnal lemurs are found both in Farankaraina and in Masoala. But the situation is different for the local sportive lemurs: the **Seal's Sportive Lemur** (*Lepilemur seali*) is believed to occur in Farankaraina while the expected **Masoala Sportive Lemur** (*Lepilemur scottorum*) is the one seen within Parc National de Masoala. During our night in Farankaraina, we were lucky to observe two Seal's Sportive Lemurs in the exact same fruiting trees as the ones visited by the Aye-aye.

After a fantastic night in Farankaraina, we headed to **Masoala** where we had one day and a half and two nights left. We were really amazed by the huge diversity and the combination of strong forest habitat and beautiful beaches. Here also ten lemur species can be



encountered (the same as in Farankaraina apart for the sportive lemur). We were able to observe seven of these species,

missing only the Hairy-eared Dwarf Lemur (which had already eluded us in Andasibe), the Masoala Fork-marked Lemur (which has apparently became very rare recently!) and the Aye-aye (which we saw in Farankaraina).

The **Red Ruffed Lemur** is a beautiful species which has a very restricted range and narrow niche dimensions, primarily inhabiting the remaining primary forests of the Masoala Peninsula. It is Critically Endangered on the IUCN Red List and population numbers are in sharp decline due to habitat loss from agriculture, illegal logging, frequent cyclones, and illegal hunting.

The **Malagasy carnivores** are all part of the endemic family *Eupleridae*. Depending on the taxonomy one will follow, that family includes seven to ten species, with the Durrell's Vontsira (*Salanoia durrelli*) usually not (yet) recognized by most sources. While division of the Falanouc into Western Falanouc (*Eupleres major*) and Eastern Falanouc (*Eupleres goudotii*) appears on the IUCN Red List, more recent molecular research³ consider both not to be split and suggest to maintain only one Falanouc (*E. goudotii*). Broad-striped Vontsira (*Galidictis fasciata*) and Grandidier's Vontsira (*Galidictis grandidieri*) are in a similar situation, being either considered subspecies of *G. fasciata* or two separated species. The IUCN Red List here again maintains both as separate while recent publication is suggesting a single species with two subspecies based on mitochondrial and nuclear DNA sequences⁴.

By the time we reach Masoala, our group had seen already four Malagasy carnivores: Spotted Fanaloka and Ring-tailed Vontsira in Ranomafana, and Fossa and Bokyboky in Kirindy. Additionally, Alex and Tomer had seen another Ring-tailed Vontsira in Tsingy de Bemaraha

while we stayed in Kirindy Forest. With Grandidier's Vontsira (*Galidictis [fasciata] grandidieri*) only occurring in the far south and therefore out of our radar [Alex would see that (sub-)species a couple of weeks later during his post-tour], we had still three species of local carnivores to find! We knew it was a very (very) long shot with these species being very shy and secretive, and extremely rarely seen, even by persons spending months and years in the field... but we still had our hope!

While we visited Ranomafana, we asked around about Falanouc and Broad-striped Vontsira but we failed on seeing any of the two there. Andasibe was a second opportunity for Falanouc, though the species also remained invisible for us there! We knew Masoala could be potentially a good spot for Brown-tailed Vontsira (*Salanoia concolor*), as well as possibly Broad-striped Vontsira, and we had the plan to spend some effort looking for these! But it is actually a **Falanouc** that crossed the trail a few meters front of Patrick,



right in the middle of the day on the 18th of October! Unfortunately for all of us, we were all in various other locations at that exact moment, with Alex and Tomer on another section of the trail, further down, and Rūta and me birding with Armond. Patrick was the only one to see the unique beast but brought back a couple of amazing pictures of this rarely seen mammal. Following Patrick's sighting, we spent some more time on the same trail in the hope the Falanouc would come back but it didn't. We saw both Spotted Fanaloka and Ring-tailed Vontsira near Chez Arol on the same trail system, which obviously make Masoala a very strong carnivore hotspot!

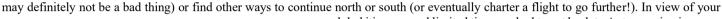
³ Veron, G. and Goodman, S.M. (2018) One or two species of the rare Malagasy carnivoran Eupleres (*Eupleridae*)? New insights from molecular data. Mammalia 82: 107-112.

⁴Veron, G. et al. (2017. New insights into the systematics of Malagasy mongoose-like carnivorans (*Carnivora*, *Eupleridae*, *Galidiinae*) based on mitochondrial and nuclear DNA sequences. Journal of Zoological Systematics and Evolutionary Research 55: 250-264.

As mentioned above, we went birding one morning with Armond (and his four American clients). Armond took us to another area of the national park, situated 2.5 km south of Chez Arol and only accessible by boat (which he organized for us from the nearby village). Our main target here was the iconic **Helmet Vanga** (*Euryceros prevostii*) which is a magnificent endangered and endemic bird species! Armond knew of a nest where we could observe a pair of birds currently taking turns incubating their eggs. Really an amazing sighting! During that same morning, we looked extensively for another localized and rare vanga: the Bernier's Vanga (*Oriolia bernieri*). We heard it calling a few times and we saw something flashing through the vegetation at two occasions but we could never clearly see it unfortunately. We saw multiple other birds on that same walk including two Red-breasted Couas and a beautiful White-throated Oxylabes.

Masoala offered us **great night walks** with the first one there being probably among the most rewarding we had in Madagascar. During a four hours and a half time lapse, we saw numerous species: Northern Bamboo Lemurs, the undescribed Mouse Lemur mentioned earlier, Greater Dwarf Lemurs, Masoala Sportive Lemurs, Masoala Woolly Lemurs, one White-tailed Tree Rat (from which the known and published range does not include Masoala yet!), three species of Tufted-tail Rats, the impressive Commerson's Leaf-nosed Bat and an unidentified smaller Long-fingered Bat. What an impressive night! The second night in Masoala added to these Lowland Streaked Tenrec and the abovementioned Spotted Fanaloka!

Masoala is indeed a **remote place** which may be difficult to reach. Air Tsaradia is currently offering a weekly flight from Antananarivo which means one has to spend seven nights in the area (which





global itinerary and limited time, we had to get back to Antananarivo in a way or another. Ultimately the cancelled flight back from Maroantsera costed us a night Chez Arol and at least one day and a half of wildlife search in Masoala. We decided to cross the Antongil Bay towards Mananara from where we had a driver taking us to Toamasina (having then a flight from there to Antananarivo). The whole section from Mananara to Toamasina may not appear long on a map, some 280 km at most, but it took us almost two full days of appalling drive! The first one hundred kilometres south of Mananara were by far the worst, with seven barge crossings, and a surface which was neither a road nor a dirt track... but simply a rocky riverbed to drive on! Logistics were also complicated along the way with few food options and limited lodging. We ended up sleeping in some kind of abandoned resort along the beach near Manakalana, some 12 km south of Soanierana Ivongo.

Before hitting the road and in anticipation, we had talks and hopes to try for a few spots along the way, potentially for Jonah's Mouse Lemur near Parc National de Mananara-Nord or around Antanambe, or more realistically for Simmons's Mouse Lemur in Ambodiriana Forest, Tampolo Forest or Réserve d'Analalava. None of that happened to be possible and we just had to drive and to endure the painful bumps, knocks and induced bruises! With sunset, somewhere between Fandrarazana and Andrangazaha, we had a flyover of several **Madagascar Flying Foxes** but could not even stop because we still had two river crossings front of us that night. In retrospect, I would highly advise to spend more time in Masoala (at least three to four nights) and avoid anyhow the long and terrible drive south to Toamasina, or approach that differently and spend more time along that stretch, trying for the above-mentioned species, especially Tampolo, Analalaya and eventually even Betampona.



Travelling the eastern coast allowed us though a stopover at Parc Zoologique Ivoloina in Toamasina (https://www.madagascarfaunaflora.org/). The institution opened as a botanical garden in 1898, and the zoological facilities were later added in 1963. After being largely destroyed by a cyclone in 1986, Ivoloina was reconstructed and reopened in 1990. It is managed since then by the nonprofit Madagascar Fauna and Flora Group (MFG) (in collaboration with the famous Duke Lemur Center). MFG is actually a membership-based collaboration of zoos, aquaria, botanical gardens, and related institutions. MFG operates Parc Ivoloina and has also a partnership with Madagascar National Parks to conduct conservation research in the nearby Betampona Natural Reserve (where captive-born Black-and-white Ruffed Lemurs were released in 1997, 1998 and 2001). We met with Bernard Iambana Richardson, Zoo Director at Ivoiloina, whom showed

us around and detailed their programs and activities. The institution has also a Center for Environmental Education (CEE) and Ivoloina Conservation Training Center. The captive collection includes some 250 lemurs of a dozen species, many coming from situations which required rescued (illegal pets, confiscation, etc.). Ivoloina is also involved in the breeding of some endangered lemur species and is currently keeping one Aye-aye. A wild colony of Malagasy Large White-bellied Free-tailed Bats is roosting in a specifically-built structure near the conference centre. Wild Simmons's Mouse Lemur are also supposed to occur in the area and to be visible at night on the zoo grounds. Unfortunately we had to head further to Toamasina Airport where we caught an evening flight to Antananarivo, rounding up our wildlife itinerary around Madagascar!



Mammal species observed in Farankaraina (6 species):

- Mouse Lemur (undescribed) (*Microcebus sp.*)
- Greater Dwarf Lemur (*Cheirogaleus major*)
- Seal's Sportive Lemur (Lepilemur seali)
- Aye-aye (Daubentonia madagascariensis)
- Webb's Tufted-tail Rat (*Eliurus webbi*)
- Roof Rat (*Rattus rattus*)

Mammal species observed in Masoala (16 species):

- Lowland Streaked Tenrec (Hemicentetes semispinosus)
- Mouse Lemur (undescribed) (*Microcebus sp.*)
- Greater Dwarf Lemur (*Cheirogaleus major*)
- Masoala Sportive Lemur (*Lepilemur scottorum*)
- Northern Bamboo Lemur (Hapalemur occidentalis)
- White-fronted Brown Lemur (*Eulemur albifrons*)
- Red Ruffed Lemur (*Varecia rubra*)
- Masoala Woolly Lemur (Avahi mooreorum)
- White-tailed Tree Rat (*Brachytarsomys albicauda*)
- Grandidier's Tufted-tail Rat (*Eliurus grandidieri*)
- Ellerman's Tufted-tail Rat (Eliurus ellermani)
- Webb's Tufted-tail Rat (*Eliurus webbi*)
- Commerson's Leaf-nosed Bat (Macronycteris commersonii)
- Long-fingered Bat (*Miniopterus sp.*)
- Spotted Fanaloka (Fossa fossana)
- Ring-tailed Vontsira (Galidia elegans elegans)





Bird species observed in Farankaraina and on our way to Farankaraina (32 species):

- White-faced Whistling-Duck (*Dendrocygna viduata*)
- Muscovy Duck (Cairina moschata)
- Red-breasted Coua (Coua serriana)
- Malagasy Coucal (Centropus toulou toulou)
- Malagasy Palm Swift (Cypsiurus gracilis gracilis)
- Madagascar Wood-Rail (Mentocrex kioloides kioloides)
- White-throated Rail (Dryolimnas cuvieri cuvieri)
- Whimbrel (*Numenius phaeopus phaeopus*)
- Common Sandpiper (Actitis hypoleucos)
- Madagascar Pratincole (Glareola ocularis)
- Long-tailed Cormorant (Microcarbo africanus pictilis)
- Purple Heron (*Ardea purpurea madagascariensis*)
- Great Egret (*Ardea alba melanorhynchos*)
- Little Egret (*Egretta garzetta dimorpha*)
- Black Heron (*Egretta ardesiaca*)
- Cattle Egret (Bubulcus ibis ibis)
- Squacco Heron (Ardeola ralloides)
- Striated Heron (Butorides striata rutenbergi)
- Black-crowned Night-Heron (Nycticorax nycticorax nycticorax)
- Malagasy Harrier (*Circus macrosceles*)
- Black Kite (*Milvus migrans parasitus*)
- Madagascar Buzzard (*Buteo brachypterus*)
- Madagascar Scops-Owl (Otus rutilus rutilus)
- Malagasy Kingfisher (Corythornis vintsioides vintsioides)
- Malagasy Paradise-Flycatcher (*Terpsiphone mutata mutata*)
- Pied Crow (Corvus albus)
- Malagasy White-eye (Zosterops maderaspatanus maderaspatanus)
- Common Myna (Acridotheres tristis)
- Souimanga Sunbird (Cinnyris sovimanga sovimanga)
- Malagasy Sunbird (Cinnyris notatus notatus)
- Red Fody (Foudia madagascariensis)
- Forest Fody (Foudia omissa)

Bird species observed in Masoala and during our crossings of Antongil Bay (26 species):

- Madagascar Blue-Pigeon (Alectroenas madagascariensis)
- Blue Coua (Coua caerulea)
- Red-breasted Coua (Coua serriana)
- Collared Nightjar (Gactornis enarratus)
- Bridled Tern (Onychoprion anaethetus antarcticus)
- Roseate Tern (Sterna dougallii)
- Common Tern (Sterna hirundo hirundo)
- Lesser Crested Tern (Thalasseus bengalensis bengalensis)
- Purple Heron (*Ardea purpurea madagascariensis*)
- Great Egret (*Ardea alba melanorhynchos*)
- Little Egret (*Egretta garzetta dimorpha*)
- Black Heron (Egretta ardesiaca)
- Cattle Egret (Bubulcus ibis ibis)
- Squacco Heron (Ardeola ralloides)
- Malagasy Pond-Heron (Ardeola idae)
- Black-crowned Night-Heron (Nycticorax nycticorax nycticorax)
- Malagasy Kingfisher (Corythornis vintsioides vintsioides)
- Tylas Vanga (Tylas eduardi eduardi)
- Helmet Vanga (Euryceros prevostii)
- Malagasy Paradise-Flycatcher (*Terpsiphone mutata mutata*)
- White-throated Oxylabes (Oxylabes madagascariensis)
- Long-billed Bernieria (Bernieria madagascariensis madagascariensis)
- Spectacled Tetraka (Xanthomixis zosterops andapae)
- Madagascar Magpie-Robin (Copsychus albospecularis albospecularis)
- Souimanga Sunbird (Cinnyris sovimanga sovimanga)
- Nelicourvi Weaver (*Ploceus nelicourvi*)











ANTANANARIVO (2 days / 3 nights)

1 mammal species + 29 bird species + 4 reptile species seen

We had two days booked in Antananarivo at the end of the trip. Our goal was to visit a few zoological institutions around the capital city as well as a couple of birding spots, but also to have some time flexibility in case of any delay on our itinerary. We stayed for three nights at **Lamina 3** (https://www.laminappart.com/) which is well situated and offers large fully-equipped apartments with balcony. We also had arranged in advance a driver for our full stay: Haja was really kind and flexible, driving us around to all our selected destinations (WhatsApp: +261 34 16 922 29).

Antananarivo, also named Tananarive in French or very often shorten Tana, is settled at an elevation of 1,300 m and has a lot of topography. The city is home to a population of some 1,300,000 inhabitants. Traffic within the city and its close proximity can be a real nightmare and one will have to expect long delays, especially during the daytime and when driving in and out of the city.







Parc Botanique et Zoologique de Tsimbazaza (PBZT) is the national zoo of Madagascar (http://pbzt.recherches.gov.mg/). It is situated south of the city centre in a relatively large green area totalling 27 hectares. Opened in 1925 as a botanical garden, some cages for captive animals were added several years later on the request of the Muséum National d'Histoire Naturelle de Paris. It was nationalized in 1974. We had no

real expectation before our visit but we knew Tsimbazaza was both the main zoo in Madagascar and had been collaborating with numerous institutions around the world. Gerald Durrell had also established some insurance captive populations in collaboration and at Tsimbazaza back in 1990. The situation we discovered on site in October 2023 was rather poor with numerous cages and enclosures in very bad conditions, many of them been empty and abandoned and several areas clearly rundown. The financial situation of Tsimbazaza seems to have been complicated recently and the institution clearly has seen better days! The animal collection on show has a strong focus on Malagasy species with several lemur species being maintained on some small islands, in various cages and in a much-larger aviary-type cage for some ruffed lemurs. We didn't notice any unusual species, apart maybe from a couple of bamboo lemurs. The famous nocturnal house for ayes-ayes is actually abandoned and completely dilapidated! The nearby reptile house is not in much better conditions but still has some tortoises, a few snakes and lizards, as well





as one Madagascar Flying Fox on show. Highlight within the bird collection is probably a remaining pair of the Critically Endangered and endemic Madagascar Fish-Eagle. The small natural history museum with collections of tribal carvings and skeleton of extinct megavertebrates, including an elephant bird, pygmy hippos and giant lemurs, was not accessible during our visit as were empty the fossa's cages. The amphibian house was simply falling apart. A single Bushpig (*Potamochoerus larvatus*), which is a species introduced in Madagascar, was a lifer for us! The highlight of the Parc Botanique et Zoologique de Tsimbazaza is probably its large central man-made lake created by king Ranavalona I. in 1815 which attracts large colonies of herons and egrets. Tsimbazaza is known additionally as a roost site for a colony of Madagascar Straw-coloured Fruit Bats; after some effort, we were able to locate a small cluster of wild bats in a high palm tree in the north of the park (18°55'41.93"S 47°31'35.21"E).







Two private zoological institutions are situated in the outskirts of the capital city and have a more touristic approach. Lemurs' Park (https://www.lemurspark.com/) is situated in Imerintsiatosika, 22 km west of Antananarivo. It was opened in 2001 by Laurent Amouric and Maxime Allorge (grandson of Pierre Boiteau, founding director of Tsimbazaza Zoo) and is dedicated to lemurs. The 5-ha site is landscaped on the steep shoreline of a largish river with some 50+ lemurs of eight species roaming in semi-free conditions within that area. The vegetation cover is somehow limited and scarce with very few larger trees, probably due to the soil and the environmental conditions. Visitors are taken through in small guided groups and we did appreciated the quality of the explanations given by our guide during the one-hour tour. The animal

collection includes the expected species, comprising a population of 28 Ring-tailed Lemurs, several species of *Eulemur* (Brown, Mongoose, Black Lemurs), three Grey Bamboo Lemurs, a few Black-and-white Ruffed Lemur and two species of sifakas (Coquerel's and Crowned Sifakas). Lemurs' Park has bred Coquerel's Sifaka multiple times since 2007 and is also involved in the Crowned Sifaka European EAZA Ex situ Programme (EEP). Most of the park's lemurs were confiscated pets and the site somehow has now exceeded his carrying capacity. Thought about relocating the park is currently being discussed, especially in view of the relatively long drive from Antananarivo which may deter some visitors. With an entrance fee of 70,000 MGA per person (approximately $14 \, \oplus$), Lemurs' Park is clearly targeting tourists who would have no time to look for lemurs in the wild and/or would like to see a wider diversity of these animals. For comparison, entrance to Parc Botanique et Zoologique de Tsimbazaza is set at 1,000 MGA for locals $(0.20 \, \oplus)$ and $20,000 \, \text{MGA}$ for foreigners $(4 \, \oplus)$.





Croc Farm Ivato (https://conservatoirebotanique.mg/) is somehow more accessible, being situated close to the airport in Ivato in the north of Antananarivo, and has widely diversified its offers. Started as a commercial crocodile farm named Reptel in 1988 (which moved to the current location in 1993), it is now a full-fledged zoo with a large collection, focused on reptiles but having also various birds and two free-roaming Coquerel's Sifakas. Croc Farm also has a restaurant next to the main crocodiles' lake, which seems to be a magnet as such for many visitors. Production of crocodile skin and other animal products is on-going but a focus on plant production has also emerged recently under the additional name Conservatoire Botanique de Madagascar. The whole area is well maintained, densely vegetated and some of the outdoor large open-topped enclosures for reptiles are appreciable!

While in Antananarivo, we had a great lunch at **Au Bois Vert** (https://auboisvert.com/), spent some time at a rather disappointing and touristic local handicraft market named Digue Market and drove around **Lac Anosy** with its superb blowing jacaranda trees. We had initially the plan to get to **Parc Forestier d'Angavokely et Angavobe**, a small protected area managed by Ministère des Eaux et Forêts and situated 40 kilometers east of Antananarivo. Angavokely means in Malagasy "where there are little bats" and Angavobe "where the big bats are found"! We knew that an opened-cave in that area was a roost-site for both Major's Long-fingered Bat (*Miniopterus majori*) and Small Sister Long-fingered Bat (*Miniopterus sororculus*) but local guide (M. Fortunah can be reach at +261 34 61 833 67) mentioned that the cave requires a very long walk to reach and that it has been mainly found empty recently. So we decided to give it a miss in view of our limited time!

Parc Tsarasaotra is a 27-ha forested park situated on the way to Ivato, right outside Antananarivo, but still in urban settings. The core 5-ha area is classified as a Ramsar Site in recognition of its importance as a wetland habitat and it is indeed a resting place for hundreds of water birds! It is a very famous birding spot especially to have a chance of seeing the rare and endemic Madagascar Pond Heron (which we saw there!) and due to its proximity with the airport. Admission costs 20,000 MGA per person $(4 \, \epsilon)$ and the park has extended operating hours. We spent some hours one morning from 6:45 and came back in the late afternoon for another look at the place and to search for some more birds. The park has diverse habitats, with two large open lakes in the south and more forested areas in the north. We were surprised to find various buildings and private villas within Parc Tsarasaotra and checking on historical aerial views it seems that this has increased exponentially in the recent years. While the two lakes may be preserved due to their status and recognition, other parts of the park are under pressure from nearby



urban development! We saw in Tsarasaotra some 20 bird species including numerous White-faced Whistling-Ducks and Red-billed Ducks, some Knob-billed Ducks, Blue-billed Teals and Meller's Ducks, but also Great Egret, Little Egret, Black Heron, Cattle Egret, Squacco Heron, Malagasy Pond-Heron, Striated Heron, and Black-crowned Night-Heron, as well as Madagascar Hoopoe, Malagasy Brush-Warbler and Malagasy White-eye. While driving through the rice paddy fields between Ivato and Tsarasaotra, we had a very brief view of the rare and endemic Humblot's Heron which was a high target for us! Some local birders confirmed later that Humblot's Heron "had arrived" near Lac Ivato. The brother of our driver Haja, who took us to the airport the last morning to get to our flight home, knew apparently some good areas for birding around that lake but we had no time anymore to check these. This would something to do next time we come to Madagascar!







Mammal species observed in Antananarivo / Tsimbazaza (1 species):

• Madagascar Straw-coloured Fruit Bat (Eidolon dupreanum)

Bird species observed in Antananarivo / mainly within Parc Tsarasaotra (29 species):

- White-faced Whistling-Duck (*Dendrocygna viduata*)
- Knob-billed Duck (Sarkidiornis melanotos)
- Muscovy Duck (Cairina moschata)
- Blue-billed Teal (Spatula hottentota)
- Meller's Duck (Anas melleri)
- Red-billed Duck (*Anas erythrorhyncha*)
- Malagasy Turtle-Dove (*Nesoenas picturatus picturatus*)
- Eurasian Moorhen (Gallinula chloropus pyrrhorrhoa)
- Humblot's Heron (*Ardea humbloti*)
- Great Egret (*Ardea alba melanorhynchos*)
- Little Egret (*Egretta garzetta dimorpha*)
- Black Heron (*Egretta ardesiaca*)
- Cattle Egret (Bubulcus ibis ibis)
- Squacco Heron (*Ardeola ralloides*)
- Malagasy Pond-Heron (*Ardeola idae*)
- Striated Heron (*Butorides striata rutenbergi*)
- Black-crowned Night-Heron (Nycticorax nycticorax nycticorax)
- Black Kite (Milvus migrans parasitus)
- Madagascar Hoopoe (*Upupa marginata*)
- Malagasy Kingfisher (Corythornis vintsioides vintsioides)
- Malagasy Kestrel (Falco newtoni newtoni)
- Malagasy Brush-Warbler (Nesillas typica typica)
- Malagasy Bulbul (*Hypsipetes madagascariensis madagascariensis*)
- Malagasy White-eye (*Zosterops maderaspatanus maderaspatanus*)
- Common Myna (*Acridotheres tristis*)
- Madagascar Magpie-Robin (Copsychus albospecularis inexspectatus)
- Red Fody (Foudia madagascariensis)
- Madagascar Munia (Lepidopygia nana)
- House Sparrow (Passer domesticus)







SELECTED BIBLIOGRAPHY AND RECOMMENDED READINGS

Andreone, F. et al. (2018) Les amphibiens du nord de Madagascar. Association Vahatra.

Andreone, F., Rosa, G.M. and Raselimanana, A.P. (2014) Les amphibiens des zones arides de l'ouest et du sud de Madagascar. Association Vahatra.

Attenborough, D. (1961) Zoo Quest to Madagascar. Lutterworth Press.

Botting, D. (1999) Gerald Durrell, the authorized biography. HarperCollins Publishers.

Bradt, H. and Austin, D. (2020) Madagascar. Edition 13. Bradt Travel Guides.

Durrell, G. (1992) The Ave-ave and I, a rescue expedition in Madagascar. HarperCollins Publishers.

Garbutt, N. (2022) Handbook of Mammals of Madagascar. Bloomsbury Publishing.

Garbutt, N. and Austin, D. (2023) Madagascar Wildlife. Edition 5. Bradt Travel Guides.

Glaw, F. and Vences, M. (2007) A Field Guide to the Amphibians and Reptiles of Madagascar. Third Edition. Vences & Glaw Verlag GbR.

Goodman, S.M. (2011) Les chauves-souris de Madagascar. Association Vahatra. Guides sur la diversité biologique de Madagascar.

Goodman, S.M. (2012) Les Carnivora de Madagascar. Association Vahatra. Guides sur la diversité biologique de Madagascar.

Goodman, S.M. (2022) The New Natural History of Madagascar (2-Volume Set). 2nd edition. Princeton University Press.

Goodman, S.M. et al. (2019) Les aires protégées terrestres de Magagascar: leur histoire, description et biote / The terrestrial protected areas of Madagascar: their history, description, and biota (3-Volume Set). Association Vahatra.

Goodman, S.M., Raherilalao, M.J. and Wohlhauser, S. (2022) Les aires protégées de Lokobe, d'Ankarana et de la Montagne d'Ambre dans la partie nord de Madagascar / The protected areas of Lokobe, Ankarana, and Montagne d'Ambre in northern Madagascar. Association Vahatra.

Goodman, S.M., Raherilalao, M.J. and Wohlhauser, S. (2023) Les aires protégées de Ranomafana et Andringitra dans le Centre Sud-est de Madagascar / The protected areas of Ranomafana and Andringitra in central southeastern Madagascar. Association Vahatra.

Goodman, S.M., Raherilalao, M.J. and Wohlhauser, S. (2023) Les aires protégées de Mantadia et d'Analamazaotra dans le Centre-est de Madagascar / The protected areas of Mantadia and Analamazaotra in central eastern Madagascar. Association Vahatra.

Hawkins, F., Safford, R. and Skerrett, A. (2015) Birds of Madagascar and the Indian Ocean Islands. Helm. Helm Field Guides.

Jovanovic, O. and Rabemananjara, F. (2008) Frogs of Madagascar, Genus Mantella: Pocket Identification Guide. Conservation International. Conservation International Tropical Pocket Guide Series.

Leuteritz, T.E. et al. (2008) Turtles and Tortoises of Madagascar and Adjacent Indian Ocean Islands: Pocket Identification Guide. Conservation International. Conservation International Tropical Pocket Guide Series.

Mittermeier, R.A. (2021) Mammals of Madagascar. Lynx Edicions. Lynx Illustrated Checklists Collection.

Mittermeier, R.A. et al. (2008) Lemurs of Madagascar: Pocket Identification Guide Nocturnal Lemurs. Conservation International. Conservation International Tropical Pocket Guide Series.

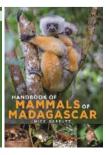
Mittermeier, R.A. et al. (2008) Lemurs of Madagascar: Pocket Identification Guide Diurnal & Cathemeral Lemurs. Conservation International. Conservation International Tropical Pocket Guide Series.

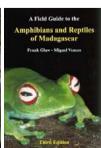
Mittermeier, R.A. et al. (2023) Lemurs of Madagascar. Fifth edition. Global Wildlife Conservation. Re:wild. Conservation International Tropical Field Guides.

Paulian, R. (1955) Les animaux protégés de Madagascar. Publications de l'Institut de Recherche Scientifique Tananarive-Tsimbazaza.

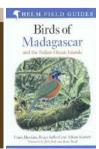
Soarimalala, V. and Goodman, S.M. (2011) Les petits mammifères de Madagascar. Association Vahatra. Guides sur la diversité biologique de Madagascar.



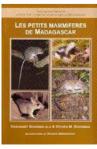


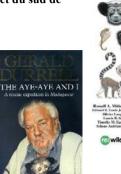














Target (**** = highest target / * = lowest)

IUCN Red List (NT and higher)

Endemic to Madagascar Scientific name English name French name Total number of sp. observed: 78 mammal species + 120 bird species 613 214 67 14 * eBird Observations 08/20 * eBird Observations 08/2023, from 19,960 checklists and 1,242 observers; for Mammals: iNaturalist 08/2023 (168 sp.)

	Species marked in white	on dork grow bookground wore or	agging m	ioood during	our trip b	ut notonti	ally assur	ring on o	ur itinor	on/	`			_		
	Species marked in white	e on dark grey background were sp	recies mi	issea auring	our trip b	ut potent	ally occur	ing on o	our illnera	ary						
MAMMALS	78 species															
Afrosoricida > Tenrecidae / Te	nrocs	4 sp. out of 31 sp. occuring														
M1 Greater Hedgehog Tenrec	Grand Tenrec-hérisson			е	27			T	Х	П		Т	Т	\top	ΤГ	
M2 Lowland Streaked Tenrec	Tenrec rayé	Hemicentetes semispinosus	**	е	88						х	х				
M3 Dobson's Shrew Tenrec	Microgale de Dobson	Nesogale dobsoni	*	е		Lif.		_	Х		\Box					Caught during trapping in Ranomafana
M4 Pale Shrew Tenrec	Microgale pâle	Microgale fotsifotsy	*	е	0	Lif.	\Box	\perp	Х							D uncertain (70%)
Primates > Cheirogaleidae / Me	ouse diant mouse dwar	f a 16 sp. out of 41 sp. occuring														
M5 Grey Mouse Lemur	Microcèbe murin	Microcebus murinus	***	е	96			T		X 2	x I				ΤГ	
M6 Jolly's Mouse Lemur	Microcèbe de Jolly	Microcebus jollyae	***	EN e	5	Lif.		+	х			\neg	\top			
M7 Nosy Be Mouse Lemur	Microcèbe de Claire	Microcebus mamiratra	***	EN e	7	Lif.	Х									Nso occuring on the main island, not only Nosy Be!
M8 Goodman's Mouse Lemur	Microcèbe de Goodman		***	NT e	88	?	\vdash	+	-	\vdash	X	-	+	_		
M9 Madame Berthe's Mouse Lemur		Microcebus berthae	***	CR e	9	Lif.	\vdash	+	,	X	\dashv	-	+	-	-11-	
M10 Rufous Mouse Lemur M11 Mouse Lemur (undescribed)	Microcèbe roux Microcèbe (non décrit)	Microcebus rufus Microcebus sp. (undescribed)	***	VU e ? e	102	Lif.	\vdash	+	х	\vdash	+	x x	.	-	-11-	
M12 Northern Giant Mouse Lemur	Microcèbe zaza	Mirza zaza	***	VU e	1	Lif.		x	-		\dashv	^	+	-		Ankarafa forest and potentially also on Nosy Be according to some sources
M13 Sibree's Dwarf Lemur	Chirogale de Sibree	Cheirogaleus sibreei	***	CR e	3	Lif.		_	х		+	-	+ +	\dashv		D uncertain in Ranomafana (75%)
M14 Fat-tailed Dwarf Lemur	Petit Chirogale	Cheirogaleus medius	***	VU e	33					х						· ·
M15 Greater Dwarf Lemur	Grand Chirogale	Cheirogaleus major	***	VU e	6	Lif.						хх			4 [
M16 Groves's Dwarf Lemur	Chirogale de Groves	Cheirogaleus grovesi	***	DD e	2	Lif.	\vdash	+	х	\vdash	\dashv		+	+	$-\parallel$	
M17 Crossley's Dwarf Lemur	Chirogale de Crossley	Cheirogaleus crossleyi	***	VU e	45	Lif.	\vdash	+		\vdash	X	-	+	+	$-\parallel$	
M18 Dwarf Lemur (undescribed) M19 Pale Fork-marked Lemur	Chirogale (non décrit) Phaner pâle	Cheirogaleus sp. [major] CCS5 Phaner pallescens			33	Lif.	\vdash	++	X	x	\dashv	-	+	+	- -	
M20 Sambirano Fork-marked Lemur	Phaner de Pariente	Phaner parienti		EN e	1	Lif.		T x	\dashv	 ^ 	\dashv	\dashv	+	+		
Sambirano Mouse Lemur		o Microcebus sambiranensis		EN e	0			, A						>	c S	Species occuring around Ambanja on our itinerary
Coquerel's Giant Mouse Lemur	Microcèbe de Coquerel	Mirza coquereli		EN e										>		
Hairy-eared Dwarf Lemur	Allocèbe	Allocebus trichotis		EN e										>		One of the most difficult lemurs to find in the wild; also Mananara-Nord National Park
Dwarf Lemur (undescribed)	Chirogale (non décrit)	Cheirogaleus sp. [major] CCS2		? e	0									>		Species occuring around Ambanja on our itinerary
Masoala Fork-marked Lemur	Phaner à fourche	Phaner furcifer	***	EN e	0									>	(_ U	Over the past 15 years, this species has only been directly observed in August 2004 at a single locality, Zahamena National Park and Reserve; numerous recen
Primates > Lepilemuridae / Spe	ortive lemurs	7 sp. out of 26 sp. occuring													F	Family lifer!
M21 Masoala Sportive Lemur	Lépilémur des Scott	Lepilemur scottorum	***	EN e	2	Lif.		$\overline{}$				X		$\overline{}$		uy
M22 Seal's Sportive Lemur	Lépilémur de Seal	Lepilemur seali	***	VU e	1	Lif.						х				
M23 Weasel Sportive Lemur	Lépilémur mustelin	Lepilemur mustelinus	***	VU e	10	Lif.	\vdash	\perp			X		\perp		41	
M24 Red-tailed Sportive Lemur		se Lepilemur ruficaudatus	***	CR e	49	Lif.	\vdash	+	-	X 2	x	-	+	_	-11-	
M25 Small-toothed Sportive Lemur M26 Gray's Sportive Lemur	Lépilémur à petites dent Lépilémur à dos gris	Lepilemur microdon Lepilemur dorsalis	**	EN e	8 0	Lif.	\vdash	x	х		+	-	+	-	-	May extend from Ranomafana National Park to Andringitra National Park. However, with the recent descriptions of several new species of Lepilemur from easter
M27 Nosy Be Sportive Lemur	Lépilémur de Nosy Be	Lepilemur tymerlachsoni	***		28	Lif.	x	+^+	-		+	_	+			Confined to the Lokobe National Park region and agricultural fragmented forests on the island of Nosy Be
Troop Be operate Lema.	Lopinomar do Hooj Lo	Zopnomar tymonachosm		0.1		2	Α .									to the best of the second of t
Primates > Lemuridae / Bambo		s 11 sp. out of 21 sp. occuring														
M28 Grey Bamboo Lemur	Hapalémur gris	Hapalemur griseus griseus	***	VU e	142	Lif.		$+$ \mp	\Box		Х	-	+			
M29 Northern Bamboo Lemur	Hapalémur occidental	Hapalemur occidentalis	***	VU e	30	1	\vdash	++		\vdash	+	X		+	- -	
M30 Golden Bamboo Lemur M31 Greater Bamboo Lemur	Hapalémur doré	Hapalemur aureus Prolemur simus		CR e	120 101	Lif.	\vdash		X X	\vdash	\dashv	-	+	+	- -	
M32 Brown Lemur	Lémur à nez large Lémur brun	Eulemur fulvus	+	CR e VU e	256		\vdash	+	X X	 	X	-	+	+		
M33 Red-fronted Brown Lemur	Lémur à front roux	Eulemur rufifrons	****	VU e	262	Lif.	\vdash	++	х	X 2	_	-	+	\dashv		
M34 White-fronted Brown Lemur	Lémur à front blanc	Eulemur albifrons	*	VU e	90							х			In	ntroduced to Nosy Mangabe, also occuring in Mananara-North
M35 Black Lemur	Lémur noir	Eulemur macaco	**	EN e	93		X X						\Box		4	
M36 Red-bellied Lemur	Lémur à ventre roux	Eulemur rubriventer	**	VU e	130		\vdash	++	Х	\vdash	+		+	-	- -	
	Vari noir et blanc	Varecia variegata editorum	***	CR e	188		\vdash	++	X	\vdash	+	X	,	+	- -	
M38 Red Ruffed Lemur Ranomafana Bamboo Lemur	Vari roux Hapalémur gris	Varecia rubra Hapalemur griseus ranomafane	ens ****	CR e	142							X				
Tanomalana Bamboo Eeniui	- Haparomar grio	Taparemai griscus ranomaiane	10.		172									/	`	
Primates > Indriidae / Wooly le		7 sp. out of 19 sp. occuring														
M39 Eastern Woolly Lemur	Avahi laineux	Avahi laniger	***	VU e		Lif.					Х					
M40 Masoala Woolly Lemur	Avahi des Moore	Avahi mooreorum	***	EN e			\vdash	+	-	\vdash	\dashv	X		+	$-\parallel$	
M41 Peyriéras's Woolly Lemur	Avahi de Peyriéras	Avahi peyrierasi	***	VU e			\vdash	++	х	 	.	-	+	+		
M42 Verreaux's Sifaka M43 Diademed Sifaka	Sifaka de Verreaux Sifaka à diadème	Propithecus verreauxi Propithecus diadema	****	CR e			\vdash	++	+	X 2	X X	+	+	+	$-\parallel$	
M44 Milne-Edwards's Sifaka	Sifaka de Milne-Edwards			EN e			\vdash	++	х	\vdash	^	+	+-	+		
M45 Indri	Indri	Indri indri		CR e		Lif.	\vdash	++	-	\vdash	X	-	+	\dashv		
-																
Primates > Daubentonia / Aye-		1 sp. out of 1 sp. occuring				. —										
M46 Aye-aye	Aye-aye	Daubentonia madagascariensis	****	EN e	28							х				

Comment

Chiroptera > Miniopteridae / Lo	ong-fingered bats	1 sp. out of 12 sp. occuring													Family lifer
 Long-fingered Bat 	Minioptère	Miniopterus sp.		е	l -						\Box	х	T		Unidentified: M. gleni, brachytragos, majori, or egeri
M69 Major's Long-fingered Bat	Minioptère de Major	Miniopterus majori	*	е	0	Lif.			х						ID uncertain (80%), could also be potentially M. manavi or M. sororculus
										•					
Chiroptera > Vespertilionidae /	Vesper bats	3 sp. out of 11 sp. occuring													
M70 Racey's Pipistrelle	Pipistrelle de Racey	Pipistrellus raceyi		DD e	0	Lif.		\neg		х	\Box		\top		Caught during bat catching in Kirindy Forest
M71 Dark Madagascar Pipistrelle	Vespère de Kirindy	Hypsugo bemainty		е	0	Lif.		\neg		х					Caught during bat catching in Kirindy Forest
	Murin de Madagascar	Myotis goudotii	*	е	7	Lif.		x			\neg				
Cetartiodactyla > Balaenopterio	dae / Rorquals	2 sp. out of 8 sp. occuring													
M73 Humpback Whale	Rorqual à bosse	Megaptera novaeangliae	*		22		х								
M74 Omura's Whale		Balaenoptera omurai	****	DD	1	Lif.	Х	\neg							
		· · · · · · · · · · · · · · · · · · ·													
Carnivora > Eupleridae / Madag	gascar carnivores	4 sp. out of 8 sp. occuring													
M75 Fossa	Fossa de Madagascar	Cryptoprocta ferox	****	VU e	78			\neg		х	\Box		\top		
M76 Spotted Fanaloka	Fossane	Fossa fossana	**	VU e	32	1177		\neg	х			х			
M77 Ring-tailed Vontsira	Galidie à queue annelée	Galidia elegans elegans	*	е	92			\neg	х			х			3 ssp in Madagascar
M78 Bokyboky	Galidie à dix raies	Mungotictis decemlineata deceml	**	EN e	26	1177		\neg		х					2 ssp in Madagascar
Falanouc	Euplère de Goudot	Eupleres goudotii	***	VU e	2									Х	
Broad-striped Vontsira	Galidie à bandes larges	Galidictis fasciata		VU e											
Brown-tailed Vontsira	Galidie unicolore	Salanoia concolor		VU e											

х

184

530

600

Lif.

B40 Common Tern

B41 Great Crested Tern

B42 Lesser Crested Tern

Sterne pierregarin

Sterne voyageuse

Sterne huppée

Sterna hirundo hirundo

Thalasseus bergii thalassinus **
Thalasseus bengalensis bengalen **

Périophthalme rayé d'arge Periophthalmus argentilineatus

Barred Mudskipper

Paral Series Para	Livet & Ruta Vaicekauskaite									Oh	neorvatio	n locati	ion			
Part				G Target (**** = highest target / * = lowest)	IUCN Red List (NT Endemic to Mad	eBir		Nosy Ko	Antranokarany (Amb	Ranomafana NP Kianjavato / Sanga Sanga	Akiba Lodge Marofand Kirindy Forest				On the Species targeter	
Comment description	INVERTEBRATES	36 species														
Comment description	Lepidoptera / Butterflies and M	Moths														
Street Annual		-		\Box	?			Х	\Box		\Box	\Box	丁	\blacksquare		
		Voilier des citronniers		+ +	e	80		\vdash	+	X	X		+	+		
Cont. Monument and Manument an	-	-	Papilio epiphorbas	\dashv		33	Lif.			\bot			\Rightarrow			
Section Sect	- Plain Tiger Butterfly	Monarque africain		+	e		Lif.	\vdash	++	X	l x	++	+			
Section Part Part Section Part Section Sec	-	-	Caloschemia pulchra	\dashv	е	36				\bot		\rightarrow	\Rightarrow			
Marylane		-		+	-	95	Lif.	\vdash	+	+	+		+	+	\vdash	-
Care	-	-			е	18	Lif.									ID uncertain (70%), could be any Heteropsis sp.
Care	Hemiptera / True Bugs															
The proof of the		Cigale			\Box	10		\Box	\Box	х		\Box	\perp			
Name for Name Nam	- Flower-spike Bug	- -		IS					+	_	x	++	_	\pm	X	
		Corise									X	X				
Purpose Files Purpose Purpos	Hymenoptera / Sawflies, Wasp	s, Bees and Ants														
Company Comp	-	-		$\overline{\perp}$		12	Lif.		\Box	Х			$\overline{}$			
Secret Bloody - Carporage abecage - Regions and pursuelles - Regions and pursuelles - Regions and pursuelles - Regions and pursuelles - Regions and pursuelles - Regions and pursuelles - Regions and pursuelles - Regions and pursuelles - Regions and pursuelles - Regions and pursuelles -	<u>- </u>	-		+		36	Lif.	\vdash	+	+		_	+	+		1
Stander Storkey	Dintors / Flica															
Missingscane Perviewer - Photon properhieme e 6 6 1 1 1 1 1 1 1 1		-	Chrysomya albiceps			10	Lif.					х				
Milegracium Personation - Paser nautherinee e 94 Uz x x x x x x x x x	Odenate / Dragonflies and Dan	maalfiaa														
Missingson Reversible Physicians Discovers Physicians Physicians	Madagascar Demoiselle	-	Phaon rasoherinae		е	94	Lif.			х			х			
Solidor Cholest	Madagascan Rivercruiser		Phyllomacromia trifasciata		е	34	Lif.					Х				
Control		ocusts, and Crickets														
		-		+	e	\vdash	Ш		++	X	++	++	X	+		-
Affalcan Melcrosted:		-	Spizaphilus ornatus	\blacksquare	е	1	Lif.					Х				
		-	Gryllotalpa africana	+ +	-	11	Lif.	\vdash	X	+	X	X	+	+		
Silvatode Cockroaches and termities	- Kin n Onintest	-	Euconchophora sp.		е	11	Lif.									
	King Cricket	-	Ariabropsini									X				J L
Cocknet Persistant sp.		ermites	Desirela mata harrana				1:£			T				_		
Coleoptera / Beetles Coccinellice Coccinellic		-					LII.			X		х				
Ladybug Coconellide Coco	Coleontera / Rootles															
Flea Beetle	Ladybug	Coccinelle								х						
Boas Rhinceros Beetle -		- Hanneton		+	+	<u> </u>			+ +	-			-	-		
Phasmida Stick Insects	Boas Rhinoceros Beetle	-	Oryctes boas	\Rightarrow	$\Rightarrow \exists$			\blacksquare		\pm		х	\Rightarrow			
Leicophasma adustum	Gıraffe Weevil	Charançon girafe	Trachelophorus giraffa			289	Lif.	Ш				X				
Aranae Spider Spider Caerostris sp. Spin	Phasmida / Stick Insects														,	
Red-legged Golden Orb-weaver Shephile dorée	<u>-</u>	-	Leiophasma adustum		e	3	Lif.					X				ID uncertain (60%)
Bark Spider - Caerostris sp.		datable 1	Triskense (2.)			50:	1			. 1					,	
Common Bark Spider - Caerostris sexuspidata	Bark Spider	- vepnile doree		+	\dashv	501	Lif.		++	X X	X	++	X	X	\vdash	1
Wolf Spider	Common Bark Spider	Arojanés de	Caerostris sexcuspidata	\Rightarrow	$\Rightarrow \Rightarrow$	04				\perp			\Rightarrow			
Spiny-backed Orb-weaver Spider - Gasteracantha thorelli e de description de la composition del composition de la composition de la composition de la composi	Wolf Spider	Araignée-loup		+	e			X		_	X X	+	_ x			
Shorthom Kitespider - Gasteracantha sanguinolenta 17 290 Lif.	Spiny-backed Orb-weaver Spide	er -	Gasteracantha thorelli	\blacksquare	е	22	Lif.	Х					$\overline{}$			
Madagascar Hermit Spider - Nephilingis livida ne 290 Lif. x	Shorthorn Kitespider	-	Gasteracantha sanguinolenta			17	Lif.			X	-					
Swimming Crab	Madagascar Hermit Spider	-	Nephilingis livida		ne	290	Lif.					Х				
Ghost Crab Crabe fantôme Ocypode sp.	Decapoda / Crabs, Lobsters, C															
Horned Ghost Crab Crabe fantôme à yeux cori Ocypode ceratophthalmus 43 Lif. x	Swimming Crab Ghost Crab			++	\dashv	1	Lif.		++	+	++	++	x		$\vdash\vdash$	ID uncerain (/5%)
Inversed Fiddler Crab - Cranuca inversa 4 Lif. x - Scandarma gracilipes e 26 Lif. x	Horned Ghost Crab	Crabe fantôme à yeux o	corr Ocypode ceratophthalmus	\bot	$\Rightarrow \Box$	43	Lif.	х	\Box	\perp		$\downarrow \downarrow$	T			
Scandarma gracilipes e 26 Lift. x		Pagure gaucher		++	\dashv		Lif.		++	+	++	++	+	+	$\vdash\vdash$	-
VIOIA LAND HERMIT CIAD - COENODITA VIOIASCENS 34 LIT. X	-	-	Scandarma gracilipes	\Rightarrow	е	26	Lif.		\Box	\Rightarrow		$\downarrow \downarrow \downarrow$	_	_		
	viola Land Hermit Crab	-	Coenobita violascens			34	Lif.						X			J



Madad da Skaras 28 of September 24 of Sctober 2023

- Nosy BE

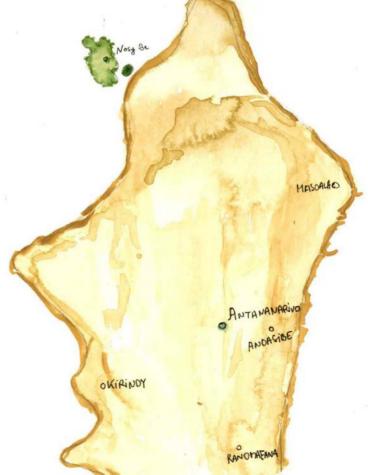
- RANDMAFANA

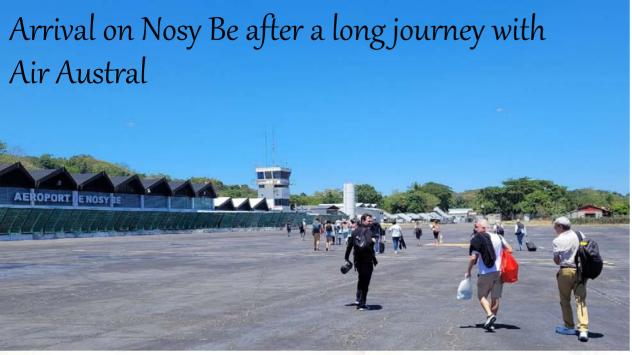
- KIRINDY

- ANDASIBE

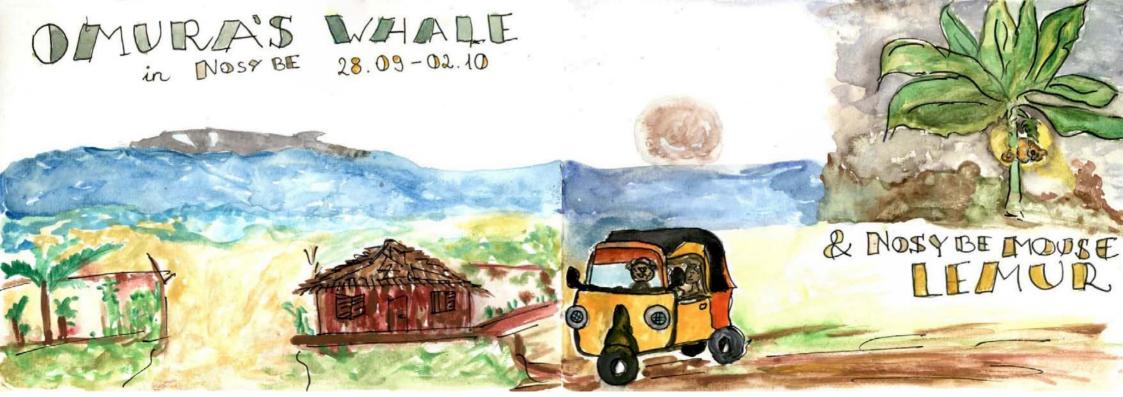
- MASDALA

- TANA











Madagascar Giant Day Gecko



















LES BALEINES RANDE Excursions Masy Be - Madagascat ACCUEIL

Whale watching in search of the Omura's Whale



























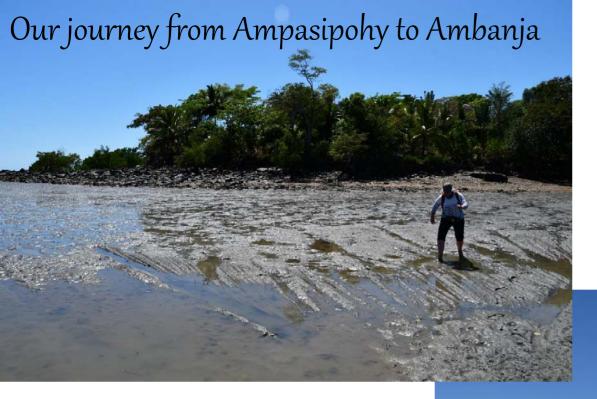










































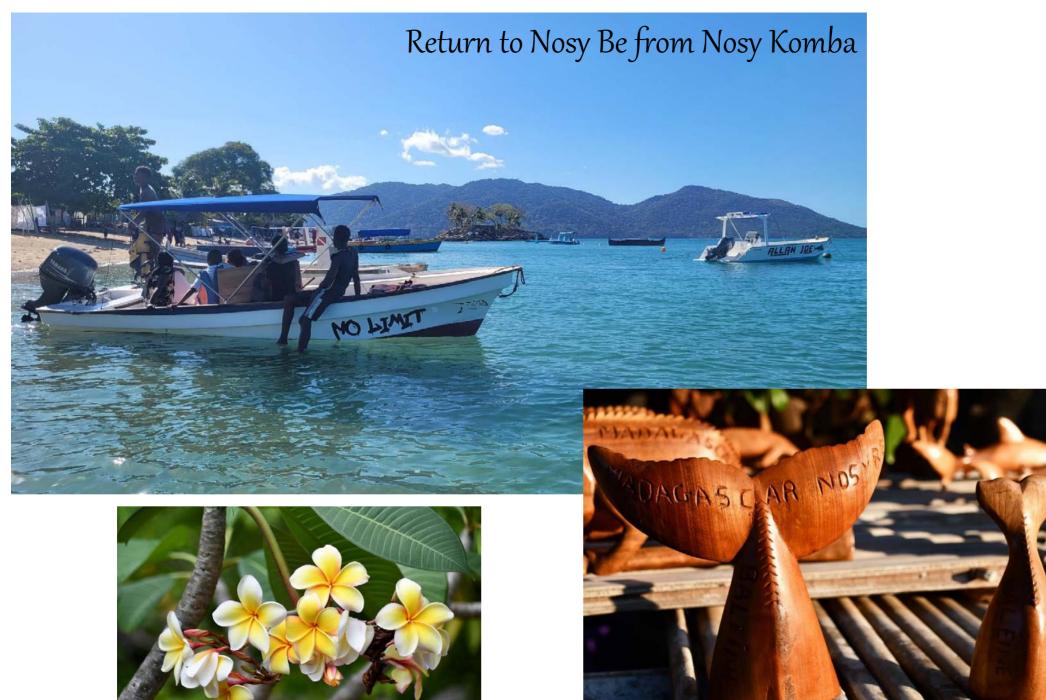










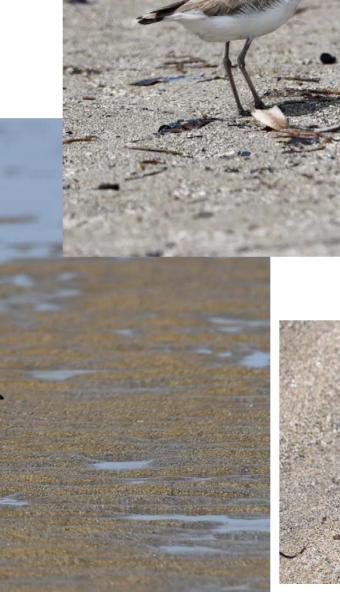








Sanderling



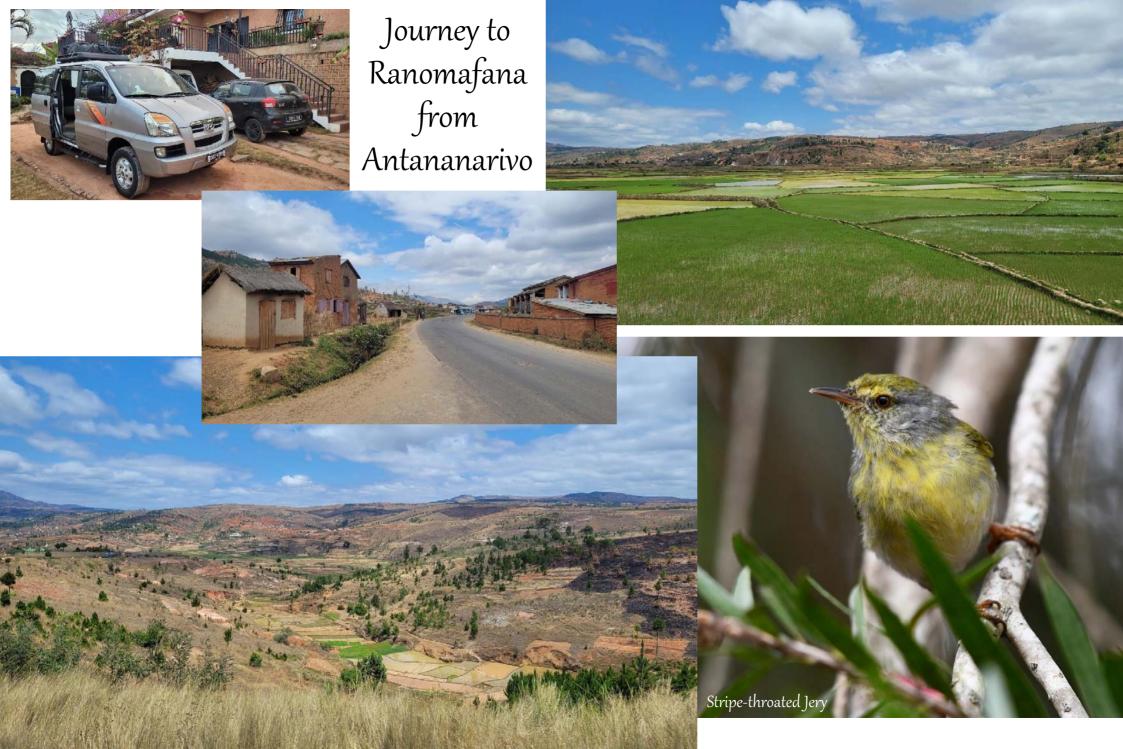






























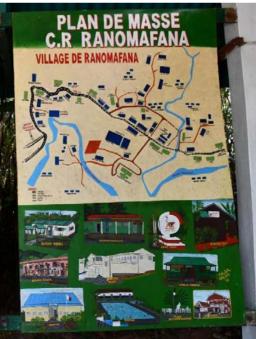






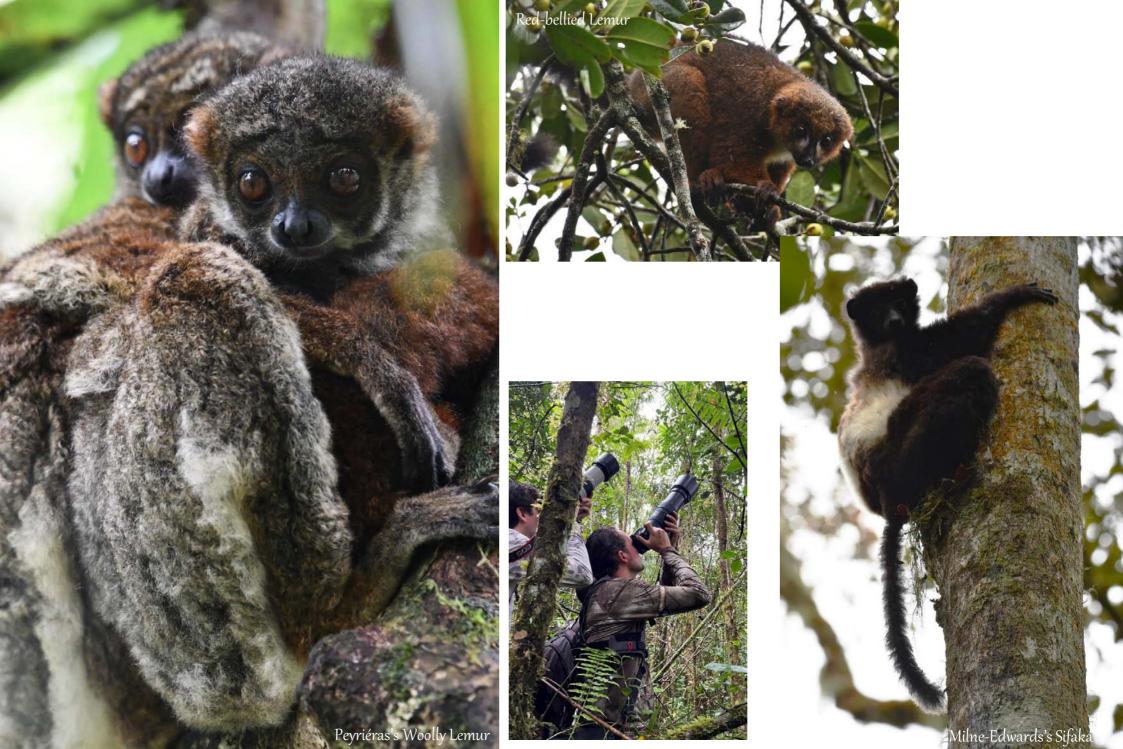














































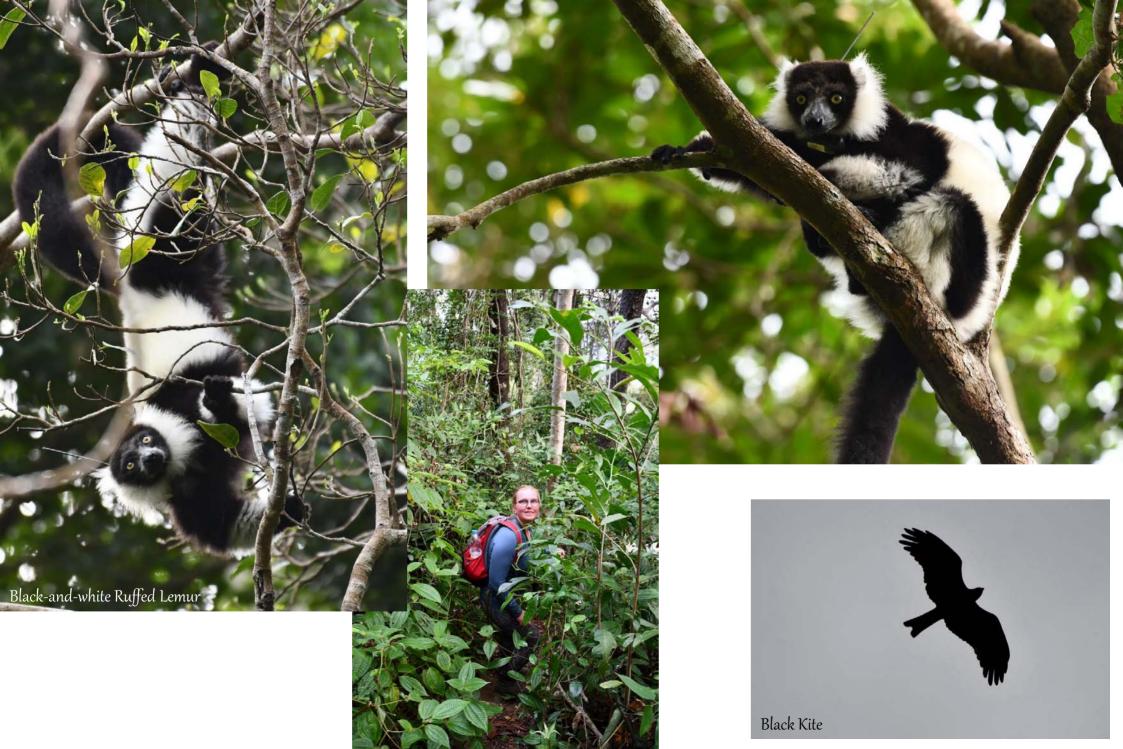
















Back in Parc National de Ranomafana / Vohiparara











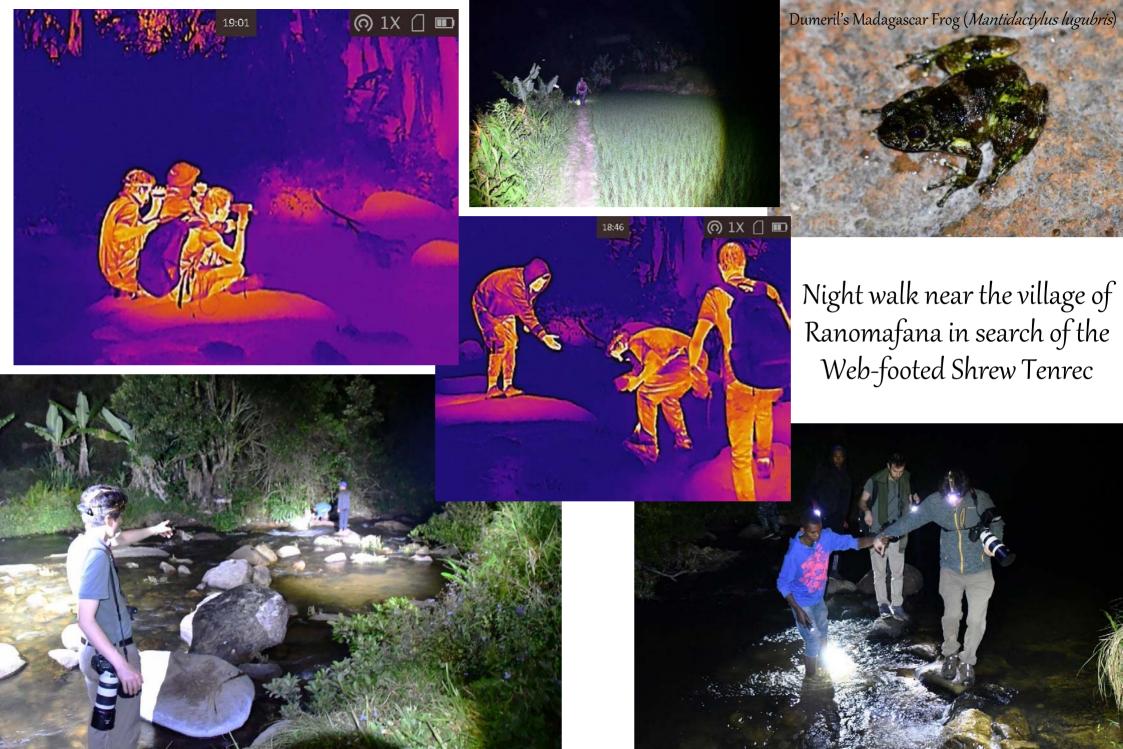




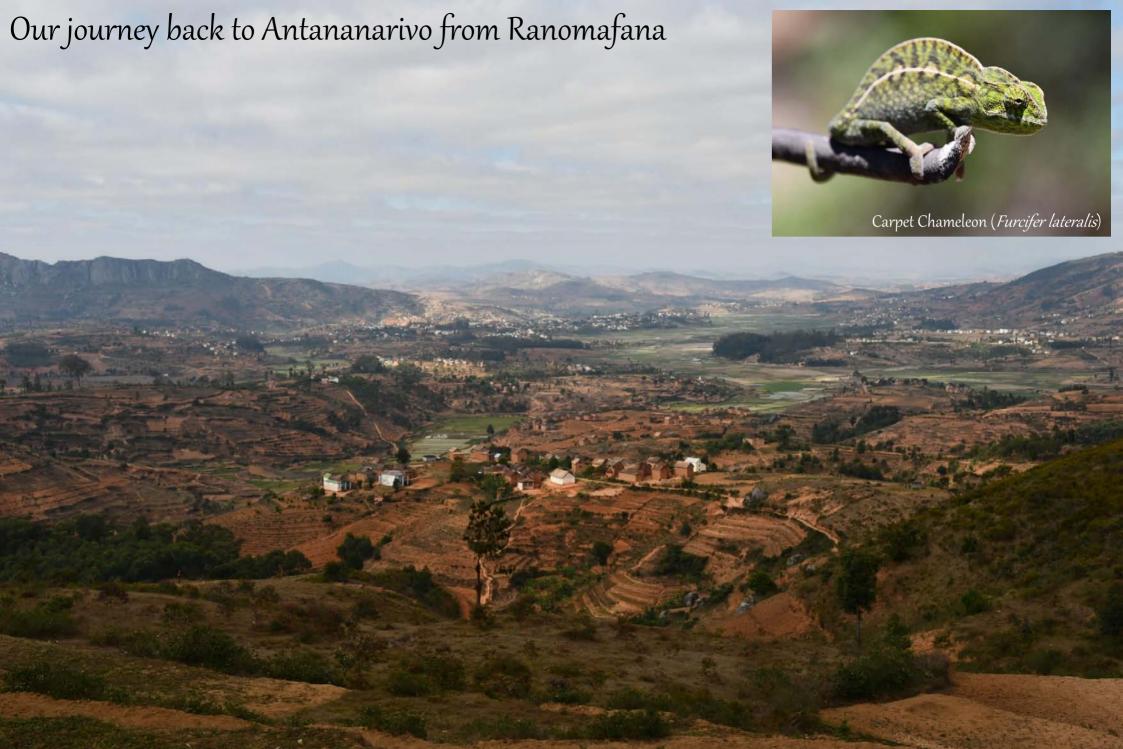


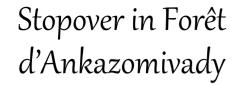






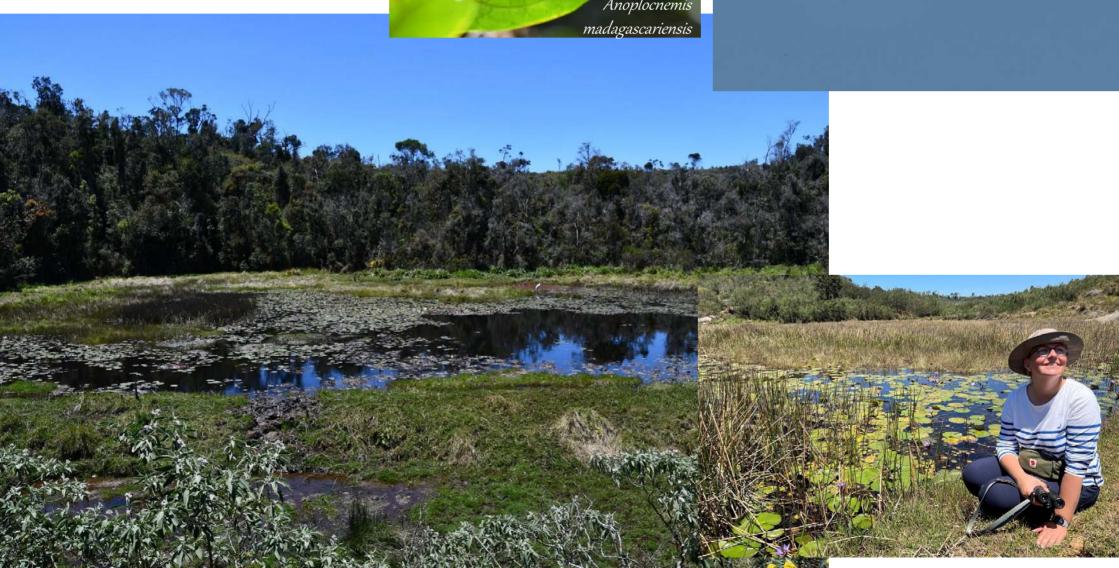








Black Kite

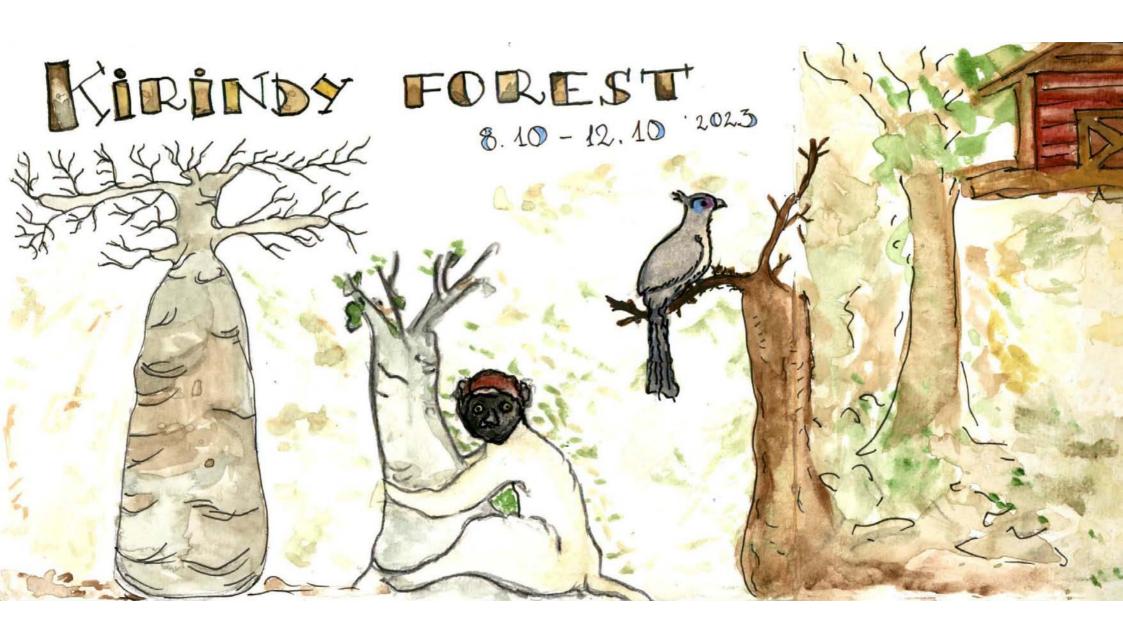












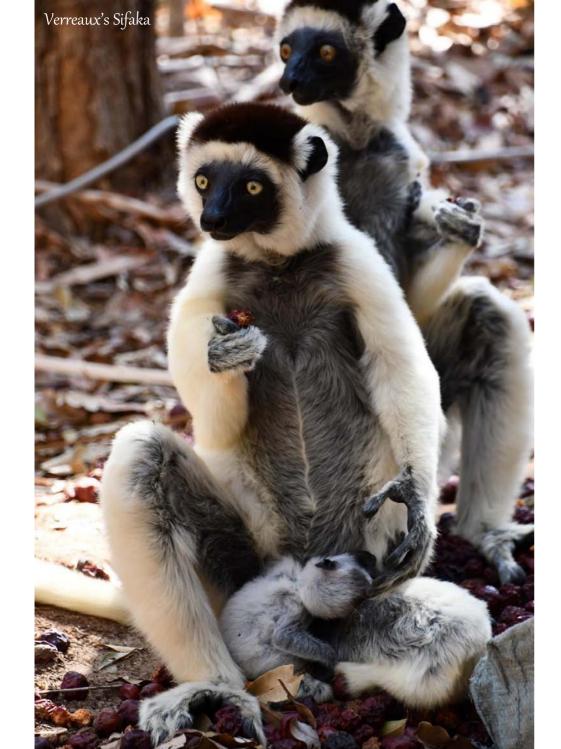
Arrival in Akiba Lodge Marofandilia

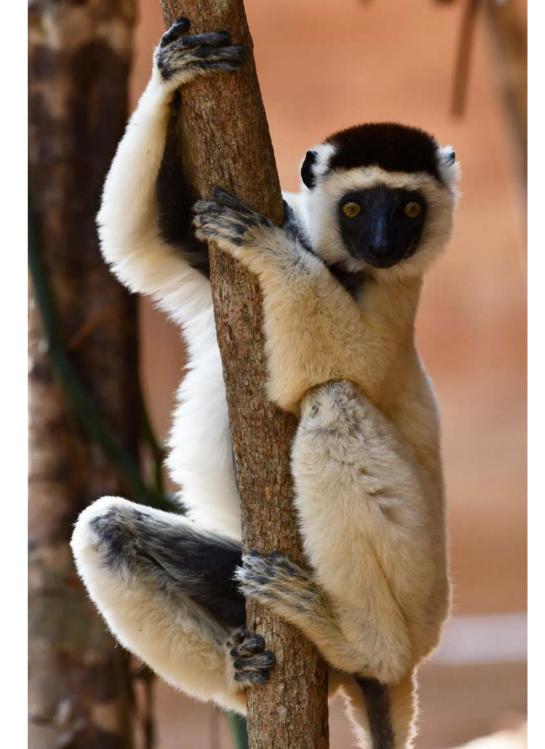




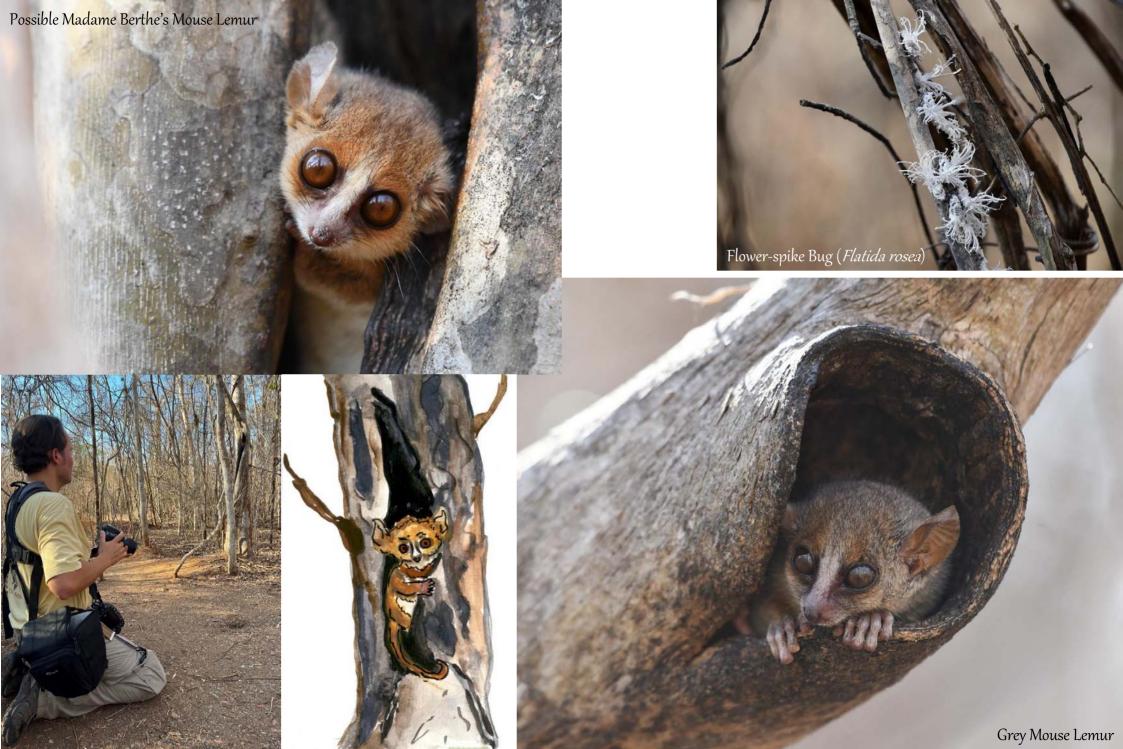


































Night walk in Kirindy Forest...

















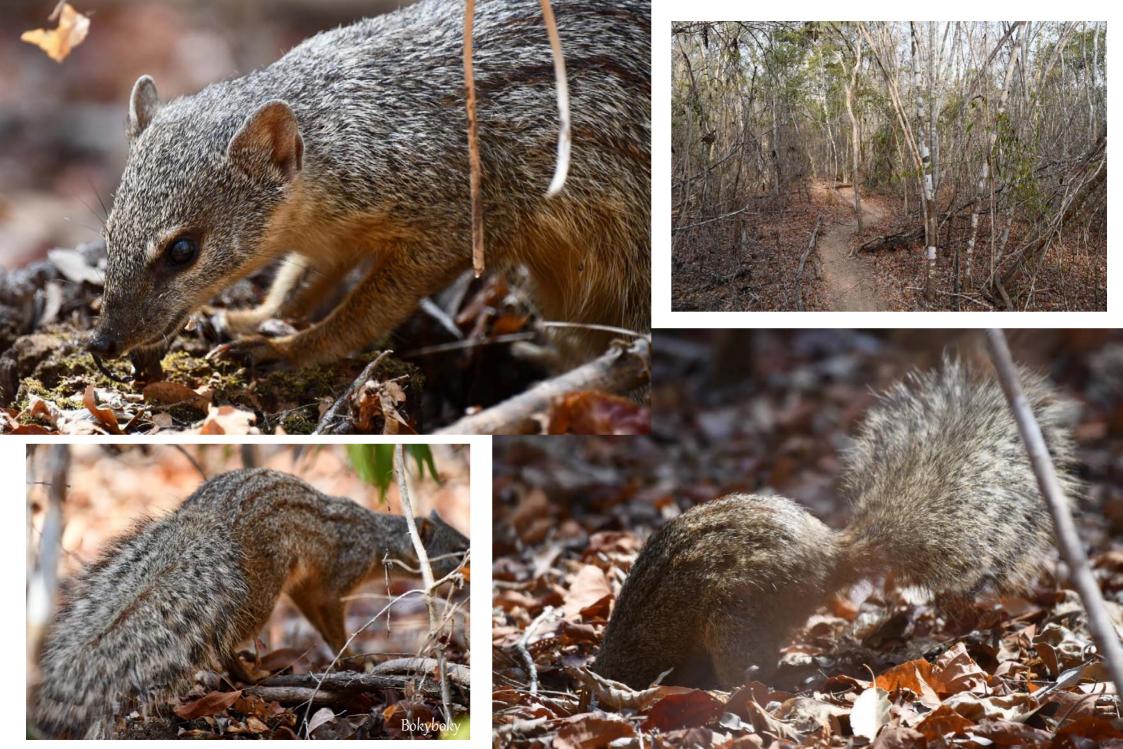
















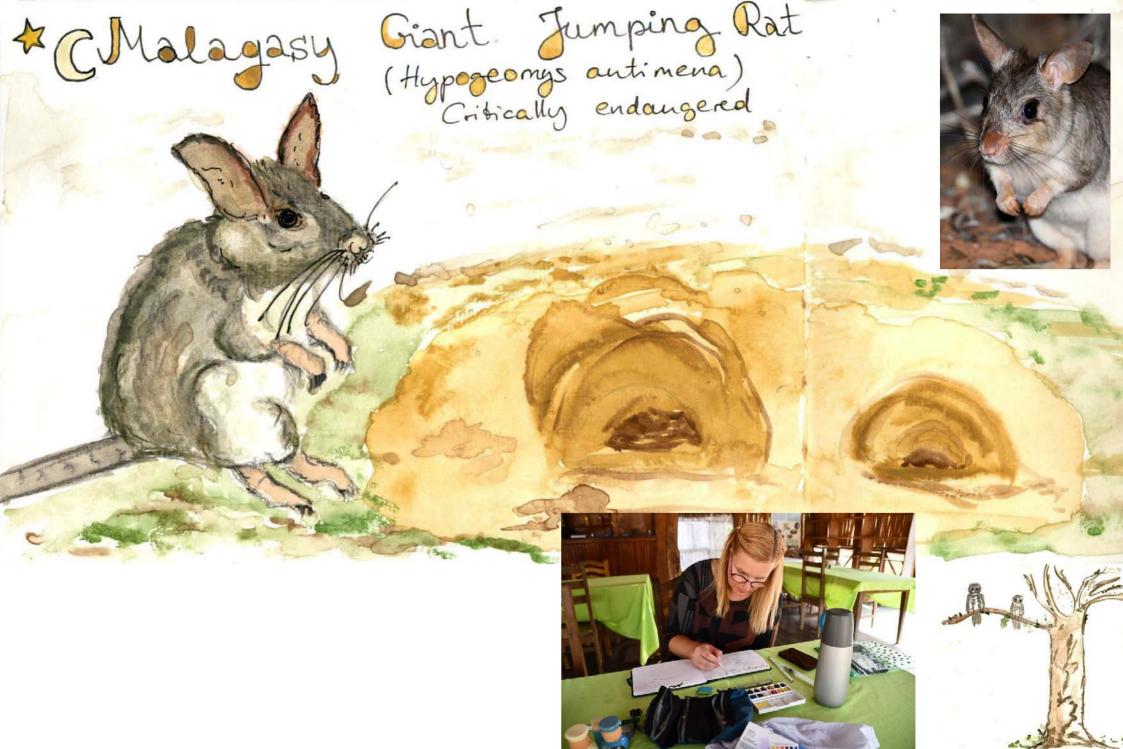












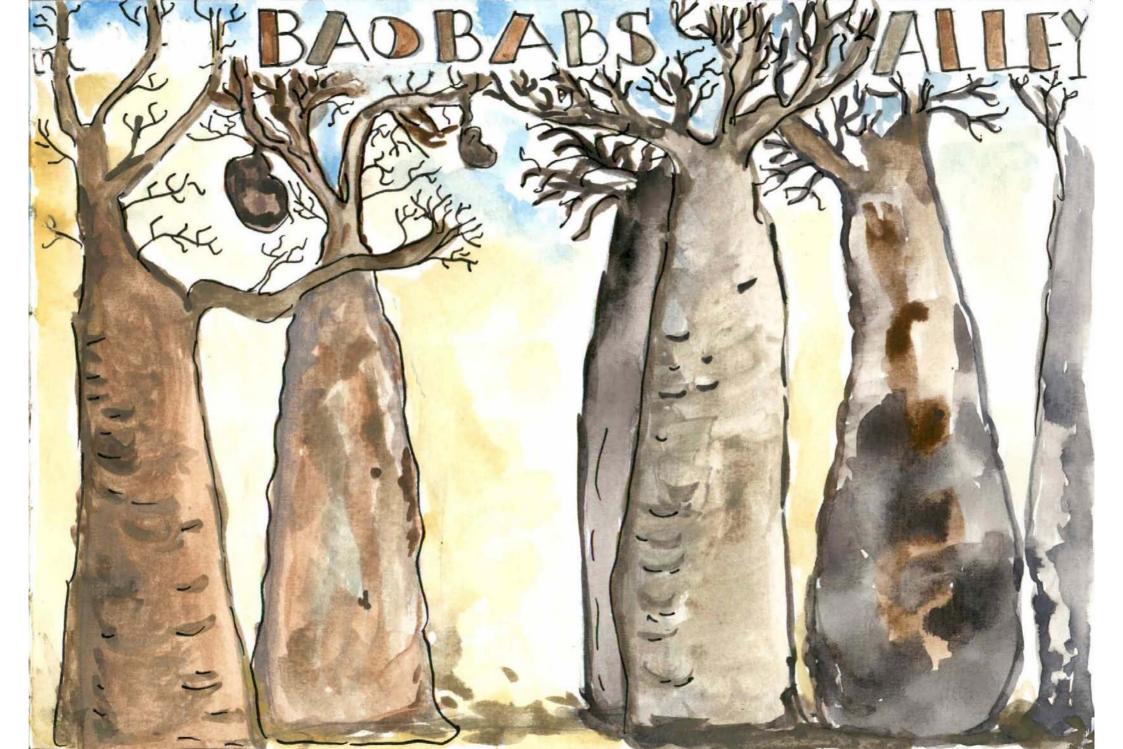


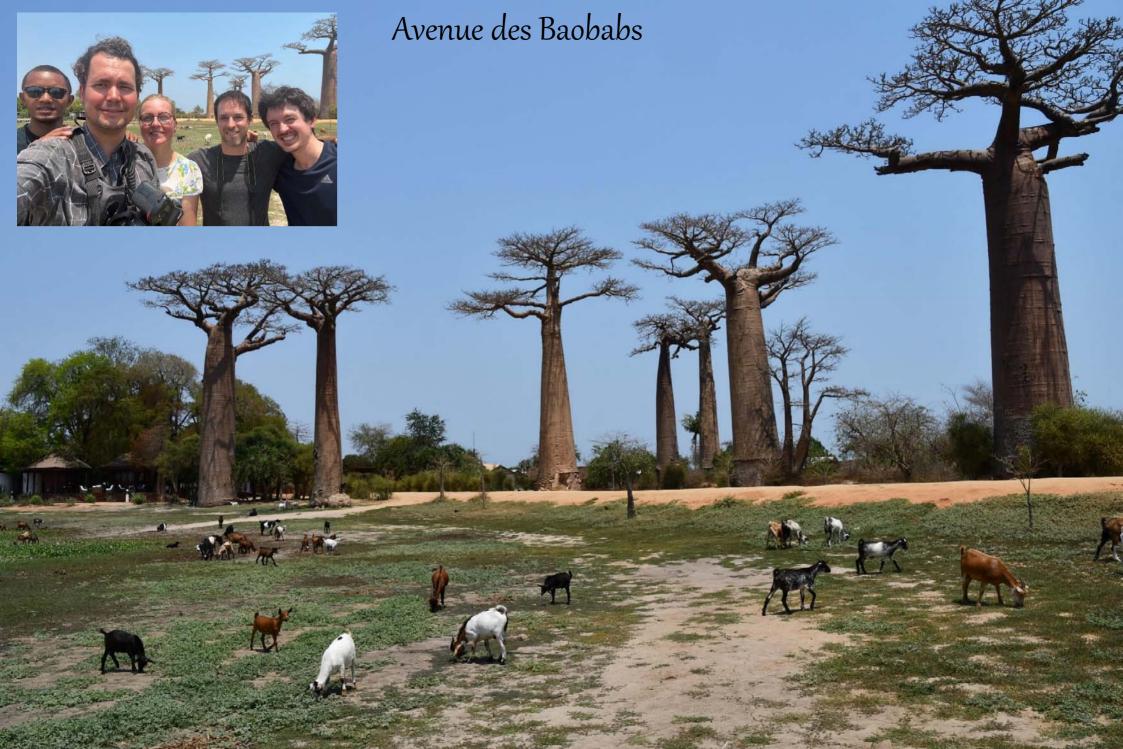




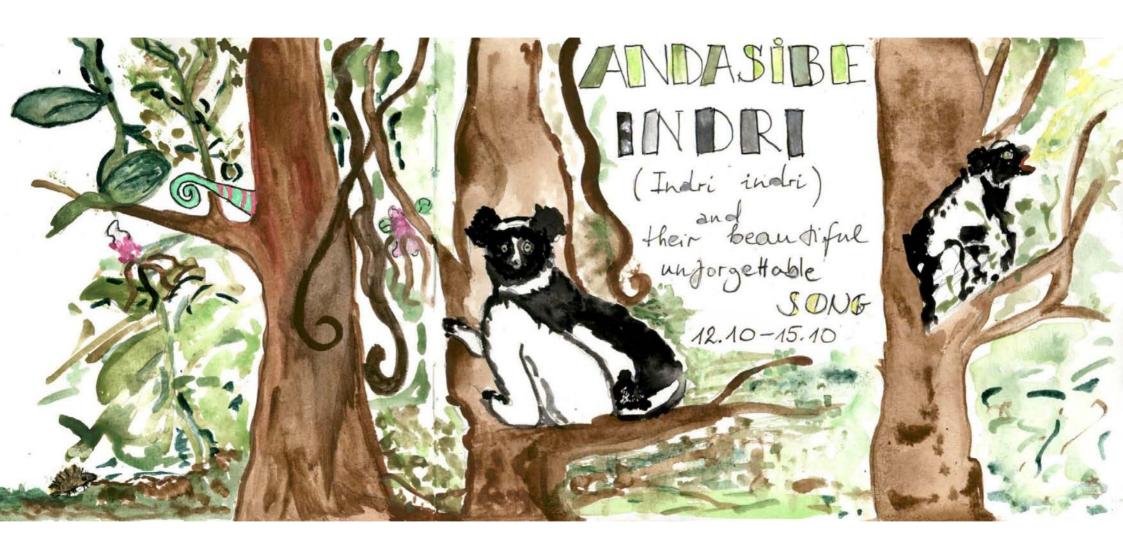












Parc National d'Analamazaotra



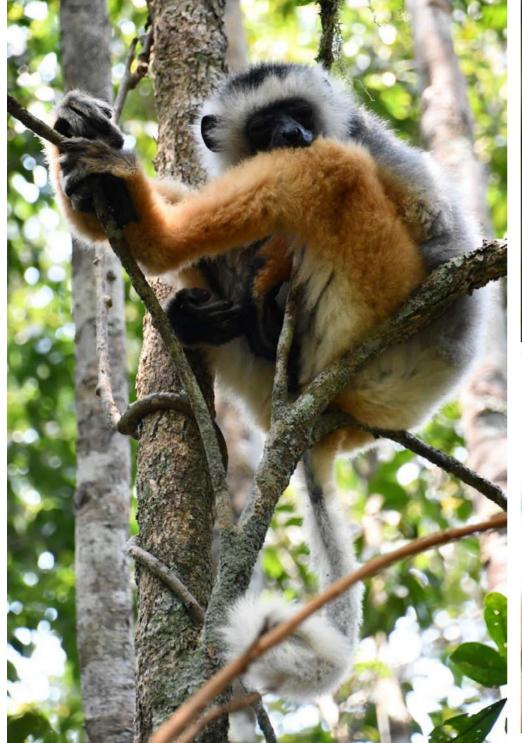
















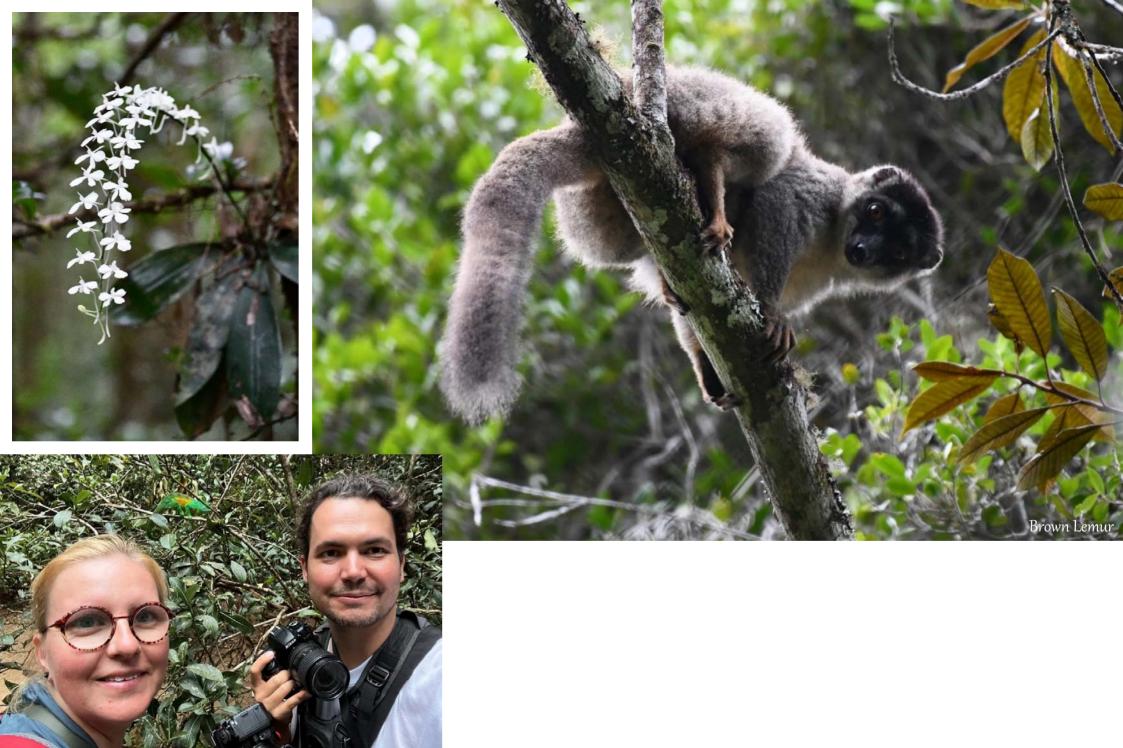








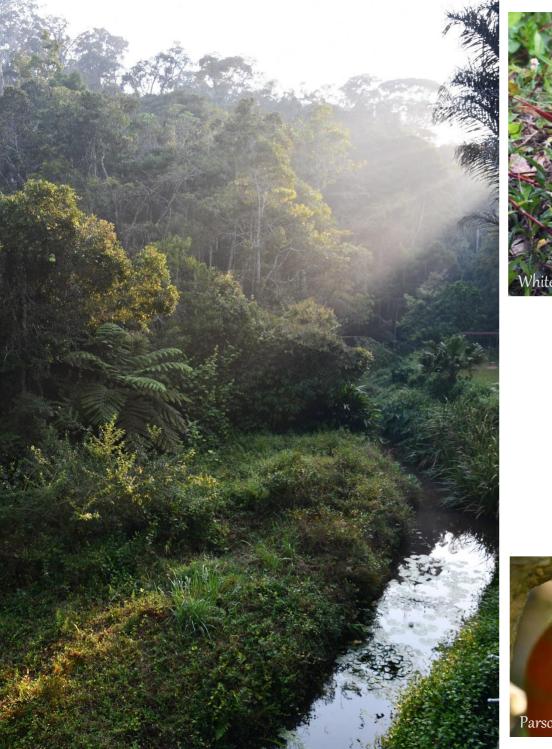
























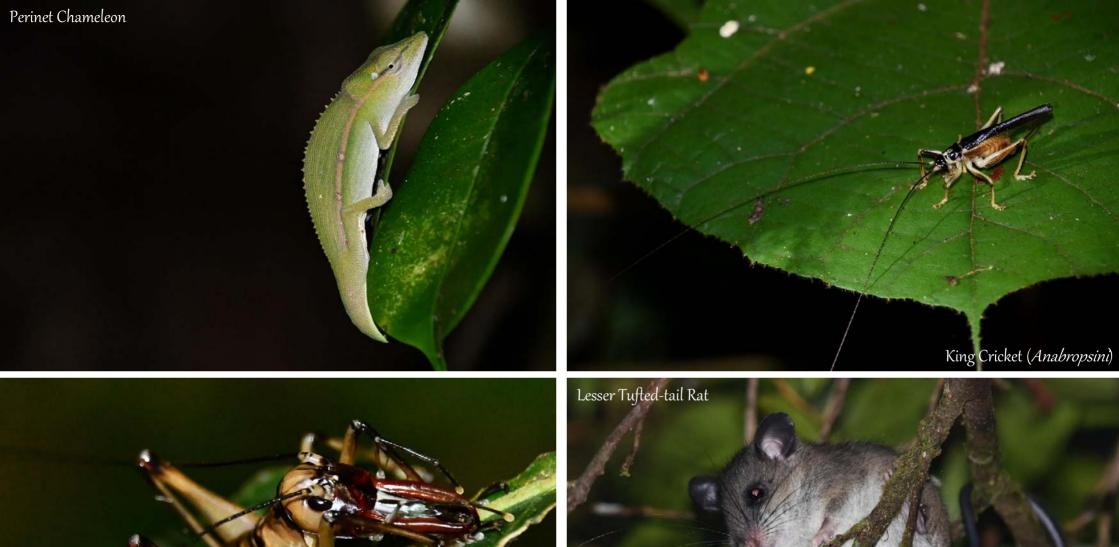
























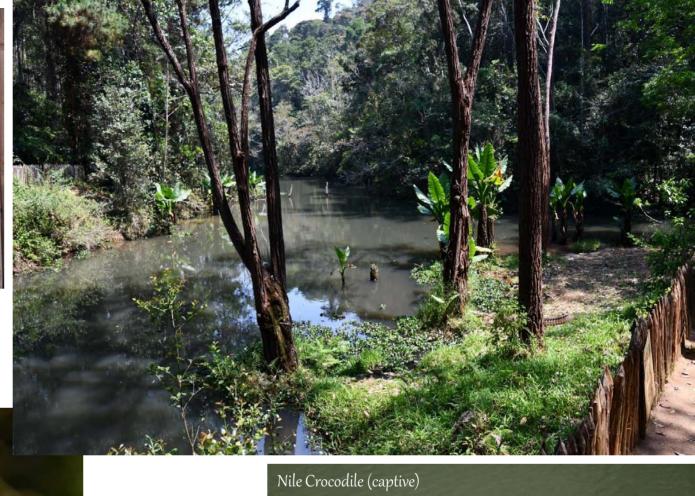
Diademed Sifaka (captive)



















to Maroantsetra







Poste Forestier de Farankaraina







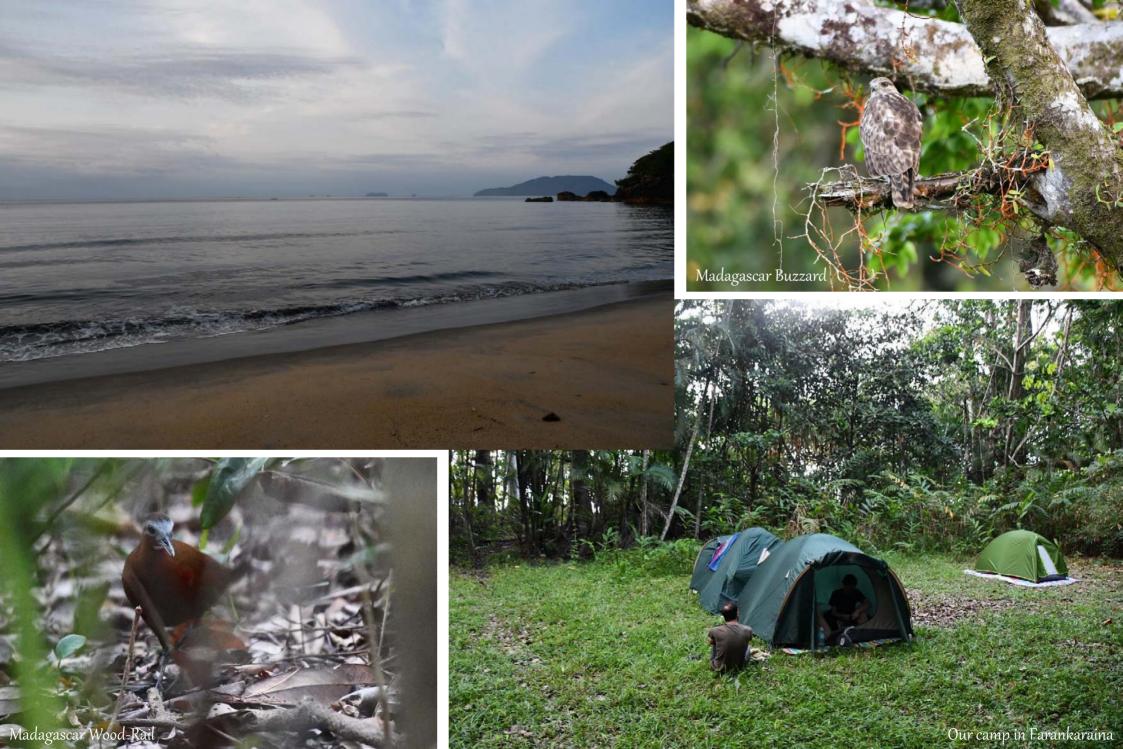




Malagasy Sunbird

Panther Chameleon











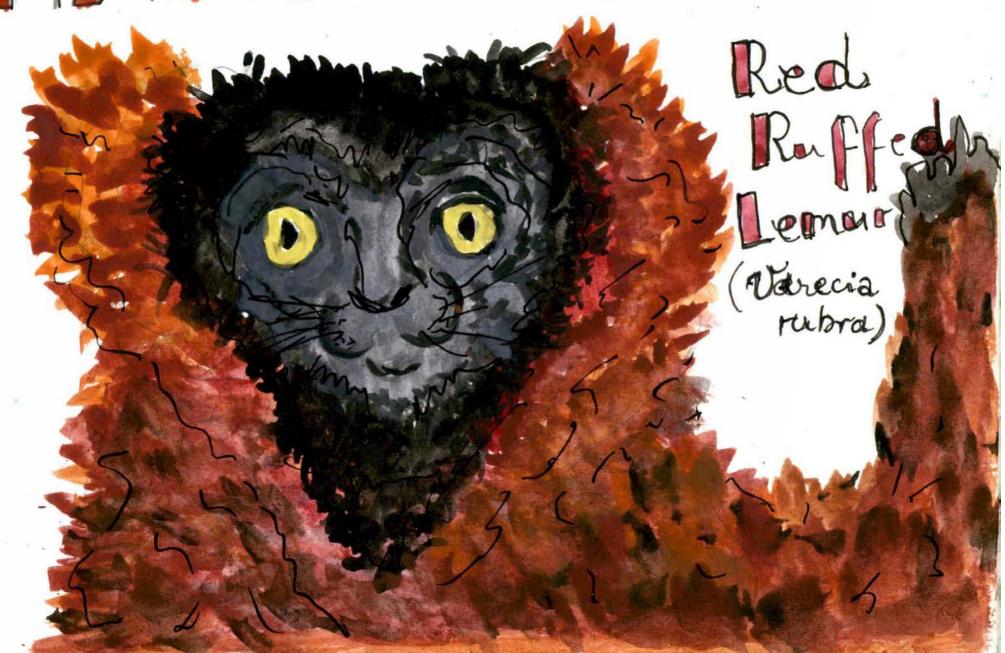






MASOALA

14-18.10







Chez Arol Ecolodge



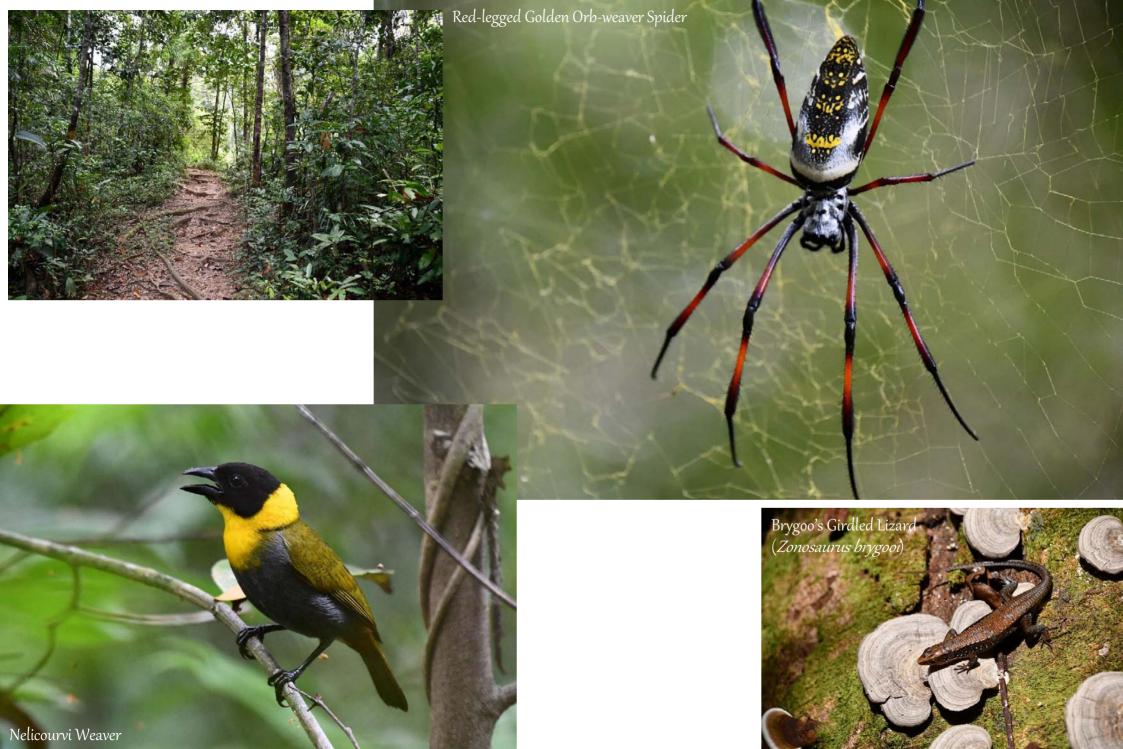




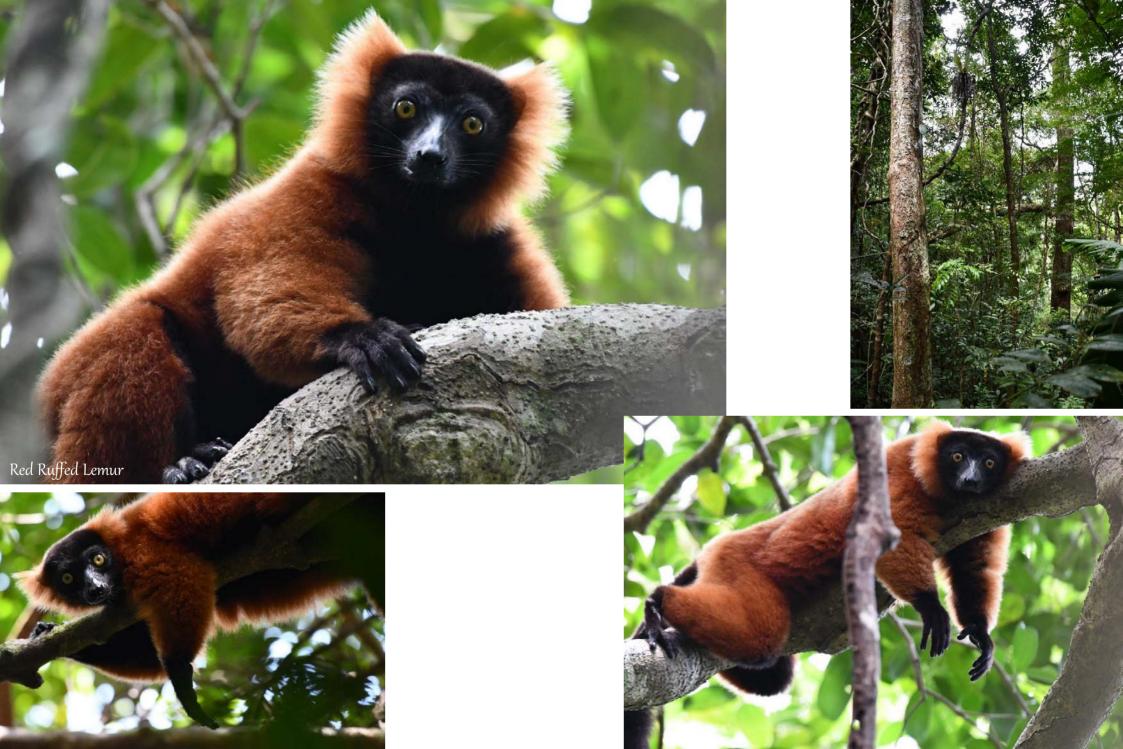






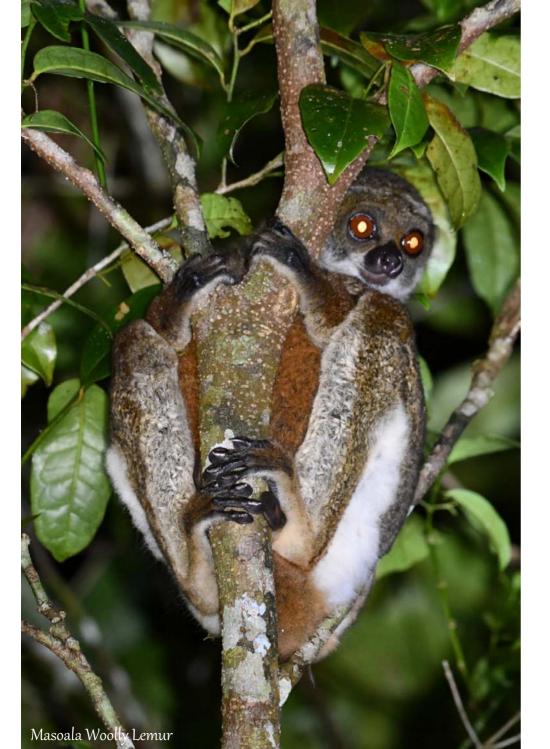












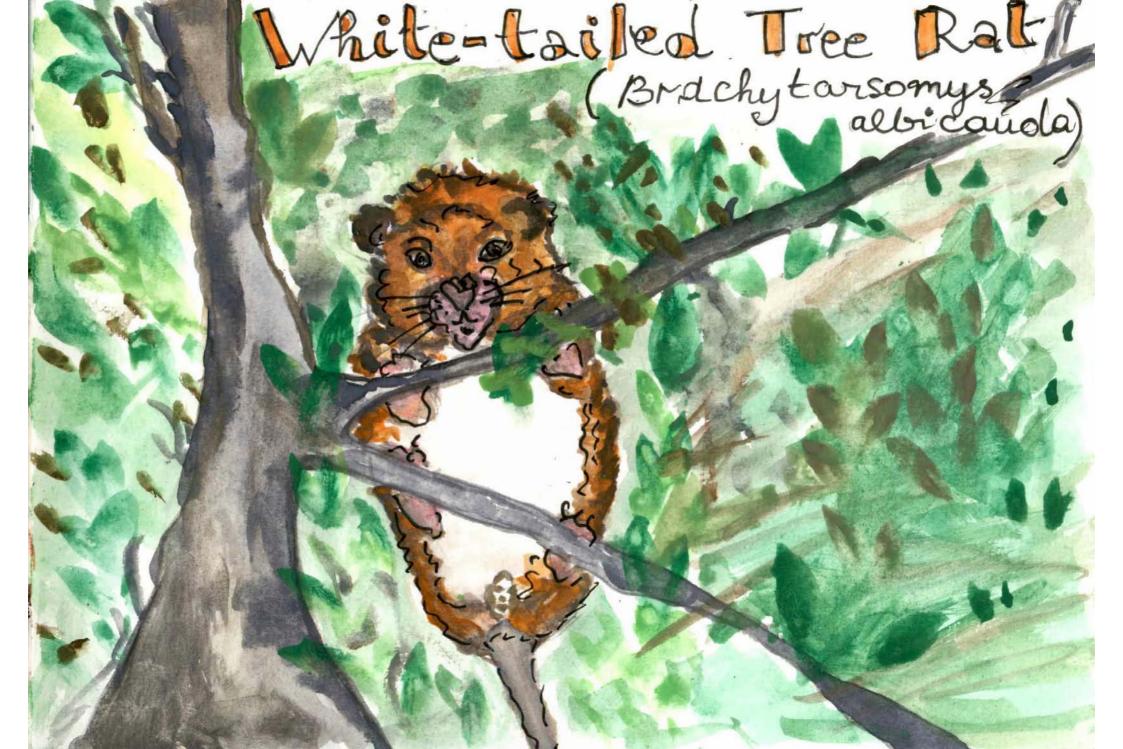












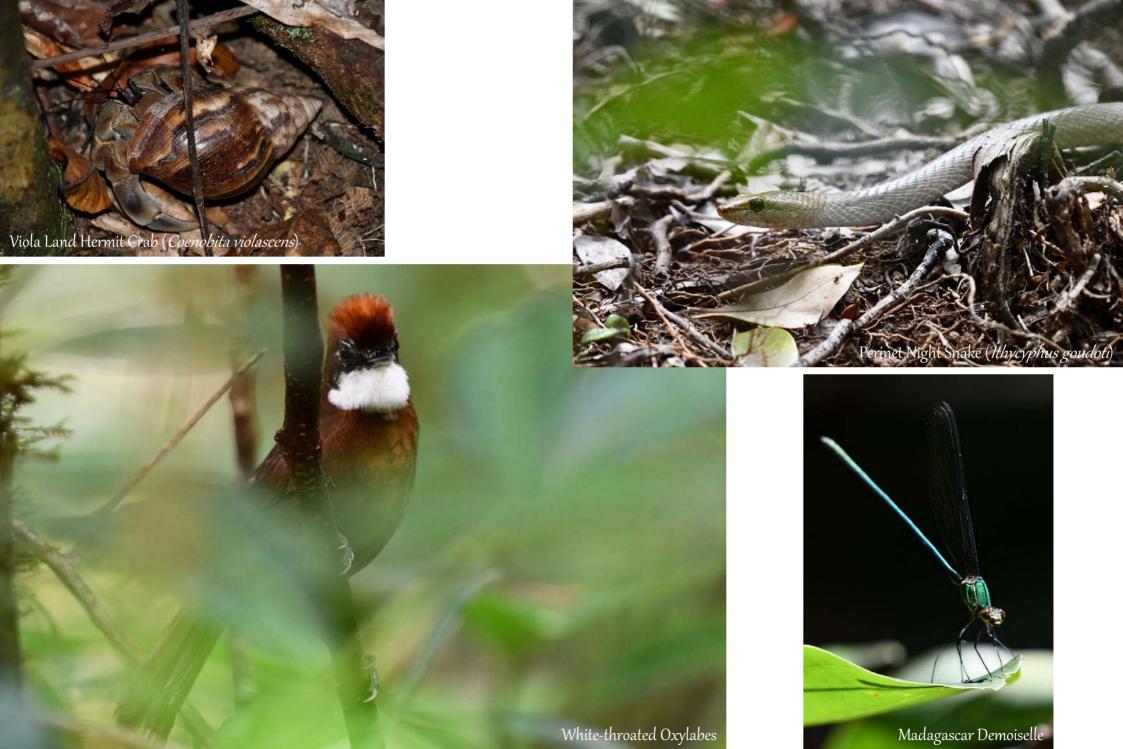




























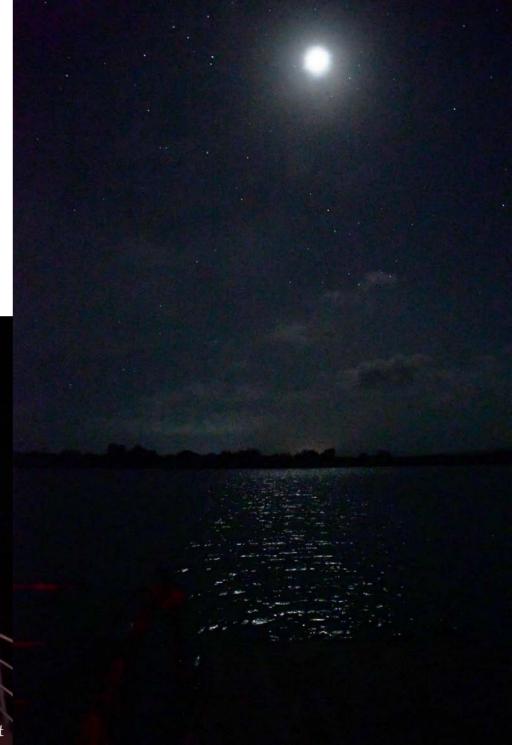










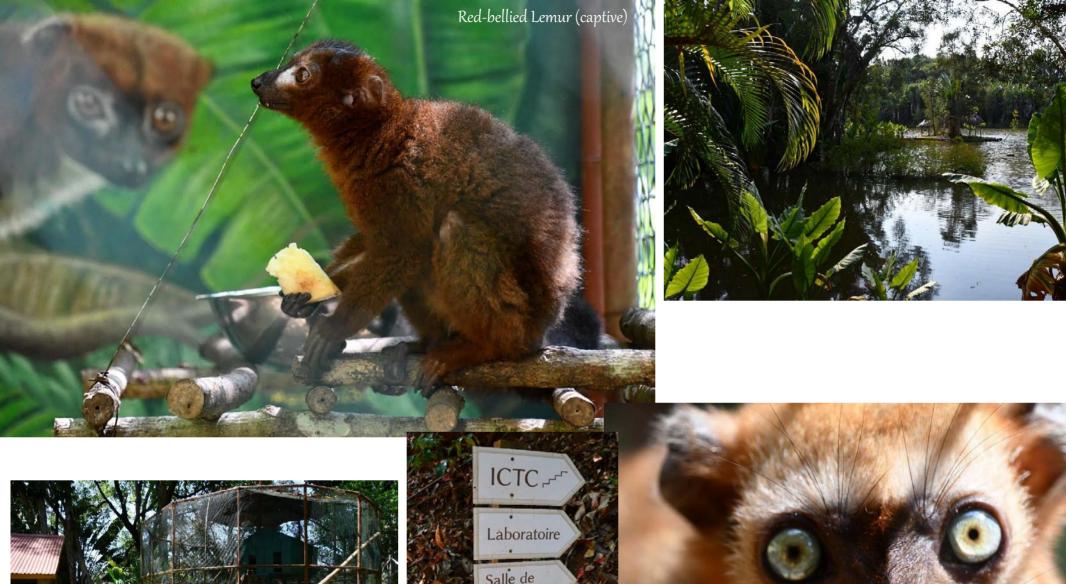




Abandoned resort along the beach near Manakalana where we spent the night on our way to Toamasina

















Flight back to Antananarivo from Toamasina









Early morning traffic in Antananarivo







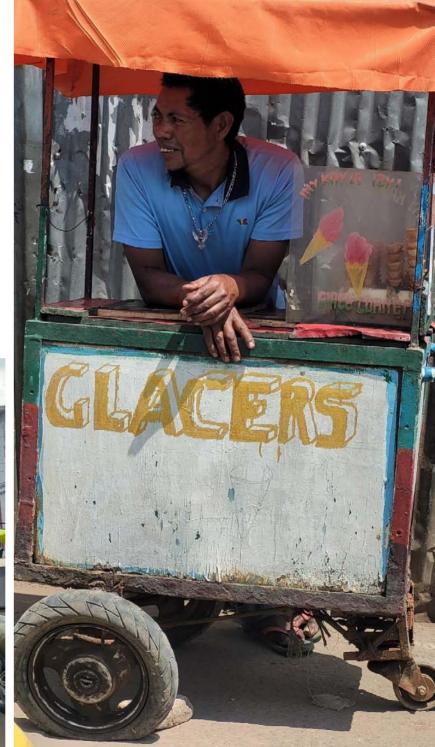














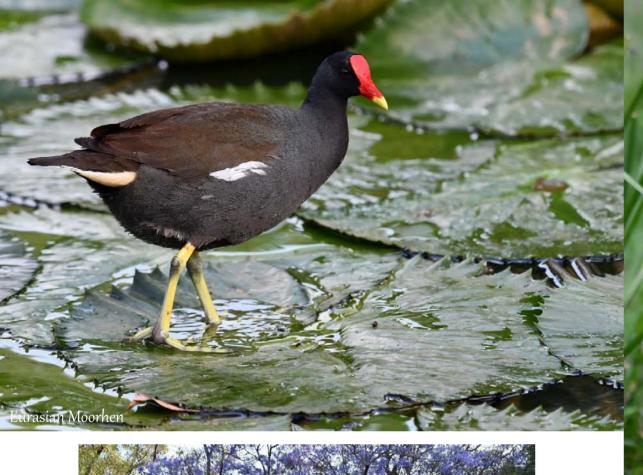






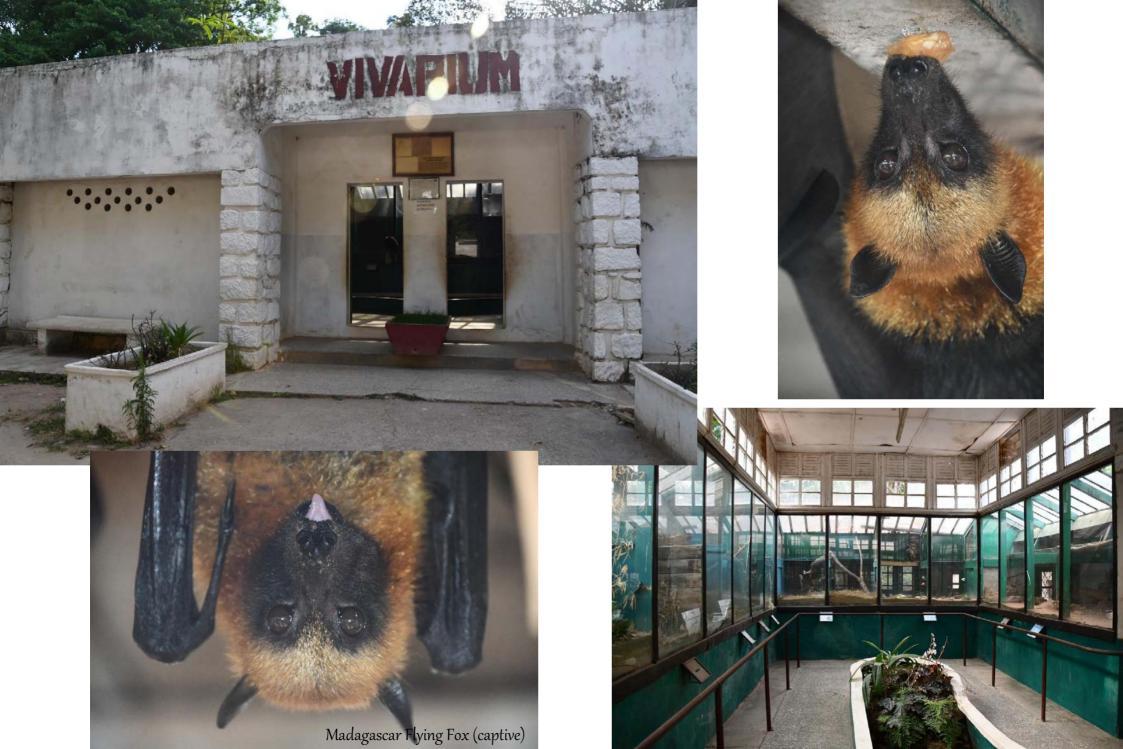






















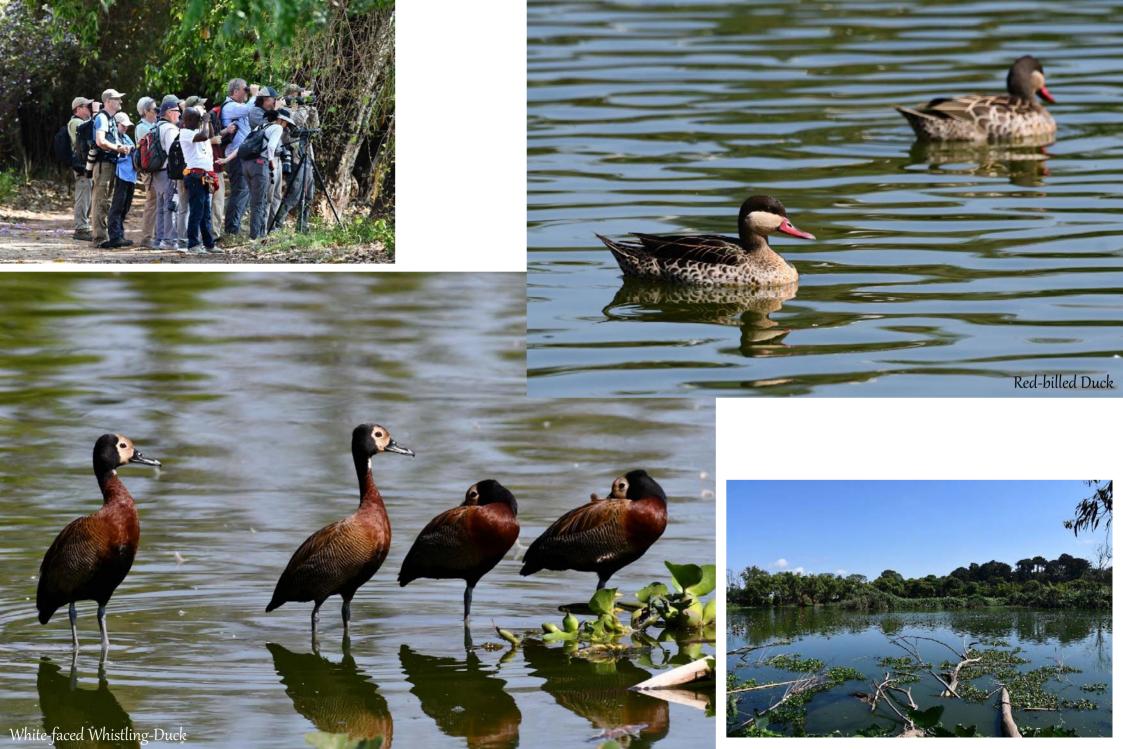












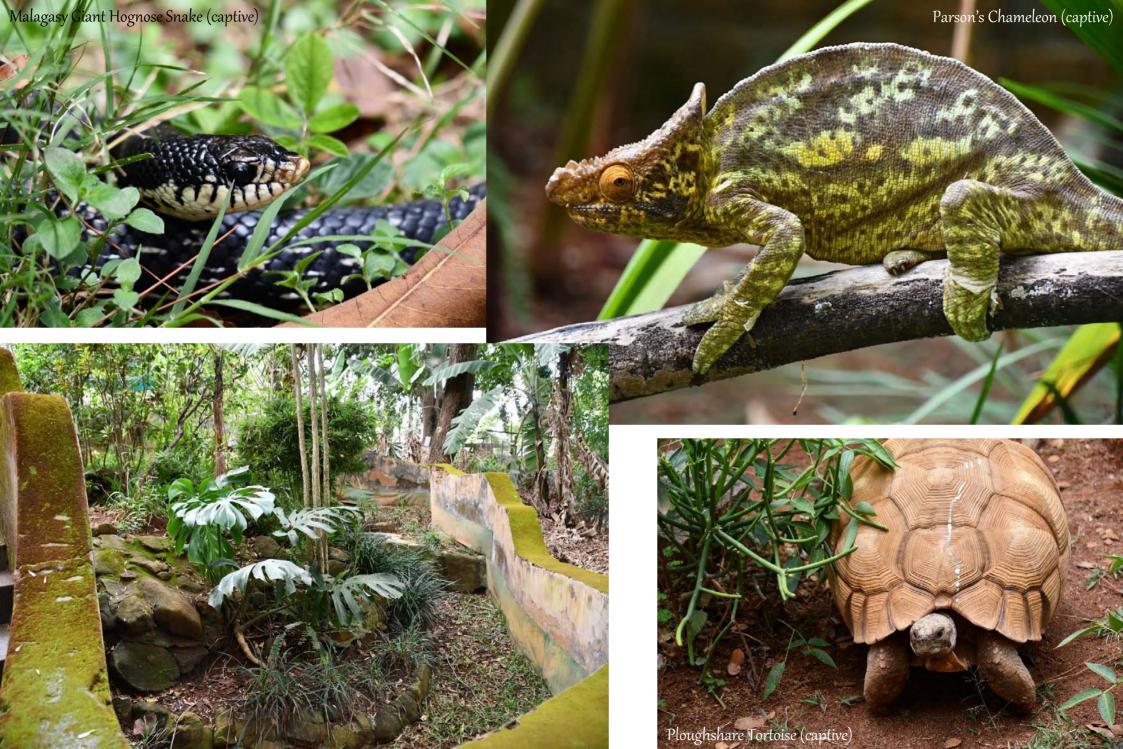




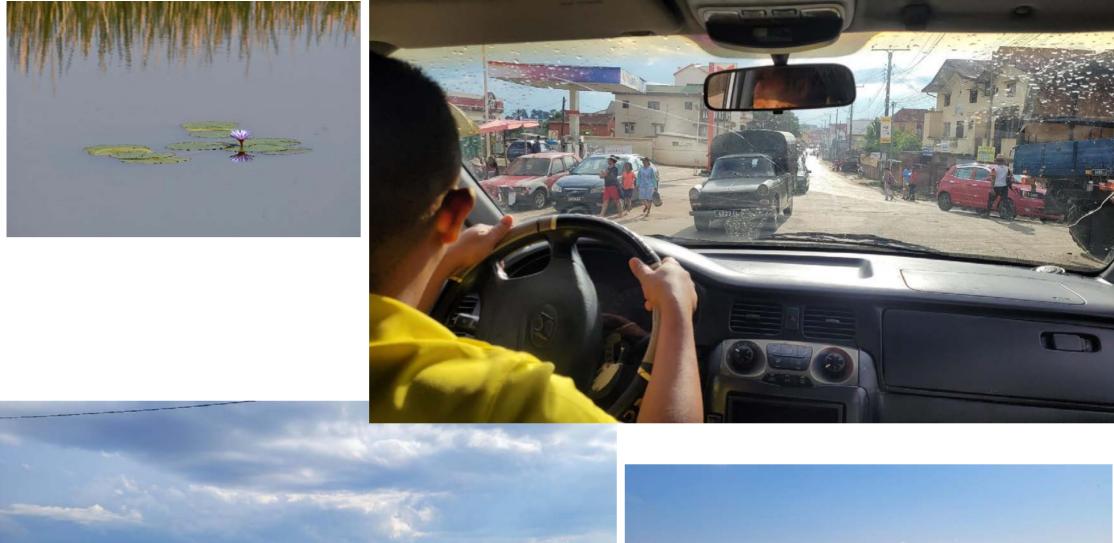


















Departure from Madagascar and flight back home



