



## ANNUAL REPORT

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2017



# The Mauritian Wildlife Foundation

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The Mauritian Wildlife Foundation (MWF) is a Registered Charity established in 1984. MWF works in close cooperation with the Government of Mauritius and the Rodrigues Regional Assembly, formalized in separate memorandums of understanding. The headquarters is located in Vacoas, Mauritius and the Rodrigues branch is based in Solitude. MWF is the only Mauritian NGO to be exclusively concerned with the conservation of terrestrial endemic species and their habitats, and in Rodrigues has a specialization in habitat restoration. The principal objective of the organization is to save threatened native and endemic species from extinction.

## Achievements

MWF's best known achievement is the saving of the Mauritian Kestrel. The MWF, has in recent years, brought the Pink Pigeon, the Echo Parakeet and the Mauritius Fody back from the brink of extinction. MWF's work in the area of captive-breeding and hands-on wild management of endemic animals is of internationally high repute. Our expertise is also being used in Rodrigues to address problems caused by degradation of habitat. Here we are propagating native plants in nurseries and planting them out to restore vegetation communities. The Foundation also works actively to restore offshore islands, by removing exotic vertebrates and plants and by restoring vegetation and vertebrate communities. The MWF is currently working on several islands including Ile aux Aigrettes, Round Island, Ile Cocos and Ile aux Sables. All of these are high profile projects of national and global biological significance. The MWF believes that the work it is doing benefits the Mauritian nation both for the present and future generations. Most of MWF's projects are of international importance in the conservation of biological diversity and are therefore placing Mauritius at the forefront of the Conservation world giving a high profile to any projects, which need funding. The MWF is raising the profile of conservation among tourists through the Eco-tourism activity conducted on Ile aux Aigrettes. The MWF promotes local capacity building and provides employment through its activities. The Mauritian Wildlife Foundation wishes to remain a strong, vibrant and innovative organization.

## MWF's Missions

- To save threatened Mauritian species through the restoration of entire ecosystems.
- To seek new information through field research, data management, captive studies and scientific collaboration for direct application to restoration methods and management.
- To share knowledge gained through restoration programs with fellow Mauritian and international conservationists.
  - To share the joys and benefits of native wilderness and wildlife with the Mauritian people.
  - To secure the future of Mauritian species through income generation and sound management of human, fiscal and capital resources.

## Organizational Structure

MWF is governed by a Council of 15 members, made up of prominent Mauritian businessmen and women, representatives from the Mauritian Government's National Parks & Conservation Service, the Durrell Wildlife Conservation Trust, Chester Zoo and other international partners. MWF employs 89 Mauritian staff at all levels of responsibility, and up to 8 expatriate staff. Their work is supported by up to 25 Mauritian and expatriate self-funded volunteers. MWF and its Council are also advised by a number of scientific associates from organizations that fund or support it, namely The Durrell Wildlife Conservation Trust, The International Zoo Veterinary Group, North of England Zoological Society, the World Parrot Trust (UK), the Institute of Zoology (UK) and various universities.

# Birds

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## Mauritius Kestrel



### Background

The Mauritius Kestrel (*Falco punctatus*) is unique to Mauritius and is one of the nine endemic bird species still left on the island. The species was saved in-extremis with an increase from just four birds in 1974, including a single breeding female, to a peak of about 800 individuals. It has become a world conservation icon as it is recognised as the most successful recovery programme in the world of an animal species and the programme remains MWF's proudest achievement. However, because of the degradation of the Mauritian native forests the kestrels are now found only on the eastern and western part of the island where they continue to face the effects of habitat degradation and predators. The eastern population has been monitored constantly since the re-introduction of birds from 1988 to 1993 and has been healthy and stable for the past decade. However, the western sub-population suffered a decline and MWF had to resume monitoring there in 2008 after an island wide survey found a drastic reduction in kestrel numbers from the estimated 800 to around 300 birds. The findings sadly confirmed the disappearance of introduced kestrels from the Moka Mountain Range. The current monitoring has enabled us to identify the management which is required to reverse the downward trend in numbers and secure the population. Measures include placing more nest boxes in suitable habitats to increase breeding pairs, studying the genetics of the populations to identify if certain bird's genes need to be introduced into the other sub-population and hand-rear birds to boost population numbers and to reintroduce birds into new nesting areas. The field team will harvest eggs and/or chicks from nests in very tall trees. The eggs and chicks will be hand-reared at the Gerald Durrell Endemic Wildlife Sanctuary in Black River (GDEWS) under the supervision of Chester Zoo staff, and then moved to nest boxes in the new release sites (Like Bel Ombre) for a period of adaptation before leaving the box to go into the forest. In 2016, 5 and 2017, 21 kestrel chicks Kestrel chicks were hand-reared in GDEWS and released in Bel Ombre. The latest scientific findings illustrates that there is no room for complacency and we still need to look after the Mauritius Kestrels.

## Main Actions

- Population monitoring in the west, south and east was carried out as usual
- Hand-rearing and hacking from nest boxes of Kestrels was carried out at Bel Ombre
- 31 eggs were harvested from the eastern population, 21 eggs were fertile; from these 19 chicks were reared to fledglings
- 2 birds were rescued from the wild (western population) and hand-reared at the Gerald Durrell Endemic Wildlife Sanctuary (GDEWS), the Black River Aviaries and released with the other birds at Bel Ombre
- 21 birds were released into the wild at Bel Ombre forest from 5 nest boxes
- Birds were healthy and feeding on provided mice. They will be fed until they are 100 days old and independent.

## Pink Pigeon



## Background

The Pink Pigeon (*Nesoenas mayeri*) is one of the world's rarest pigeons. Only 9 wild birds were known at its lowest point in 1990. In the last 25-30 years, an integrated management approach of captive breeding, releases, habitat restoration and predator control has seen the population recover to approximately 400 wild birds. Whilst the conservation work to date has saved the species from imminent extinction, MWF cannot relax in its efforts and reduce the level of support. The original causes of the species' rarity, mainly restricted and degrading native habitat and introduced predators, still prevail and unless we continue to manage the effects of these limiting factors, the Pink Pigeon may face the prospect of extinction once again. There is one subpopulation of Pink Pigeons established on the offshore island of Ile aux Aigrettes and six more in the Black River Gorges National Park.

Two of these sites, Pétrin and the Lower Black River Gorges, are open to the public and the birds can easily be seen. Additional subpopulations are planned in the future in areas of good quality native forest habitat. In 2017, 30 Pink Pigeons were released in Ferney Valley. In 2018, 30 Pink Pigeons will be released in Ebony Forest. These releases will increase the area occupied by Pink Pigeons and to help increase the population size to over 600 birds, a figure believed to be the minimum viable population size for an avian species. To provide birds for the additional subpopulations and to provide

genetic diversity to the current populations, a captive population of Pink Pigeons has been set up at the Gerald Durrell Wildlife Endemic Sanctuary. The offspring of these birds will be released into the wild. In 2017, 7 pairs of pigeons were used for the captive breeding and 5 young birds were obtained.

There is an ongoing study supported by our University partners to consider whether it is justified to reintroduce birds from European zoos with genes that are missing or underrepresented in the wild in Mauritius. The genetic management of the Pink Pigeon is an indication of success and maturity of the project, and very few conservation initiatives worldwide are at this stage of management.

### Main Actions

- Populations were managed as usual at 8 sites with an estimated population of 370 birds
- Carried out captive breeding and hand rearing of Pink Pigeons at the Black River Aviaries with the use of Barbary doves as foster parents
- 49 Pink Pigeon eggs were laid, 11 were infertile and 6 fledglings were obtained at GDEWS
- Translocation and release of 30 Pink Pigeons to Ferney.
- Pink Pigeons breeding at Ferney, 5 Ferney born Pink Pigeon were ringed
- Building of release aviaries in Ebony Forest.
- Preparation for release of Pink Pigeon in Ebony Forest in January 2018.

### Echo Parakeet



### Background

The Echo Parakeet (*Psittacula eques*) is the last endemic parrot of the Mascarenes and was close to extinction as the wild population numbers were estimated at around 20 birds in the mid-1970s. The Echo Parakeet is closely associated with good quality native forest, and the decline of the bird has been due to habitat decline and degradation, which cause shortage of food and tree cavities for nesting. Predators and diseases severely impact on the survival of Echo Parakeets. The population is currently over 700 birds thanks to a conservation programme that has included rescue of eggs and chicks in the wild, captive breeding and rearing, releases into the wild, pest and disease control, supplementary feeding nest site provision and habitat restoration. The Echo Parakeet is arguably the most successful parrot restoration programme and is a model for the rescue of other parrots worldwide. The immediate challenge is overcoming *Psittacene* Beak and Feather Disease (PBFD), a

deadly viral disease, whilst long term, it is large scale habitat restoration that will provide for natural food and nest sites. Despite the disease, the population is still growing which would indicate that the current minimum management is adequate. However, the total population is found in the Black River Gorges National Park and in order to further secure the Echo Parakeet from a localised event which could severely impact on the population, a suitable area with good quality native forest has been identified in the Bambous Mountains.

The translocation started in February 2015: 14 birds were released in 2015, 29 birds in 2016 and 30 birds in 2017. At the end of 2017 we had 13 birds regularly visiting the feeding hoppers in the Ferney Valley. In 2018 we will continue taking birds from the population in the Black River Gorges National Park with the aim of translocating 30 young birds to a new site, a suitable area with good quality native forest, Ebony Forest in Chamarel. Monitoring will locate suitable birds and supplementary feeding will continue to support general bird fitness and breeding success. Our university partners are undertaking a number of studies which look at PBF, supplementary feeding, genetics and population dynamics all of which will inform conservation actions in the future.

### Main Actions

- Monitoring and supporting the population in the Black River Gorges National Park was ongoing.
- Estimated population: over 750 birds.
- The third translocation of birds to Ferney Valley took place from February to April with 30 birds translocated.
- A total of 73 birds were released: 13 birds are regularly seen and have settled at Ferney.
- 8 birds were seen in good health in an orchard in Jardin de L'étoile
- Building of release aviaries in Ebony Forest.
- Preparation for release of Echo Parakeet in Ebony Forest in January 2018.

### Mauritius Olive White Eye



### Background

The Mauritius Olive White-eye (*Zosterops chloronothos*) is thought to be the rarest and most threatened of the endemic Mauritian birds. The number of Olive White-eyes has fallen drastically

since the early 1970s, coinciding with the last large-scale forest clearance on Mauritius. In 2005 conservation action was considered essential to decrease the risk of extinction of this attractive small bird whose habitat had dwindled to a small known area in the Black River Gorges National Park. The Mauritian Wildlife Foundation (MWF) aims to save the Olive White-eye through protecting the area they live in and maintaining a population of birds on the predator free island of Ile aux Aigrettes. Our biologists based in Combo (Black River Gorges National Park) identify nests and protect them from predators, as well as monitor nesting success to increase our knowledge of threats to the species. From 2005 to 2009 MWF rescued eggs and chicks from falling wild nests to incubate eggs, hand raise hicks and release fledglings onto Ile aux Aigrettes. A second team of biologists monitor the progress of the birds on the island to understand the species biology and habitat requirements. It is now possible for the public to have a glimpse of the Olive White-eye, one of the most threatened birds in the world, on a visit to Ile aux Aigrettes.

### Main Actions

- Improvement of supplemental feeding on Ile aux Aigrettes research carried out, investigating replacing perishable food in the feeds was stopped as it had a negative impact on the breeding of birds
- A poison grid of 350 poison stations along 1.5 km of rivers at Combo, to reduce rodent density and increase the probability of Olive White-eyes fledging chicks was maintained. But this was stopped as no noticeable improvement in breeding was observed due to the poison grid.
- The agreed way forward to protect the Olive White-eye was the creation of a mainland island using Good nature (self-resetting) traps
- Discussion concerning translocation of Olive White-eye to the mainland island and Flat Island took place

### Mauritius Fody



### Background

The Mauritius Fody (*Foudia rubra*) is a small charismatic weaverbird endemic to Mauritius. The number of Fodies has fallen drastically since the early 1970s, coinciding with the last large-scale forest clearance on Mauritius. In 2002 conservation action was considered essential to decrease the risk of extinction of this attractive small bird whose habitat had dwindled to a small known area in the

Black River Gorges National Park. The Mauritian Wildlife Foundation (MWF) aims to save the Mauritius Fody through protecting the area they live in and maintaining a population of birds on the predator free island of Ile aux Aigrettes. Our biologists were based in Pigeon Wood (Black River Gorges National Park) to identify nests and protect them from predators, as well as monitor nesting success to increase our knowledge of threats to the species. Having identified predators as the main threat to the species, concrete action was undertaken from 2002. From 2002 to 2006 MWF rescued eggs and chicks from failing wild nests to incubate eggs, hand raise chicks and release fledglings onto Ile aux Aigrettes. A second team of biologists monitor the progress of the birds on the island to understand the species biology and habitat requirements. It is now possible for the public to have a glimpse of the Mauritius Fody, the bird with one of the most successful conservation projects in the world, on a visit to Ile aux Aigrettes.

### Main Actions

- 2 outbreaks of avian pox were recorded on Ile aux Aigrettes
- Discussions were held about the way forward to protect the Mauritius Fody, with the creation of a mainland island using Goodnature traps at Brise Fer
- Discussion concerning translocation of Mauritius Fody to the mainland island
- Grant applied for to obtain funding to start with the creation of a small (20 ha) mainland island

### Mauritius Cuckoo-Shrike



### Background

The three year island wide survey of Passerines confirmed the decline of the Mauritius Cuckoo-shrike (*Coracina typica*) both in distribution and total population size. Preliminary observations indicate the decline is caused by predation of eggs and chicks. Urgent action is required to address this decline. A study has identified that there is habitat in the Ferney Valley for the Mauritius Cuckoo-shrike, which is currently absent there. The Mauritius Cuckoo-shrike is a declining endemic passerine that was once found in the valley, but it was probably extirpated in the 1950's by organ chloride pesticides no longer in use. To re-introduce the cuckoo-shrikes, hand-rearing birds is thought to be the best method as it

will allow us to increase the probability of birds fledgling. At the start of the season a field team of two staff will be based in the Black River Gorges National Park to locate nests and clutches of eggs and chicks will be followed to identify the optimum harvesting date. The field team will harvest eggs and/or chicks from nests in very tall trees. The eggs and chicks will be hand reared at the Gerald Durrell Endemic Wildlife Sanctuary in Black River (GDEWS) under the supervision of Chester Zoo staff, and then moved to the Ferney Valley for a period of adaptation in a release aviary before being released into the forest. In the 2015/16 season, 5 birds weretranslocated to Ferney Valley and 2 were released. In the 2016/2017 season, 9 birds were released in Ferney Valley.

### Main Actions

- Further tested Good Nature traps in Brise Fer to control rats, however, results at spacing of 50 m were found to be less effective than at 25 m
- Studied birds in the wild, 2 nests fledged chicks.
- 12 eggs were collected and taken to Black River Aviaries for hand rearing. 4 eggs were infertile. From the 8 eggs, 6 chicks were obtained.
- Successful hand rearing of Mauritius Cuckoo-shrike chicks: 5 in 2016-2017, 6 in 2017-2018.
- Preparation for release of Cuckoo-shrike in Ferney Valley in February 2018.

### Gerald Durrell Endemic Wildlife Sanctuary (GDEWS)



### Background

The Gerald Durrell Endemic Wildlife Sanctuary (GDEWS), also known as the Black River Aviaries, is a captive breeding centre set up for saving endangered endemic birds and bats. GDEWS is a small facility but yet has been critical for saving near extinct animals. The centre supports the fauna conservation programmes by providing facilities to captive breed, incubate and hand-rear animals to reintroduce to the wild to boost populations, providing training facilities for aspects of animal husbandry and to take care of sick animals. It also keeps captive populations of animals for research purposes to better understand their behaviour, diets and habits which in turn support efforts to maintain the wild populations and guide conservation actions. Additionally GDEWS houses a collection of Critically Endangered endemic plants in a secure environment (e.g. palmiste blanc de l'île Ronde *Dictyosperma album var conjugatum*, bois puant *Foetidia mauritiana*, bois tambour

*Tambourissa quadrifida*) where seeds can be collected for propagation for the MWF Rare Plants project and subsequent reintroduction to the forest.

In 2015 we started an intensive breeding programme for the Pink Pigeon where pairs of birds are kept in captivity and their offspring released into the wild to create new sub populations of birds as well as reinforcing current populations, for example, on Ile aux Aigrettes. In 2016 and 2017, 7 pairs of pigeons were used for the captive breeding and 5 young birds were obtained. In September 2018 hand-rearing of cuckoo shrikes is planned along with the Mauritius Kestrel to support their conservation. In 2016, 5 Cuckoo-shrikes and 5 kestrels were successfully reared at GDEWS. In 2017, 6 Cuckoo-shrikes and 21 kestrels were successfully reared at GDEWS The centre is managed collaboratively by the Mauritian Wildlife Foundation (MWF) and the National Parks and Conservation Service with specialist assistance from abroad (e.g. Chester Zoo, Durrell, International Zoo Veterinary Group). What makes the centre so successful is the cooperation and interaction of experts sharing their knowledge and the close collaboration between MWF and NPCS.

### Main Actions

- New aviaries are being built to be able to hold more Pink Pigeons pairs.
- Captive breeding and hand rearing of Pink Pigeons at GDEWS with the use of Barbary doves as foster parents continued
- 6 Pink Pigeon squabs were hand-reared
- 21 Mauritius Kestrel chicks were hand-reared to 30 days
- 6 Mauritius Cuckoo-shrike were hand-reared between September and December 2017
- Hand rearing of rescued adult and baby Mauritius Fruit Bats and stranded seabirds continued.

### Other bird projects

Project proposal submitted by MWF to National Geographic Society and entitled 'Creating an island on an island', and funds obtained to create a Mainland Island of 20 ha in Brise Fer area. The mainland island is an area where rats are controlled intensively using self-resetting traps. The traps would lower rat abundance significantly and allow the creation of new sub-populations of endangered passerines in new suitable areas while also helping the remaining bird populations to survive. The species for which this would be the most useful to are the Olive White-eye and Mauritius Cuckoo-shrike. The benefits for other species would also be quite important as rats impact negatively on other endangered birds, plants and invertebrates.

# Reptiles

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## Monitoring and translocations



### Background

The small islets around Mauritius support numerous unique species that were once abundant on the main island, but are now found nowhere else in the world. Several species, particularly reptiles, are now restricted to single island populations where they are at great risk of extinction from the threats that caused their loss elsewhere. Many other endangered Mauritian animals and plants are dependent upon the unique geckos and skinks for their survival, such that their preservation is crucial for sustaining island communities and local biodiversity. Since 2006 MWF has been reintroducing threatened reptile species back to other islets. A total of 2256 reptiles from seven species were moved to seven different released sites. Major threats (e.g. introduced predators, habitat loss and habitat degradation) have been addressed to lessen the risks of extinction and the reptile reintroductions contribute to the rebuilding of lost Mauritian ecosystems. These actions are enhancing the distribution and abundance of endangered reptiles. To date the distribution and abundance of five threatened Mauritian reptile species have been increased by an average of 85% and 55% respectively and the extinction of the orange-tailed skink has been prevented. To maintain this success MWF needs to continue the high level of research and monitoring on the islands to direct appropriate conservation management decisions; detect and adapt to emergent threats and to continue to build upon what has been started for the conservation of endangered island communities.

### Günther's gecko

- A total of 59 eggs were detected during searches on Ile aux Aigrettes (IAA) with a hatching success of 88% for 2016/2017 breeding season.
- Round Island hatching success for the same period is 89%.

## Telfair's skink

- IAA: Unable to estimate abundance as too few skinks remain following the invasions of non-native predators: dogs (threat removed), tenrecs (still present) and crows (still present). Less than 100 adult skinks remain. Until the invasive predators have been removed, further skink translocations will not occur.
- Gunner's Quoin (GQ): The reintroduced Telfair's skink population was found to be at their highest abundance with approximately 14,000 adults from initial translocations of 350 individuals.

## Bojer's skink

- Annual Capture Mark Recapture surveys were conducted. Due to poor weather, recapture rates were too low and population abundance could not be obtained for the reintroduced population on Ile aux Fouquets and source population on Ilot Vacoas, however the populations were found to be healthy and robust.
- The abundance estimate of the reintroduced Ile de la Passe population was estimated at 391 (95%CI: 288-571) individuals.

## Lesser night gecko

- Capture Mark Recapture surveys were conducted on the translocated population on Ile Marianne and from source population on Ilot Vacoas.
- Estimates of population size were 310 (95%CI: 190-563) on Ile Marianne and 237 (95%CI: 136-413) on Ilot Vacoas. This is the highest abundance estimate recorded so far for Ile Marianne since the initial translocation in 2011, effectively more than doubling the abundance of this threatened reptile in the southeast of Mauritius.

## Orange-tailed skinks

- A total of 98 sightings and 21 captures were made on Gunner's Quoin in November. The morphometric measurement for each captured skink was taken. The number of skinks seen and captured has doubled as compared to last year. Some skinks were found in areas outside of their previously recorded range. A trip was also organized to Ilot Gabriel; no orange-tailed skinks were recorded during the surveys.
- 19 samples were collected in November on Gunner's Quoin to determine genetic health of the orange tailed skinks.

## Bio-security work on the islets

- No novel exotic animal introductions were detected during trapping and searches on any of the islands.
- However, three new exotic plant species (papaya, *chromolaena*, basil) were detected on GQ, they were removed, locations recorded and reported to NPCCS.

## Training and visits

- Staff from Nature Océan Indien (NOI), Reunion, visited Mauritius for a week in August to learn about techniques used in the reptile programme. They also shared their experiences with eradicating invasive *Phelsuma grandis* and the control of *P. laticauda*, two species that pose a threat to Mauritian *Phelsuma*.
- In a constructive meeting with NPCCS we discussed the possibility of eradicating *P. laticauda*, which is currently restricted to two locations in Mauritius.
- Finella Blair from Durrell started a six-month contract in Mauritius from August 2017 to work with and train the reptile team to develop field based validated tablet data entry forms and Access databases to reduce manual data entry, transcription errors and improve data security.

# Tortoises

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## Background

The tortoises had an important role in the native ecosystem as browsers, grazers and seed dispersers. Many native and endemic plants have evolved with and are adapted to the presence of tortoise grazing and seed dispersal. Since the extinction of our endemic tortoises, all the functional roles fulfilled by giant tortoises in the ecosystem have gone missing. To remediate this we are using a close relative of Mauritian giant tortoises, the Aldabra tortoises from Seychelles as replacement to re-activate those lost plant-tortoises interaction and helping in restoring the forests on two of the islands we work on: Ile aux Aigrettes and Round Island. The aim of this project is to manage 26 adult tortoises free-roaming on Ile aux Aigrettes and currently 674 free roaming tortoises on Round Island. Wild hatchlings produced from Ile aux Aigrettes' adult tortoises are collected and head-started in captivity on the island. They are on show to the public thus serving an educational purpose on Ile aux Aigrettes. The juvenile tortoises are then transferred to Round Island to create a tortoise population that will be self-sustainable. The tortoises on both Islands are monitored closely and studies have been set up to assess their impact on the ecosystem.

## Ile aux Aigrettes

- 26 adult free-roaming adult Aldabra tortoises (13 males and 13 females). Their location was recorded every month and water provided at three different points on the island.
- Translocation of juvenile Aldabra tortoises from IAA to Round Island carried out.

## Round Island

- By the end of 2017, 674 (total released) free-roaming Aldabra and 14 Radiated tortoises were present on Round Island. The morph metric measurements of the free-roaming tortoises were carried out twice per year to assess their condition and health.
- Daily sightings and monthly quadrat searches were carried out in the seven habitat types to obtain abundance, movement and distribution data.
- Seven wild Aldabra juvenile tortoises were found on RI, of which 6 were tagged and released. The other tortoise was too small to be tagged.
- Fixed point photos and vegetation surveys were carried out to monitor impact of tortoises on RI vegetation.

# Islands

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## Round Island



### Background

Round Island, 219 ha, is undeniably Mauritius' most important island for conservation with unique or significantly large remnant populations of endemic plants, reptiles and native seabirds. The island was spared from predators such as cats and rats that have caused irreversible damage elsewhere, but goats and rabbits were introduced in the early 19th century that caused severe loss of soil and vegetation. Poaching of seabirds was a common activity on the island. By 1986, the herbivores were eradicated, and closer management put an end to seabird poaching by 1997. A field station was built and this has allowed MWF to achieve a greater impact to protect and restore the island, control or eradicate invasive plants and restore over 15 ha of the island. A permanent staffing of the island has supported reptile rescues through reintroduction to other islands including in 2012 the translocation of the Round Island boa, a greater understanding of seabirds including resolving the identity of the Round Island Petrel, and a host of field studies. The restoration of Round Island has been initiated, but we need to continue to restore the island, conserving its unique plants and animals. This will include saving from extinction two endemic plants that are in precipitous decline (*Aerva congesta* and *Phyllanthus revaughanii*), tracking of seabirds to understand where they travel to (thus identifying Marine Important Bird Areas and assessing the impact of global climate change), monitoring the response of threatened reptiles to restoration activities, curbing soil erosion and planting greater areas of the island with native plants which will benefit the resident endemic animals. Round Island has been an important training and research ground for local and international restoration practitioners and scientists. Being one of very few islands in the World to have never been invaded by rats or non-native reptiles, combined with ongoing extensive restoration work and pioneering research on highly threatened and unique animals and plants, the global significance of Round Island is increasing as a leading site for conservation and scientific excellence.

### Red-tailed Tropicbird

- 1,209 checks were made of 353 active nest sites within monthly checks of the Red-tailed Tropicbird survey area, eight of which were occupied by White-tailed Tropicbirds and four by Wedge-tailed Shearwaters. Adult Red-tailed Tropicbirds were detected 725 times, which included

480 individuals detected (287 recaptures from previous years and 193 newly ringed), of which 169 adults were detected more than once. Red-tailed Tropicbird chicks were detected 436 times, which included 218 individuals of which 43 were ringed in 2017.

### Round Island Petrel

- 712 adults were found during monthly surveys and a total of 96 birds were ringed (56 chicks and 40 adults).
- 33 Geolocators were deployed in 2017 and 32 from previous years tagging were recovered
- Wardens received training on petrels in November from Dr Malcolm Nicoll (Institute of Zoology) on bird handling, ringing, deployment of geotags, and collection of blood samples.

### Keel-scaled Boa

- A total of 233 boas (176 adults and 57 juveniles) were found during the monthly quadrat surveys. The encounter rate of adult boas per search hour was 0.921, higher than all previous years' of monitoring.
- Another 18 incidental boa encounters (15 adults and three juveniles) were also recorded.
- 75 boas were PIT-Tagged for the year.

### Günther's Gecko

- 219 eggs found in total for the 2016/2017 breeding season; 198 hatched, 21 failed, giving a hatching success of 89%
- 18 Günther's Gecko sites were monitored fortnightly
- 104 eggs had been found by December 2017 of the 2017/2018 breeding season.

### Weed management

- *Chromolaena odorata*, *Heteropogon contortus* and *Lycopersicon esculentum* sites were checked on a monthly basis.
- Seven new sites of *C. odorata* were found in 2017.
- By the end of the year there were 26 known sites for *C. odorata* plus one mega site encompassing several old individual sites, 14 for *H. contortus* and 1 for *L. esculentum* being monitored.
- 8,457 seedlings and adult plants of *C. odorata*, 1,210 *H. contortus* and 717 *L. esculentum* were removed in 2017.

### Plant restoration work

- Approximately 90,000+ seeds of 22 species (17 hardwoods and 5 non-hardwoods) were collected on RI.
- 3300+ seeds from 4 species were collected from IAA and mainland sites.
- 14200+ seeds from 19 species were sown in RI nursery.
- 1103 nursery grown seedlings were potted.
- 936 seedlings collected from RI (327 non hardwood of 6 species and 609 hardwood from 11 species)
- 538 (7 species) and 198 seedlings (2 species) were collected from IAA and Morne Sec respectively and sent to RI.
- Non-vegetative propagation: 6 Air layering of 3 species and 54 cuttings of 5 species
- 710 plants were planted in the lower palm-rich habitat: 587 hardwood plants of 23 different species and 123 non-hardwood plants of 6 different species.
- By the end of December 2017 the Round Island nursery contained 1235 plants (1016 hardwood and 219 non-hardwoods).
- Rare plants: one site of *Phyllanthus mauritianus*, four sites of *Phyllanthus revaughnii* and two sites of *Aerva congesta* were monitored monthly.
- The propagation plan document for 2018 was completed.

## Infrastructure

- One of the field station windows was replaced in August.
- A representative from Aquaflo came on the island in September to advise on the upgrade of the water filtering system.
- Mr Mesack Sham was recruited by MWF and Durrell from December for three months to undertake much needed infrastructural work on Round Island. By the end of December a new roof was placed on the field station and most of the materials needed for further work (cyclone proofing all structures, renovating the plant nursery and improving storage facilities) had been bought by the end of December.

## Other

- Prof David W Hedding and Prof Werner Nel, from South Africa, visited Round Island in October to collect weather and soil erosion data and upgrade the equipment in place.
- A delegation consisting of the Director of NPCS, NPCS and Forestry Service officers visited the island in September along with a French film crew of three persons. The purpose of their visit was to film a short documentary about the Round Island boa and Red-tailed Tropicbirds.
- Wardens Henry Brown and Shawn Daniel came to the end of their contract and were replaced by Luke A'Bear and Johannes Chambon mid-way through the year.
- The Round Island Vision and Strategy Document was in final stages

## Ile aux Aigrettes



## Background

Ile aux Aigrettes is a 26-hectare low coralline island, and has been declared that Ile aux Aigrettes is a 26-hectare low coralline island and has been declared a Nature Reserve since 1965 due to its remnant Mauritian dry coastal forest. Ecological restoration started in 1985 with the aim of restoring the coastal vegetation community and to replace the missing components of the flora and fauna. Through weeding of introduced species and planting of native species, including rare and critically endangered plants that have been propagated and reintroduced on the island, we are restoring the ecosystem. Around 30,000-40,000 plants per season/year were planted from 1998 to 2003, although the forest is now regenerating well naturally, specialised planting still continues to enhance the species diversity, to provide food for the native species reintroduced on the island and to provide habitat for seabirds and reptiles. The island is also used to conserve suitable lowland species that are critically endangered in the wild. Maintenance weeding continues through employment of a team of labourers living in the vicinity. As a part of a sustainable conservation programme, the island is open to visitors through our ecotourism and environmental education programmes. Students, tourists and

the general public learn about the habitat restoration project, in order to raise their awareness of the conservation of the threatened Mauritian flora and fauna.

### Invasive Alien Species control and bio-security

- Monthly monitoring of sooted tiles and chew cubes around the island for rodent detection continued. Nothing was detected. Shrew trapping continued around reptile nurseries.

### Tenrecs

- Nine sightings and 13 capture (7 in cage traps, 3 in seesaw traps, and 1 by hand and 2 in pitfalls). Most have been caught using snail bait. Most active month January to April and December.
- Ink tunnels have been shown not to be effective in detecting tenrecs and were stopped in March.
- 56 seesaw traps built in January and placed in February (2 per hectare covering the whole island).
- Tissue samples were collected during post-mortem examinations for genetic analyses.
- Tenrec summary from February 2015 (initial detection) to December 2017: 22 sightings, 19 captures and 1 footprint. Most tenrecs caught in cage traps and pitfalls.
- Ten additional cage traps were ordered and more pitfalls are needed.

### Crows

- Crows are still very active on the island. They have been observed taking large reptiles (skinks and geckos) from the island.
- Two Larsen traps were used from January to May, but with little success, although Mynah birds were caught. Trapping stopped the end of May, due to staff shortages.
- Crow baiting in conjunction with NPCCS, using Starlicide, began in May, but crows did not take the bait.
- Nik, Vikash and Debby have been working with crow eradicators Guntram Meier and Pete Haverson to develop a proposal for the eradication of crows from Mauritius.

### Seabirds



### Background

The reintroduction of a community of native seabirds to Ile aux Aigrettes to support entire ecosystem restoration builds on the foundations of the introduced mammalian predator and herbivore eradications, habitat restoration and seabird research and monitoring undertaken by the Mauritian Wildlife Foundation (MWF) on offshore islets. The development and refinement of seabird restoration techniques have tremendous potential for the Mascarenes and beyond. The project recognises the

important role of seabirds in maintaining the health of the marine ecosystem, as well as the restoration of plant and animal communities on islands. According to the Birdlife Global Seabird Programme, seabirds are the most threatened group of birds and their conservation status has declined rapidly in recent years. The prevalent threats include predation and poaching at nesting sites, overfishing and fisheries by-catch, marine pollution, and climate change and severe weather events. Mauritius has 49 offshore islets, of which only a few have significant seabird populations. This includes Round Island and Serpent Island, which have thriving seabird communities due to their remoteness and inaccessibility to humans and mammalian predators. Many more islets have lost their seabirds through poaching by people and introduced predators. The long term aim of MWF is to increase the populations of seabirds on numerous islets through reintroductions and support this through habitat restoration and protection. Consequently, the seabirds import marine-derived nutrients to the islets, affecting invertebrate abundance and community composition. This benefits endemic birds and reptiles through the provision of decaying animal matter and the positive effects on vegetation and prey abundance. An increased population of seabirds also helps in maintaining the tropic levels at sea. MWF began the project in 2009 and for two seasons translocated Red-tailed Tropicbirds, White-tailed Tropicbirds and Wedge-tailed Shearwaters from Round Island. Common Noddies, Lesser Noddies and Sooty Terns were additionally translocated from Serpent Island to Ile aux Aigrettes over three seasons from 2013 - 2015. Translocation efforts increased in 2016 and 2017, with 50 Wedge tailed Shearwaters, 39 White-tailed Tropicbirds and 81 Red-tailed Tropicbirds translocated. We have worked towards the long term goal of further reintroductions to other islets by building on the expertise acquired, and refining and developing techniques that can be applied to seabird conservation projects worldwide.

The project is seasonal and having begun in July 2016 was ended in June 2017 but not continued in 2017 as there was not sufficient funding. Funding is being sought to return to project activity in August 2018.

### Number of birds translocated and fledged

- Wedge-tailed Shearwater: 50 translocated, 49 fledged.
- Red-tailed Tropicbird: 19 translocated, 19 fledged.
- White-tailed Tropicbird: 12 translocated, 12 fledged.
- Four translocations were conducted in total (January, March, April and June).
- 99 percent birds fledged, representing the greatest success to date.

### Seabird attractants

- The photovoltaic system to power sound playback for seabird call was checked by a technician, finding that the batteries need to be replaced. Without funding this system remains redundant.
- 90 seabird decoy models (40 terns, 30 White-tailed Tropicbirds and 40 Red-tailed Tropicbirds) ordered from the UK arrived in September 2017.
- Begging and feeding sounds of Red-tailed Tropicbird and White-tailed Tropicbirds chicks were recorded using a MP3 recording device
- The released sites were weeded regularly as part of ongoing efforts to create an attractive habitat for prospecting seabirds.

### Seabirds rescue

- One adult White-tailed Tropicbird and one adult Wedge-tailed Shearwater were rescued and both fledged successfully

### Media

- In January, the team was interviewed and filmed feeding the chicks for the Mauritian newspaper L'Express.

## Ile Cocos & Ile aux Sables



### Background

Ile Cocos and Ile aux Sables, two sandbar islets to the West of Rodrigues, of 15 and 8 Ha respectively, are renowned for their breeding seabirds - water birds as well as migratory birds and occasional prospecting seabirds. The islets are also the last place on Rodrigues where there is natural vegetation succession (from coastal strand to shrub to tree), and despite their small size hold several ecotypes (strand, grasses, marshes, forest). Ile aux Sables also support the only known breeding population of the Roseate Tern and population of bois mapou (*Pisonia grandis*) in the Mascarenes. By virtue of the biodiversity hosted by these islets, they are classified as an 'Important Bird Area for Africa' by Birdlife International. The Mauritian Wildlife Foundation (MWF) has had a long history of involvement with these islets, and has advised the Government in formal and informal capacities for over two decades on their management, giving advice on planting, weed control and on the management of the bird populations. In February 2014, the Rodrigues Regional Assembly (RRA) approved the up-scaled role of MWF for the conservation of the two islets, in particular Ile aux Sables and discussions on future plans have been ongoing. Despite their native biodiversity, the islets have been severely modified by man and the vegetation communities have been replaced to a great extent by casuarinas and coconut plantations, damaged by invasive exotic plants and animals, coastal erosion, and by inadequately managed human visitation.

### Main Actions

- Conduct quarterly seabird monitoring censuses
- Continue with the removal of invasive alien species
- Propagate and plant endemic and native seedlings in selected plots
- Advise for the conservation of the native biodiversity
- Support ecotourism on Ile aux Coco
- Devise plan to increase conservation impact on the islets
- Ongoing training of Rodriguans wardening and conservation in Mauritius

### Future Island Projects

#### Flat Island

- We continue to promote our vision when appropriate.
- The future Global Environment Facility (GEF) 6 has included conservation work on Flat Island in the proposal which MWF would be involved in.

## Gunner's Quoin

- Government is building a field station on Gunner's Quoin. MWF has voiced some concerns about the field station construction in terms of quarantine and manning once built, enquired about the restoration plan for the island and has offered its assistance where possible.

## St Brandon



## Background

Rich in native coastal flora and fauna, St Brandon's beaches are a favourite place for sea turtles (Hawksbill Turtle *Eretmochely simbricata* and Green Turtle *Chelonia mydas*) to lay their eggs. Coconut trees can be found on a few of the St Brandon islands as well as native trees, shrubs and grasses. The coral and outer reefs are still in good condition. This archipelago has a huge range of marine biodiversity with important seabird colonies on the islets, and the shores are visited by migratory birds. Unfortunately, invasive alien plants and animals have reached the islets and are affecting the vegetation and breeding of seabirds. The islets are also affected by ongoing human activities. The project is the first step towards encouraging all stakeholders involved in St Brandon to develop and abide by a common Vision for the conservation of the archipelago. It is recognised that any actions carried out would not be effective unless Raphael Fishing Ltd, the Outer Islands Development Corporation (OIDC), and other relevant departments and Ministries of the Government of Mauritius support the actions. Thus, it is necessary to enter into discussions with the various stakeholders to agree a common vision and work together to establish guidelines and an action plan which all stakeholders will uphold.

## Main Actions

- Funding from the Critical Ecosystems Partnership Fund to help develop a common vision for the sustainable management of St Brandon will expire on 28<sup>th</sup> February 2018 and we will request an extension for 18 months.
- MWF continues to consult (government, private sector, NGOs and members of the public) about the development of the vision, receiving comments constructive comments and criticisms from a wide cross section of respondents.
- Government's reaction to the Vision has softened but we have not tested whether we will encounter resistance to a more active approach.

# Ferney

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The UNDP GEF Small Grants funding ended on 31<sup>st</sup> October 2017. The final report is being compiled. CIEL have agreed to a grant to MWF to support the continuation of the project where MWF takes care of the birds and supplies some consultancy services for Flora and Ecotourism activities.

## Fauna

### Pink Pigeons

- Translocation and release of 30 Pink Pigeons to Ferney.
- Pink Pigeons breeding at Ferney, 5 Ferney born Pink Pigeon were ringed

### Echo Parakeet

- The third translocation of birds to Ferney Valley took place from February to April with 30 birds translocated.
- A total of 73 birds were released: 13 birds are regularly seen and have settled at Ferney.
- 8 birds were seen in good health in an orchard in Jardin de L'étoile

### Mauritius Cuckoo-shrike

- 9 birds were released at Ferney, the last one was seen in May 2017
- Preparation for release of Cuckoo-shrike in February 2018.

### Mauritius Paradise Flycatcher

- Carried out hard release of 22 Mauritius Paradise Flycatchers in Ferney Valley.
- One bird is regularly sighted in Ferney Valley
- Three translocated birds were seen back in Combo, one pair in their own territory.
- Seven released birds were equipped with radio transmitters and followed for two weeks following releases

## Flora

### Weeding

- Initial weeding of 14,150 m<sup>2</sup> (1.4ha) completed
- Overall total initial weeding of 96,025m<sup>2</sup> (9.6ha) been done from the beginning of the project in April 2014
- Maintenance weeding was conducted of 30,500 m<sup>2</sup> (3.0 ha)

### Propagation of plants and planting in the restored areas

- For 2017, 4,752 plants have been propagated in the nursery.
- A total number of 21,189 plants have been successfully propagated since the beginning of the project,
- In 2017 2,590 plants were planted
- 12,831 plants planted from the beginning of the conservation project

### Training of restoration labourers

- 12 La Vallée de Ferney labourers were trained in weeding techniques, plant identification, herbicide application and nursery work.

### Rare plant searches

- Plant survey and the location of rare plants species were ongoing during restoration.
- In 2017 the following rare endemic plants were discovered at Ferney; 4 *Pisonia costata*, 4 *Bremeria landia* var. *holoserica*, 10 *Poupartia borbonica*, 29 *Sideroxylon sessiliflorum*, 1 *Dombeya ferruginea*, 1 *Apodites dimidiata*, 1 *Drypetes caustica*, 1 *Tambourissa tau*, 2 *Turraea rigida*, 1 *Tamboussisa tau*, 3 *Callophyllum parviflorum*, 72 *Eugenia elliptica*, 3 *Polycias paniculata* and 4 *Diospyros boutaniana*. Three orchid; one epiphyte orchid *Hederorkis scandens*, one epiphytic orchid *Jumellea recta* and one clump ground orchid *Phaius tetragonus* and two ferns; 2 patches *Vittaria isoetifolia*, 3 patches *Tectaria pica*. 1 liana; *Gounia tiliifolia* were found.

### Training

- Specialised technical workshops on plant conservation and practical hands-on sessions were run
- Reinforcement sessions were held on the Mauritius Kestrel feed presentation
- Guides were informed about the Echo Parakeet translocation.
- Exchange sessions were organized with the MWF Rangers to compare the handling of their respective trails.

### Education

- Enhanced tour 'In touch with the Forest' implemented for visitors and students
- 'In touch with the Forest' for students followed by 3,008 visitors from 54 educational institutions.
- Trail contents were reviewed regularly
- Practical training sessions were organized for the guides
- Fact sheets were prepared and circulated to the eco-tour team.
- Signage was worked on to provide information to visitors.
- A trail map was designed

# Flora

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## Rare Plants Search Project



### Background

Mauritius is home to 691 native species of flowering plants. 281 are endemic to the island, of these over 90% are considered to be threatened and about 100 species have less than 100 individuals in the wild. The project undertakes to propagate and plant the rarest species to increase their numbers and protect them from extinction. The Mauritian Wildlife Foundation (MWF) horticulturalists search in forests and map the locations of these species and propagate the rarest plants by growing them from seeds, cuttings, and sometimes seedlings in the MWF nurseries at Pigeon Wood (Black River Gorges National Park), Ile aux Aigrettes and Round Island. The plants, when grown, may be planted in the Field Gene Bank found at Pigeon Wood or on Ile aux Aigrettes. This safeguards the remaining genetic diversity of the species and will provide propagation material in later years. Plants are also re-introduced to their original locations or to protected rediscovered plant species that were thought extinct and found new populations of rare plants. MWF holds the co-chair ship of the IUCN (International Union for the Conservation of Nature) Mascarene Islands Plant Specialist Group, with overview on Mauritius and Rodrigues from 2017-2020. The group brings specialists together and is working on completing the red-list of Mauritian plants.

### Main Actions

- 35 rare plant searches were carried out across Mauritius with collaborators: National Parks and Conservation Service, Forestry Service, Mauritius Herbarium, and Independent Botanists.
- A long list of Critically Endangered plants were rediscovered e.g. *Sideroxylon grandiflorum*, *Ficus densifolia* at Brise Fer, *Diospyros nodosa* at Plaine Raoul, *Turraea tricopoda* at Bras d'Eau, *Jumellea recta* at Montagne Longue, *Eugenia vaughani* at Case Noyale.

### Pigeon Wood Nursery and Field Gene Bank

- A list of 28 critically Endangered upland species were identified to be propagated between July 2016 and June 2019.
- Field visits and searches allow plant parts to be collected for propagation in the Pigeon Wood nursery.
- Of note, the following species were propagated in 2017. *Pandanus macrostigma* (42 seeds), *Croton vaughanii* (4 cuttings), and five cuttings of *Tetraxis salicifolia* and *Syzygium pyneei* each and 10 cuttings of *Ficus laterifolia*.
- 6 *Pandanus microcarpus* from the 15 planted in the field genebank, were flowering this season and one plant is female and had bearded immature fruits.

- We planted 6 *Hyophorbe vaughanii*, one *Tetrataxis salicifolia*, bringing the population to 4 individual planted in the FGB during the project. The following were also planted: 3 *Gouania tiliifolia*, 3 *Acanthophoenix rubra*, 2 *Polyscias gracilis*, 2 *Tectiphiala ferox*, and 2 *Zanthoxylum heterophyllum* amongst others.
- Several rare plants propagated in Pigeon Wood Nursery which have been re-introduced in protected areas and private conservation areas e.g. *Gouania tiliifolia* (at Mondrain, Perrier, NPCS arboretum), *Ficus laterifolia* (at Forestry Service and NPCS arboretum, Mondrain, Ebony Forest), *Pandanus macrostigma* and *Trochetia parviflora* (Ebony Forest), *Albizia vaughanii* (Chamarel), *Pandanus microcarpus* (Petrin), *Hibiscus boryanus* (Tamarind Falls) etc

### Red Listing of Mauritian Plants

- The IUCN Red Listing has been compiled and finalized for the endemic plants of Mauritius, with the collaboration and input of the Mauritius Herbarium, National Park and Conservation Service and the Forestry Service with the support of the Missouri Botanical Gardens.
- We have worked out and finalized a list of 281 endemic species for Mauritius in August 2016.
- There was next to no progress red-listing since 2017, whilst awaiting updates from the Mauritius Herbarium.

### Mondrain Nature Reserve

- Work on the Management plan for Mondrain has to be finalized
- Medine Sugar Estate provided 116 man-days worth of labour for weeding from 20<sup>th</sup> March to 31<sup>st</sup> of May 2017. 3 hectares (of the 6 ha) of the reserve were maintained.
- 120 plants were planted at Mondrain, including Critically Endangered species such as *Poupartia borbonica* (30), *Norhonia ayresi* (5), *Syzygium guehoi* (5) and *Ochrosia borbonica* (1). 110 plants were also produced by using cuttings from the reserve itself.

### Ile aux Aigrettes

- The following critically endangered plants were successfully propagated at the Ile aux Aigrettes nursery e.g. *Ochrosia borbonica* (1), *Tambourissa quadrifida* (7), *Syzygium guehoi* (36), *Angraecum eberneum* (1), *Zanthoxylum heterophyllum* (5), *Sideroxylon boutonianum* (5), *Olax psittacorum* (6), *Gouania tiliifolia* (6). These plants were planted on Ile aux Aigrettes, Mondrain and Round Island.

### Other

- Two visits from Brest (France) scientists took place during the year. This is part of the project submitted by l'Arche des Plantes (Conservatoire Botanique National de Brest, France) to the Critical Ecosystems Partnership Fund (CEPF) in collaboration with MWF for re-introduction of rare plants to Mauritius and Rodrigues and assistance in plant conservation projects. Plants were also repatriated to Mauritius in November 2017 and were kept in quarantine at the NPCS nursery in Curepipe. These plants will be despatched to NGO, private sector and government project partners in Mauritius and Rodrigues.
- MWF became an official Botanical Gardens Conservation International (BGCI) member. The certificate was delivered to Dr Vikash Tatayah and Dr Eshan Dulloo from Dr Suzanne Sharrock, Director of Global Programmes, BGCI, in London on Thursday 15<sup>th</sup> June 2017.

# Rodrigues

## Solitude's nursery



### Main actions

- 28,348 endemic and native plants propagated in stock in the nursery at 31/12
- 15,072 endemic & native plants were transferred from the nursery for conservation purposes in 2017
- 15 octopus fisher worked in the Solitudes Endemic Nursery between February and March doing general maintenance, and 14 between August and October
- A new irrigation system was installed, with funds from Brest

## Rodrigues Environmental Education Program (REEP)

### Background

The Rodrigues Environmental Education Project (REEP) has been operational since 1998. From its inception REEP has been involved with the community, changing people's attitudes towards the environment. This is achieved through awareness-raising and informal environmental education initiatives. These involve talks in schools and to the media, visits to restoration areas and environmental education campaigns including outreaching to community groups in order for them to experience 'hands-on' the habitat restoration process. Volunteer's day is celebrated with activities and hand-outs of educational materials for those who have volunteered for MWF during the year. REEP also focuses on sensitising school children about environmental issues that affect Rodrigues and encourages them to take pride in their natural heritage.

In 2012 a short film was made on the Rodrigues Fruit Bat to create awareness on the importance of the Bat to the ecosystem and a 'Bat day' is held each year. In 2014 a calendar on the theme of the birds and bat of Rodrigues was produced from children's drawings. In 2015 a 116-page illustrated field guide entitled 'La Faune et la Flore de Rodrigues' was produced and distributed to all schools and libraries in Rodrigues and used as an information tool in training eco-tour guides. World Biodiversity day is celebrated each year by a donation of plants to Standard 6 children.

In 2016, guided Ecotours were launched in the Grande Montagne Nature Reserve. This site has now become an active regional and international platform for raising awareness of Rodrigues' unique endemic fauna and flora with foreign visitors. These projects have developed collaborative links with the government, private sector and other non-governmental organisations.

### Main Actions

- 1731 endemic and native plants were donated to schools, colleges, local institutions and community groups
- Participation in World Environment Day by donating plants in schools
- Educational talks were given to 892 school children & youths in 2017
- Educational visits were given to 1,353 school children & 165 teachers during 2017 at Grande Montagne Nature Reserve, Anse Quitor Nature Reserve, & Solitude Endemic Nursery
- 1014 volunteers worked with MWF in 2017
- MWF celebrated the International Volunteer Day on the 8<sup>th</sup> December 2017 at Graviers
- The REEP Educator participated in the Carnival on the 3<sup>rd</sup> of December 2017 from Mt Lubin to Mt Plaisir to Celebrate the Volunteer Day 2017, followed by a commemorative wreath laying at the Volunteer Monument at Malabar

### Grande Montagne Nature Reserve



### Background

The Mauritian Wildlife Foundation (MWF) has been working in the Grande Montagne Nature Reserve for more than twenty years and the visitor is now able to enjoy areas of maturing forest while witnessing other more recently restored areas or view restoration underway. Around 84% of the 25.5 ha fenced area at Grande Montagne has been restored to date and the aim of MWF is to complete the initial restoration of this reserve within the next few years. Over 156,516 plants have been planted in the reserve by MWF so far and 40 rare Rodriguan plant species are successfully conserved on Grande Montagne. The forest is a habitat to the surviving endemic animals and insects of Rodrigues. From about only 30 birds, the population of the Rodrigues Fody reached 8,000 individuals in 2010, whilst that of the Rodrigues Warbler increased to over 4,000 individuals over the same period, in part due to the habitat restoration on Grande Montagne. This project involves the local community, providing employment to restoration labourers from the nearby villages and organising 'restoration working days' with grassroots associations to sensitise and empower the local people in habitat

restoration. The reserve is included in the Rodrigues Environmental Education Programme where students visit and are taught about the reserve and its importance. The reserve is also open to the public for visits, and in 2013 the Rodrigues Regional Assembly approved plans for the MWF to conduct ecotourism activities in this nature reserve.

### Main Actions

- 8382 endemic and native plants were planted in the GMNR
- The Commission de l'Océan Indien (COI) biodiversity project was started on the 22 /03, and was launched on the 11/05 at Dominique Farla interpretation centre by the Commissioner of Environment and the COI Focal point
- 23 octopus fisher worked in the GMNR between February and March doing general maintenance, and 17 between August and October
- Recruiting 6 new labourers and 4 existing labourers under the COI project
- Installation of aluminium handrail at the Dominique Farla interpretation centre
- Construction of a concrete water tank
- Upgrading electrical system installation in the information centre, Toilets were repaired and Wooden steps were replaced

### Eco-Tours Grande Montagne

- Visit of Danny Thisbe, MWF Ecotour Manager based on Mauritius to advise on the promotion of the ecotour project
- Renewal of MWF ecotourism licence
- New flyers were produced and distributed around Rodrigues
- The Ecotour ranger and Conservation Assistant manned the GMNR information Centre and conducted ecotour visits
- 346 paying clients visited the GMNR in 2017
- 59 persons received complementary visits in 2017 (journalists, scientist, RRA VIP'S, staff)

### Anse Quitor Nature Reserve



## Background

Forest clearance, introduction of invasive plant and animal species, predators (e.g. rats and cats), over exploitation of the island's nature resources, unsustainable agricultural and farming practices and soil erosion have led to the demise of much of Rodrigues rich biodiversity. Well over 20 bird species and a host of plants are, as a result, extinct. The Anse Quito Nature Reserve contains critically endangered plants within some of these last relics of forest on Rodrigues, although even these are highly degraded. Small-scale restoration began in Anse Quito in the mid-1980s and the Mauritian Wildlife Foundation (MWF) began a larger scale restoration project in 2010 with a focus on employing conservation labourers from the local community. So far, 16 of the 35ha fenced reserve have been restored, with MWF planting approximately 107,955 native Rodriguan plants. By restoring this area, extremely rare plants are safeguarded and endemic and native habitat is recreated for the critically endangered Rodrigues Fruit Bat (*Pteropus rodricensis*) and it is hoped that the recolonisation of this area by the Rodrigues Warbler and Rodrigues Fody, both red-listed-species according to the International Union for the Conservation of Nature, may be possible thus helping increase their numbers. The restoration work is being carried out by labourers residing in the surrounding villages with a focus on supporting poverty alleviation through training and employment so they may acquire a marketable skill. It is to be noted that Anse Quito ranks as one of the poorest regions of the Republic of Mauritius. Restoration working days are organized with grassroots associations to sensitize and empower local people in habitat restoration and conservation. The reserve is included in the Rodrigues Environmental Education Program, where students visit and are taught about the reserve and its importance.

## Main Actions

- 4959 endemic and native plants were planted in the AQNR
- 17 Octopus fisher worked in the AQNR between February and March doing general maintenance, and 9 between August and October
- Received funding from Gestion Durable des Zones Côtières de l'Océan Indien – Fond Française de l'Environnement Mondial (*GDZCOI- FFEM*)

## Rodrigues Fruit Bat (RFB)

- Censuses carried out 3 times island-wide and fortnightly at one site.
- Fruit Bat impact study done by Jean Daniel Pierre Louis in Rodrigues
- The highest RFB count was in November returning 12,768 bats of which 3,608 were at 1 site (Accacia)
- The RFB was down listed from Critically Endangered to Endangered

## Ile Cocos and Ile aux Sables Nature Reserves

- Clean up of the Islets
- Site visit by RRA, Island Chief Executive, Departmental heads, Discovery Rodrigues and MWF Staff, Alfred Begue
- Site visit by Carl Jones
- 1529 plants were planted in 2017
- Plant Monitoring of 10 x 10 m quadrat
- Seabird Censuses were carried out four times during the year

## Grenade Community Forest (GCF)

- 5 octopus fishers worked in the GCF between February and March doing general maintenance and fence repairs
- 6 octopus fishers worked in the GCF between August and October doing general maintenance

## Others

- Exchange component of the IOC\_GIDZC project: Mr. Attoumane Mahoma (coordinator of Ulanga Activities), Ms. Yoursa Abdourahamane (Animator & Representative of Female Groups) and Mr. Zainoudine Anziz (Nursery Responsible) from Moheli were on mission in Rodrigues, visiting the Solitude Nursery, Grande Montagne and Anse Quito Nature Reserve.
- Visit of Dr Stephan Buord from Conservatoire Botanique National de Brest accompanied by Dr Vikash Tatayah
- Visit of Sweety Edouard, who was conducting her B.Sc. final research project on *Psiadia rodriguesiana*. She collected samples for University of Mauritius research project/ thesis
- Site visit of Dr Nik Cole to discuss the procedures for the introduction of Tortoises in the Grande Montagne Nature Reserve
- Courtesy visit of the Commissioner of Agriculture & Forest at the Solitudes nursery
- Visit of two members from SMEDA at Solitude nursery to identify Medicinal plants for donation in school and other institution
- Management visit of Mrs Deborah De Chazal
- Visit of Henry Brown (MWF) and Harriet Clark (MWF/Durrell) for the observation of seabirds colonies and share knowledge with MWF Rodrigues staff.
- One MWF Rod Staff Jean Daniel Pierre Louis attended a module of the PGDip Course in Mauritius, on 31st July 2017
- One MWF Rod Staff, Martine Brasse attended the Certificate in Endangered Species Recovery course in Jersey in May 2017, receiving the Postgraduate certificate
- One MWF Rod staff, Mr Alfred Begue, participated in the BGCI Global Tree Campaign – certificate in seed conservation
- Two MWF Rod staff, Liliana Meunier, MWF educator and Jenetta Abdool, MWF Ecotour Ranger participated in the customer care and communication skills training with Employee Welfare Fund organising by Commission of Tourism
- Visit of Prof. Carl Jones, accompanied by Dr Claire Raisin from Chester Zoo
- MWF Rod welcomed one intern, Mrs Jacqueline Hélié from France
- Visit of Dr Dennis Hansen, Andrin Durst and Urs Len at Grande Montagne Nature Reserve and Solitude nursery carrying out MSC project in Rodrigues. They collected morphological information from 6 heterophyllus plant species in Grande Montagne and Anse Quito Nature Reserve.
- Visit of Ms Micheline Peltier- journalist taking photos for President Ameenah Gurib-Fakim's latest book
- Visit of Mr Francis Staub (FFEM assessor) at the Solitude Nursery
- Visit of Mr. Claude Mamet, volunteer engineer for concreting the upper Solitude Nursery and the construction of the tortoise enclosure at the Grande Montagne Nature Reserve

# Education in Mauritius

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## Learning with Nature on Ile Aux Aigrettes



### Background

The Mauritian Wildlife Foundation (MWF) recognises that the long term survival of Mauritius' endangered biodiversity depends on the continuous education of Mauritian and Rodriguan children and raising the level of awareness among the public at large to overcome human indifference towards conservation. MWF believes that this depends on providing opportunities for everyone to appreciate strategic areas, local species, and foster education to highlight the ecological, aesthetic, cultural, spiritual, recreational and economic importance of protecting our endemic animal and plant species. MWF is conscious of the challenges involved in changing attitudes to the environment. One of the MWF's missions is: 'To share the joys and benefits of native wilderness and wildlife with the Mauritian people'. To achieve this mission, various educational initiatives are undertaken by MWF. As from 2009, the MWF developed 'Learning with Nature', a structured educational programme on Ile aux Aigrettes which has since become embedded in the national school curriculum and is supported by the Ministry Education and Human Resources, Tertiary Education and Scientific Research. MWF's 'Learning with Nature' programme strives to promote greater environmental awareness and support for conservation nationwide by helping to create the next environmentally conscious citizens. Through this programme over 3,616 students and 617 teachers visited Ile aux Aigrettes in 2017 on an educational tour. Students have the opportunity to visit the islet, discover a natural reserve, and appreciate its biodiversity, witness actions undertaken to save species from decline in their restored natural habitat, obtain support towards their school curriculum, and return armed with knowledge and educational materials especially designed to reinforce learning.

## Main Actions

- A total of 4,239 visitors followed the LWN trail in 2017 from 122 institutions of which 1,772 from 46 institutions were CSR sponsored and received educational and food packs.
- Specialised programmes were organized on request for a number of groups following modules in conservation as part of the National Curriculum.
- Feedback was collected from educators and students and analysed to evaluate ranger performance and learning outcome.
- A student from Colorado State University, USA, carried out a project entitled “Exploring the impact of Learning with Nature on Ile aux Aigrettes, Mauritius through the eyes of participants”
- The National Curriculum and school textbooks for all subjects were reviewed and resource material for the educational tour on Ile aux Aigrettes was updated.
- Training of Rangers was continuous during the year.

## Mauritius Fruit Bat



## Background

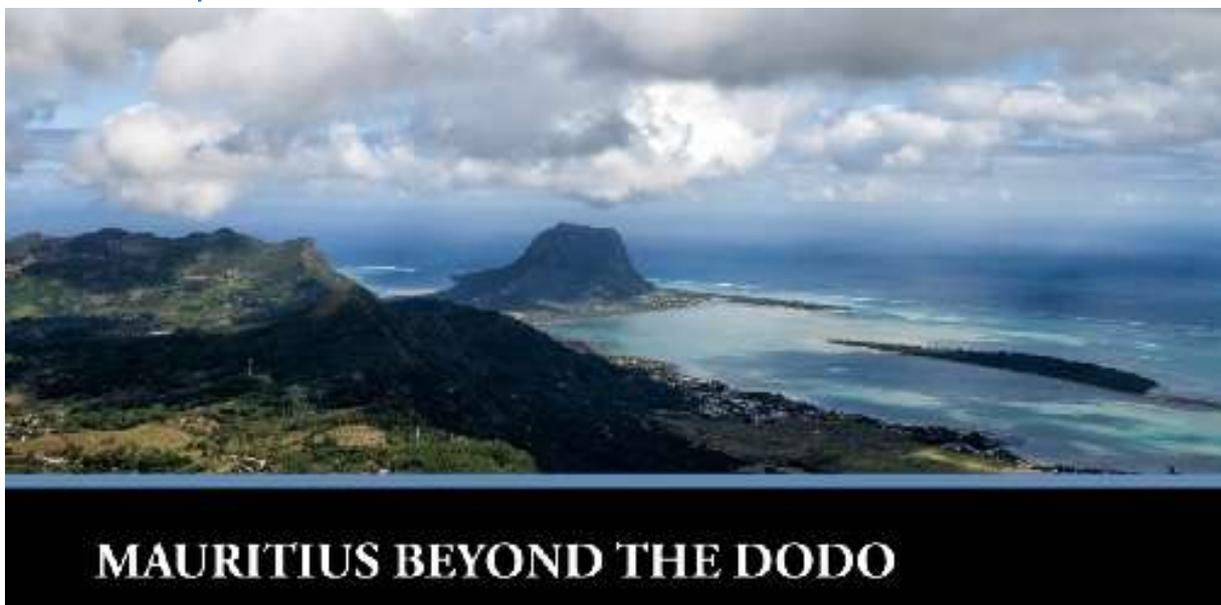
Bats are the only mammals native to the Mascarene Islands. Three species of fruit bat were once widespread over Mauritius, but two went extinct and the population of the surviving species (*Pteropus niger*) decreased considerably due to habitat loss, cyclones and illegal hunting. This bat went extinct on Reunion Island, where it was last recorded in 1790. However it is known that Reunion Island has been recolonized by a handful of individuals over the last decade, whilst a second species (*Pteropus rodricensis*) has survived on Rodrigues Island. Due to lack of major cyclones, the population of the *Pteropus niger* (also known as the Mauritius fruit bat) has increased over the last 20 years, shifting its IUCN status from Endangered to Vulnerable in 2014. The most recent bat surveys done by the National Parks and Conservation Service found that the population size of the Mauritius fruit bat is around 62,000 individuals.

In 2009, a positive step was taken when the Government carried out a sensitization campaign for the protection of farmed fruit and promoted the use of nets to protect fruit from bats and birds, along with a grant scheme to purchase the nets, which was extended into 2017. However, the species faced a serious threat to its existence as the Mauritian Government announced it had culled 30,938 bats in 2015 and 7,380 in 2016 in order to protect the interests of fruit farmers. The Mauritian Wildlife Foundation along with IUCN and BCI provided scientific and management advice to the Government to convince them that the culling could have catastrophic effects on the bat population in Mauritius especially if there was a severe cyclone. The official culling also encouraged illegal hunting which added to the massacre.

## Main Actions

- A bat education programme started with funds from the Rufford Grant. Chester Zoo agreed to advise on Human Wildlife Conflict actions needed and an initial fact finding visit was accomplished.
- A range of discussions and exchanges with IUCN Bat Specialist Group, Bat Conservation International, and several other international organisations, as well as the Government of Mauritius, local groups and people to share information and lobby against a cull
- MWF instrumental in visits of Dr Tammy Mildenstein to advise on more acceptable methods of counting bats and the actual survey that took place in September / October 2016
- Cull implemented by the Ministry of Agro Industry in December 2016, which MWF opposed
- GSM GPS tracking of bats continued
- A study was set up during the fruiting season to assess damage to fruit crops
- MWF proponent of Motion at the IUCN World Congress. 94% of national and international NGOs and 97% of Government members of IUCN adopted Resolution 019, "Protection of wild bats from culling programmes" which "Urges governments to seek non-lethal solutions/mitigation measures to conflicts between humans and bats, as part of a strategy that combines scientific research on bat ecology and ecosystem services, as well as on life-history characteristics that support population models". In the absence of peer-reviewed evidence, it also calls on Governments to "not authorise or sanction culls of wild bat populations". This is now formal IUCN policy adopted at the highest level and supported by the majority of Governments as well as NGOs. It appears that Mauritius was one of the few (two?) countries that abstained.
- MWF commented on the draft revision of the red list status of the Mauritius Fruit Bat. In all scenarios, an up listing to Endangered or Critically Endangered is unavoidable after the two major culls of 2015 and 2016.

## Mauritius Beyond The Dodo



- This Photographic Exhibition on local endemic species was exhibited 5 times during the year being available on request for exposure by organisations.
- The panels are also used for public exhibitions where MWF is participating to illustrate MWF's work.

## Southeast Islets Sensitisation Project

The project begun in May 2017 funded by the EU via the IOC until September 2018 and aims to sensitise leisure boat skippers, fishermen, private boat owners and coastguards in the region on how to help protect the wildlife on the SE islets. The objective is to have a reduction in littering, open fires, trampling and new exotic species introduction hence helping to conserve the endemic/native animals and their habitat.

### Main Actions

- 82 leisure boat skippers trained (target: 60) – 3 workshops, 9 site visits to islets.
- 87 fishermen trained (target: 60) – 4 workshops, 3 site visits to islets.
- 11 National Coast Guards trained (target: 20) – 1 workshop, 1 site visit to islets.
- T-shirts, waterproof conservation guides, “Eco-Aware Skipper” stickers for skippers were designed, produced and distributed. Signage developed for Ile aux Aigrettes. MWF booklet and Ile de la Passe booklet were distributed.
- Fortnightly islet trips conducted to monitor the impact of the project (litter and fire places).

### Other

- Plant donations extended to schools and public institutions
- Support given for the national ecoschools programme
- Interns from institutions accepted for training in ecotourism
- Special occasions like Earth Day, World Biodiversity Day and World Environment Day were celebrated
- A *No Litter* campaign was continued for the Pointe Jerome jetty area
- Training was continued for the structured tour for Ile de la Passe
- A structured tour for Mondrain was worked on

# Training

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## EDGE Fellowship Course

Aurelie Hector was been selected for a two year EDGE fellowship scholarship to support in depth research on the Round Island Boa which began in March 2017.

## DESMAN Course

Martine Brasse attended the course, 'Certificate in Endangered Species Recovery' in Jersey from February to May 2017. MWF paid her airfare, Durrell sponsored her for the course.

## MWF Induction Course

An induction course was held on 2<sup>nd</sup>, 9<sup>th</sup> and 16<sup>th</sup> March for new staff. It was designed for field staff but new office and ecotour staff joined in relevant sessions which were explaining MWF's work and not specialist field skills.

A second induction course was held on 16<sup>th</sup> & 30<sup>th</sup> October 2017 for new staff. A new format was tried out to aim to be able to run the induction more frequently to adapt better to new staff arrivals.

## Bird Re-introduction Symposium

A series of talks were held on 6<sup>th</sup> March from 9am to 12 noon at the MWF office in Vacoas to share bird re-introduction experiences in Mauritius, Madagascar and the Seychelles. The programme was:

- Dr Vikash Tatayah: Welcome and Opening remarks
- Floriot Randrianarimangason and Mahazaka Ratsimalandy, Durrell Wildlife Conservation Trust, Madagascar : Re-introduction of the Madagascar Pochard
- Christelle Ferriere, Passerine Coordinator, MWF: Re-introduction of the Mauritius Fody, M. Olive White-eye, M. Cuckoo-shrike and M. Paradise Flycatcher
- Sion Henshaw, Echo Parakeet Coordinator, MWF: Re-introduction of the Echo Parakeet
- Zairabee Ahamud, Pink Pigeon Coordinator, MWF: Re-introduction of the Pink Pigeon
- Denis Li, Kestrel Coordinator, MWF: Re-introduction of the Mauritius Kestrel
- Martine Goder, Senior Coordinator Islands Restoration: Seabird translocation
- Rachel Bristol, Independent Consultant: Bird Re-introductions in Seychelles (by skype)
- Vikash Tatayah: Talk wrap up and summary

## Human/Wildlife Conflict Workshop

A full day workshop on Human/Wildlife Conflict led by Prof. Brandon P. Anthony from the Central European University, designed to expose participants to a range of issues to consider in conflict mitigation, was held on Wednesday 17<sup>th</sup> May at the MWF Offices, Vacoas. NPCS and Forestry were invited to send participants. MWF staffs who are involved in one way or another with the conflict, including fundraising staff, were invited to attend. 18 MWF staff, including the Rodrigues Manager and Rodrigues Educator, and 2 NPCS staff attended.

## Pg Diploma in Endangered Species Recovery

Following Mr Jamie Copesey's resignation, Mr David Derand was appointed as Managing Director of

Durrell Conservation Training and took up his post in November 2017.

Mr Sion Henshaw, Echo Parakeet Coordinator attended this course full time from April to mid October. MWF is also invited to send around 2 staff per taught module. For 2017, 6 staff benefited from 4 individual modules with 8 places taken up.

### International Visitor Leadership Programme, USA

Martine Goder, Senior Coordinator, Islands Restoration Project was selected by the USA Embassy in Mauritius to visit the USA under the International Visitor Leadership Programme from 11<sup>th</sup> to 29<sup>th</sup> September. This fully-funded U.S. Department of State project examines U.S. efforts to protect species and habitat diversity through environmental laws and protection policies, scientific research, and environmental education.

### Tree Conservation Course

MWF organised a Tree Conservation Course in collaboration with the Botanical Gardens Conservation International and Missouri Botanical Gardens from 7 to 10<sup>th</sup> November 2017. The workshop included both theory and practical courses in tree seed conservation, with a focus on trees that are Critically Endangered with less than 50 individuals, though the techniques can apply to a wide range of trees. Participants came from Mauritius (MWF, NPCS, Forestry Service, Pamplémousses Botanical Garden, Osterlog Garden, private sector (Ebony Forest, Ferney, Bel Ombre)), Rodrigues (MWF, Francois Leguat Tortoise and Cave Reserve), Seychelles, and Reunion.

# Events, Media and Communication

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## Ferney Valley

To celebrate the release of Pink Pigeons to the Ferney Valley an official ceremony was held in June 2017. The guest of honour was the Minister of Agro Industry and Food Security, Honourable Mahen Seeruttun. Representatives of the UNDP GEF Small grants programme who fund this project, CIEL and the Ferney Valley Trust, the Mauritian Wildlife Foundation were present. Following speeches with guests seated on the veranda of the field station, the hatches were opened in the aviaries for a symbolic release of birds that were inside, followed by refreshments at the Lodge.

## Filming

- L'Express published a video focusing on the seabird translocations in February.
- Emission Echappées Belles featured MWF's work in a programme broadcast in April.
- In Rodrigues filming was carried out by Label Bleu Production to be broadcast on French TV under the programme 'Passion Outremer'.
- MWF's work was filmed by the British Broadcasting Corporation for a documentary to mark the 50<sup>th</sup> Anniversary of Independence, supported by the Mauritius Tourism Promotion Authority. This was played in March 2018.
- "WILDLive! Linked with Nat Geo Wild France (National Geographic) filmed on Ile aux Aigrettes and Round Island.
- Porlwi by Nature, held from 29<sup>th</sup> November to 3<sup>rd</sup> December screened two films nightly that had been supported by MWF, "Mystic Mauritius' and 'They call me Pest'.

## Written media

- There has been a focus on Facebook in 2017 with regular posts about MWF's work or related topics.
- MWF staff in Mauritius and Rodrigues is interviewed and MWF asked for information on numerous occasions which has resulted in radio talks, radio interviews, TV shows and many local and international press articles.
- Continue to be published on the Osmose page of L'Express on a weekly basis and the articles are available on our website.
- Two MWF staff (Vikash Tatayah and Ganishta Seeburrin) were interviewed for the 1500th issue of Week-End Scope.

## General

- The brochure « Explorez la nature de l'île Maurice », was sent to MWF by the "Office du Tourisme de l'île Maurice en France" for review. A lot of information was submitted including photographs. This brochure will be distributed to promote Mauritius.

# General

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## 1. Local Committees, Consultations and Workshops

MWF continued to actively participate in various national committees: Native Terrestrial Biodiversity and National Parks Advisory Council, National Invasive Alien Species Committee, Ramsar Committee and in policy dialogues: National Biodiversity Strategy and Action Plan, Protected Area Network (including Expansion Strategy), Forest Code revision. MWF is also represented on the National Eco-School committee and the Duke of Edinburgh Award committee

### Protected Area Network project

This is a consultative workshop for the formulation of good practice guide for native forest restoration in Mauritius. The Protected Area Network Expansion Strategy (PANES) 2017-2026 outlines Biodiversity Stewardship Programme as one of the means to include private lands into the Protected Area Network. In this context, a half day workshop was held on in July 2017 to get stakeholder feedback on a pre-draft Conservation Stewardship template.

### National Biodiversity Strategy and Action Plan

MWF attended meetings and a validation workshop to develop the National Biodiversity Strategy and Action Plan (NBSAP) 2017-2025. This document has been prepared through an iterative process of stakeholder consultations and approval, addressing Mauritius' obligations under Article 6a of the Convention on Biological Diversity (CBD). This NBSAP replaces its previous version (2006 – 2015) and builds upon a review of its predecessor and several preparatory documents, namely a biodiversity mainstreaming assessment for key industries and themes, an ecosystem valuation study for the catchment areas of Mare Longue and Mare-aux-Vacoas and an ecosystem-based adaptation study for a more resilient protected area network. The Mauritian Wildlife Foundation contributed actively to the process.

### Forest Code Revision and Institutional Reform

The Forestry Service has obtained Technical Assistance from the Food and Agriculture Organisation (FAO) for the project, "Support to Forest Code Revision and Institutional Reform in Mauritius". The Mauritian Wildlife Foundation has participated in consultations related to institutional reform of the Forestry Service.

### National Invasive Alien Species Committee and sub-Committee

MWF contributed to discussions and site visits relating to the planned introduction of Invasive Alien Species such as bird, reptiles and mammals and the expansion of (*Arundo donax*) trials and cultivation. MWF has opposed (sometimes unsuccessfully) some introductions.

### National Invasive Alien Species Committee

MWF had opposed the oyster farm in the Mahebourg Bay by providing views to the Environment Impact Assessment report, as well as the NIASC. The project has been given an EIA nevertheless.

### Half Day Workshop: UK – Mauritius Science Cooperation

The Faculty of Ocean Studies, University of Mauritius, organized a half day workshop on Science Cooperation in collaboration with eminent UK scientists from the British Antarctic Survey (BAS), and the Natural Environment Research Council (NERC), on Tuesday 23 May 2017. This event aimed at providing Mauritian stakeholders with an opportunity to learn about UK funding possibilities for developing countries and the cutting-edge work that BAS is undertaking in areas such as climate change, sea level rise, marine spatial planning and disaster risk reduction. The presentations by the UK Scientists were on the NERC's Global Challenges Research Fund (GCRF) and the expertise of the British Antarctic Survey related to climate change, oceans and marine spatial planning.

A presentation was given on the Round Island Petrel tracking using BAS tags and NERC funding. This was very well received. Initial discussions were held with BAS and NERC relating to the development of project proposals in 2018.

### Preparation of Management Plan for Ile de la Passe

Several MWF staff were invited to a meeting organized by the National Heritage Fund for the development of a management plan for Ile de la Passe. MWF, with the support of Geoffrey and Francoise Summers (archaeologists), produced the draft plan several years ago, but this has stayed in abeyance. It is hoped that this plan will now be finalized.

### Inception Workshop – UNCCD Land Degradation Neutrality Target Setting Programme for Mauritius

The United Nations Convention to Combat Desertification (UNCCD) has established the Land Degradation Neutrality Target Setting Programme (LDN-TSP) in its COP 12 meeting held in October 2015, to work towards the concept of Land Degradation Neutrality a reality by 2030, in line with the global Sustainable Development Goals (SDGs) agenda through SDG targets. The Forestry Service under the aegis of the Ministry of Agro Industry & Food Security is the Focal Point for the UNCCD. To implement LDN-TSP the UNCCD's operational arm – The Global Mechanism – is supporting Mauritius in their National Voluntary LDN target setting processes. The main objective of the programme is to enable country Parties to define national baselines and to identify voluntary targets and measures to achieve LDN by 2030. In this context, an Inception Workshop was held on Thursday, 11 May 2017. MWF was present at the meeting and shared information on the soil studies on Round Island, and promoted habitat restoration with natives which helps conserve soil.

### Particularly Sensitive Sea Areas

A Particularly Sensitive Sea Area (PSSA) is an area that needs special protection through action by International Maritime Organisation (IMO) because of its significance for recognized ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities. The Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping in collaboration with the IMO conducted a three-day Sub regional workshop on Particularly Sensitive Sea Areas (PSSAs) from Tuesday 11 to Thursday 13 April 2017. The objective of the meeting was to assist Mauritius, Madagascar, Comoros, Seychelles and Reunion to prepare individual and/or joint proposals to be submitted to IMO for the designation of PSSAs in the West Indian Ocean region together with the adoption of associated protective measures applicable to international shipping. MWF has proposed and supported that St Brandon and northern Mauritius islets be designated PSSAs. MWF was also invited to assist the drafting of national proposals for submission to IMO.

### Intellectual Property Week

A half day Workshop was held at the Rajiv Gandhi Science Centre on 27<sup>th</sup> April 2017 for Academics/Researchers with the purpose of sensitizing researchers of the importance of protecting and commercializing their research. This workshop was attended by Mrs de Chazal. Although this was more weighted towards registering patents for inventions which is not relevant for MWF it was a useful workshop to clarify some guidelines on data ownership which are applied by the University of Mauritius.

### Risk Analysis for Aquatic Animal Movement

The Competent Authority Seafood in collaboration with The Mauritius Oceanography Institute (MOI) and the Shipping Division of the Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping organised a 3 day workshop on Risk Analysis for Aquatic Animal Movement from 15<sup>th</sup> to 17<sup>th</sup> May 2017. MWF attended the first half day only, but shared its concerns over the emergence of aquaculture farms.

## Collaborative Project on Marine Turtle Conservation

MWF attended a few meetings at the Albion Fisheries Research Centre for the "Collaborative Project on Marine Turtle Conservation". The protocol to deal with sick and injured turtles is being revised. MWF requested that the protocol be shared/extended to Rodrigues, Agalega and St Brandon.

## Subcommittee on Animal Welfare

The Mauritius Standards Bureau is in the process of adopting the ISO Technical specification ISO/TS 34700: 2016, *Animal welfare management – General requirements and guidance for organizations in the food supply chain*. A subcommittee has been constituted to review and eventually adopt the ISO document as Mauritian Technical Specification. A Technical Specification applies to terrestrial animals bred or kept for the production of food or feed. MWF was asked to join the subcommittee and participated in two meetings.

## Assises du Tourisme

The Ministry of Tourism held the Assises du Tourisme 2017 with a view to charting a roadmap for the sustainable development of the tourism sector in the short and medium term. In this connection it has been decided to set up Committees on the following themes:

- a) Accessibility;
- b) Visibility;
- c) Attractiveness; and
- d) Sustainable Development

Those Committees have been set up so as to prepare base documents on each theme to enable constructive discussions with stakeholders during the Assises du Tourisme 2017. Under the broad theme of attractiveness, a sub-committee has been set up to reflect upon tourism product development. Given MWF's expertise and experience in the field, it has been designated to form part of the 'tourism product development' sub-committee. MWF has provided views and inputs on base documents and participated in the assises. Further meetings are planned.

### *Preparation Phase for the UNDP/GEF Project 'Mainstreaming Invasive Alien Species (IAS) Prevention, Control and Management'*

The Project Identification Form (PIF) for the above project was approved under the Biodiversity GEF Trust Fund allocation on 28 September 2016 and the Project Preparation Grant (PPG) was approved by the GEF Secretariat to prepare a Full-Size Project Document (FSP) for submission under the GEF-6 STAR. The Request for GEF CEO Endorsement and the UNDP Project Document plus ancillary documentation must therefore be nationally validated and finalized for internal UNDP clearance in November 2017.

In order to reach the stage of UNDP Project Document completion and CEO endorsement, project development includes a preparatory phase, which foresees the collection of information and gathering of useful data for project design, the validation of the indicative outcomes and outputs contained in the PIF, the development of a full Monitoring & Evaluation plan including appropriate indicators and baseline, a participatory plan to involve communities as well as the identification of implementing partners and negotiation pertaining to implementation arrangements and co-financing.

After several discussions and workshops, the FSP was almost finalized towards the end of 2017.

## Mainstreaming Biodiversity into the Management of Coastal Zones in the Republic of Mauritius

The Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping in collaboration with the UNDP CO is implementing the UNDP/GEF Project on *'Mainstreaming Biodiversity into the Management of Coastal Zones in the Republic of Mauritius'* which aims to contribute to integrating

biodiversity and ecosystem management into physical development planning and tourism sector activities to safeguard biodiversity and maintain ecosystem services that sustain human wellbeing. In this context, a 2-day workshop was held in July 2017. MWF participated in this discussion.

### Human Bat conflict Netting Workshop

In August 2017, we organised a 'Netting Workshop' in collaboration with the Ministry of Agro-Industry and Food Security, Chester Zoo (UK) and the IUCN. This workshop was attended by fruit farmers and received technical advice of farmers and researchers from Australia and Thailand. Recommendations have been provided for pruning of trees, netting, equipment and subsidies in a multi-stakeholder workshop held in August 2017. (Recommendations on netting and management of fruit bat damage to orchards in Mauritius see:

<http://www.mauritianwildlife.org/application/templates/default/images/gallery/Mauritius%20Fruit%20B at/Netting%20Workshop%20Report%20Aug%202017%20Recommendations%20VF%20201017.pdf>)

## 2. Overseas Conferences and Workshops

These can be overseas or local. MWF receives a lot of invitations but will select to attend on various criteria which include whether it is fully funded (overseas), the relevance to MWF's work or to influence national policy.

### Critical Ecosystems Partnership Fund meetings in Madagascar

Vikash Tatayah attended both the steering committee and beneficiaries meeting of the CEPF in Madagascar in February 2017. MWF has benefited directly from two projects, one on the development of a Vision for St Brandon (small grant) and the other on bird reintroductions (large grant). We have also benefited indirectly e.g. repatriation of plants by l'Arche aux Plantes (c/o Conservatoire Botanique National de Brest, France), regional capacity building project (in collaboration with Durrell Conservation Academy, Mauritius and Vahatra, Madagascar. We presented the advancement of the two projects we benefited directly from.

### Invaziles Project, Seychelles

Invaziles is the regional invasive alien species programme of the IUCN, which is hosted at the Indian Ocean Commission. Field projects are undertaken in Rodrigues, Madagascar and Seychelles, with policy documents, guidelines, best practices for the whole region and beyond. MWF is a member of the steering committee of the Invaziles, which held its meeting in Seychelles in April 2017. Representatives from the region were able to see project sites in the Seychelles where invasive species were being controlled and see other conservation sites.

### Island Invasive 2017 Conference, Dundee

Vikash Tatayah and Jean-Claude Sevathian attended the third Island Invasives conference in July 2017 at the University of Dundee, Scotland. This gathering of world experts and practitioners in invasive alien species management provided the opportunity to meet and hear about the successes and failures and latest techniques to deal with unwanted species. Over 10% of the conference was attended by ex and current MWF staff and volunteers, and close associates, which demonstrates the global impact of MWF.

### Seabird and Marine mammals Conference Tanzania

Vikash Tatayah attended the workshop on *Identifying Important Areas for Conservation in the Indian Ocean*, which was held in Tanzania from 1-4 November 2017. The workshop aimed: 1) re-evaluate important bird and biodiversity areas in the Indian Ocean; 2) evaluate priority sites for conservation, including approach for incorporating different data (e.g., different type of data, and multi taxa from seabirds to turtles to whales). Dr Tatayah discussed various related research works or plans related

to seabirds, St Brandon, and turtle tracking, as well as discussed with Birdlife the holding of a Business and Biodiversity discussion in Mauritius, and upgrading the status of MWF within Birdlife.

### 3. Visitors and Collaborators

MWF receives visits during the year from overseas collaborators and partners as well as conducting professional visits.

Dr Alexandra Zimmerman and Dr Simon Tollington from North of England Zoological Society (Chester Zoo) and Mr Brian McQuinn: conflict advisor to the International Committee of the Red Cross and member of the IUCN Task Force on Human Wildlife Conflict visited from 13<sup>th</sup> to 17<sup>th</sup> March 2017 to discuss further actions to undertake to understand the issues of this Human / Wildlife conflict in Mauritius. During their visit, they had meetings with several key stakeholders, and interviewed potential local facilitators to assist for a workshop later this year. They also monitored the progress of fruit predation and protection studies that have been set up in the field.

Stéphane Buord: from the Conservatoire Botanique National de Brest (France) and Florence Guillaume: from Klorane Botanical Foundation (funder of the programme) arrived in Mauritius on the 23<sup>rd</sup> March until 1<sup>st</sup> April as a promotional visit for the CEPF funded project for the re-introduction of very rare plants grown at Brest. MWF hosted them on several field visits to show Mme Guillaume the Mauritian Flora en situ including Ile aux Aigrettes.

Dr Claire Raisin: employed as from 1<sup>st</sup> June by North of England Zoological Society (Chester Zoo) was in Mauritius teaching on the PgDip course from 10<sup>th</sup> – 14<sup>th</sup> April. I had a meeting with her to discuss her new role of Field Programmes Coordinator Madagascar and Mascarenes. Her appointment reflects a new approach by Chester Zoo to funding projects where they wish to be more involved.

Dr John Ewen: from the Institute of Zoology, London, was in Mauritius from the 13<sup>th</sup> to 20<sup>th</sup> May 2017 to teach on the PgDip course. MWF held two meetings with him during that time, one to discuss data management and another to discuss a student PhD.

CEPF delegation was in Mauritius from 25<sup>th</sup> to 31<sup>st</sup> July 2017 in connection with the funding to MWF and other Mauritian projects. They held one office meeting with MWF management and had field visits to Ebony Forest and Ferney. They also visited NPCCS. MWF discussed the project submission for a Rodrigues Flora Strategy and Action Plan.

Dr Alexandra Zimmerman, Dr Simon Tollington and Dr Claire Raisin: from North of England Zoological Society (Chester Zoo) were in Mauritius from 13<sup>th</sup> to 19<sup>th</sup> August 2017 to facilitate a 'Bat Netting Workshop'. (ref. Conservation Director's report). Dr Raisin, newly appointed as Field Programmes Coordinator Madagascar and Mascarenes took the opportunity to visit some projects to familiarize her with the various projects which Chester Zoo support.

Dr John Ewen: from the Institute of Zoology, London, was in Mauritius from the 14<sup>th</sup> August to 6<sup>th</sup> September 2017. During that time he met with MWF Management, visited field projects and advised on studies.

Prof David Hedding, University of South Africa (UNISA) and Prof Werner Nel from University of Fort Hare, South Africa from 1<sup>st</sup> to 6<sup>th</sup> October 2017 on the yearly monitoring visit for the Round Island Soil Erosion study.

Dr Claire Raisin: returned to Mauritius to continue to learn about the projects supported by Chester Zoo from 25<sup>th</sup> to 31<sup>st</sup> October. The visit was a mixture of field visits, project planning meetings and discussions with Management about the new approach Chester wish to employ both to participate in and support a selected number of projects but also how they wish to assess progress in these

projects achieving their objectives. She then visited Rodrigues projects from 20<sup>th</sup> to 23<sup>rd</sup> November 2017.

Dr Andrew Greenwood: Consultant International Vet from IZVG and council member from 18<sup>th</sup> to 26<sup>th</sup> October 2017.

Prof. Ken Norris and Dr Malcolm Nicoll: from the Institute of Zoology, London were in Mauritius for their yearly visit from 5<sup>th</sup> to 19<sup>th</sup> November 2017 to discuss projects they are involved in and Dr Nicoll visited Round Island to work with the wardens on tagging seabirds.

Mrs Helen Clarke: ex Prime Minister of New Zealand and ex Administrator of the United Nations Development Programme (UNDP) was in Mauritius to deliver a lecture at a Conference. On Sunday 5<sup>th</sup> November 2017 she visited the Ferney Valley to view the UNDP funded project accompanied by Directors of UNDP, CIEL group and MWF.

Katherine O'Donnell, Seed Conservation Coordinator and Kirsty Shaw, Head of Ecological Restoration and Tree Conservation (based in Kenya) from Botanical Gardens Conservation International were in Mauritius from 5<sup>th</sup> – 11<sup>th</sup> November. They organised along with MWF and facilitated a Seed banking Workshop run from 7<sup>th</sup> to 10<sup>th</sup> November (ref. Conservation Director's report).

Peter Wyse Jackson President, of the Missouri Botanical Gardens was in Mauritius from 7<sup>th</sup> to 10<sup>th</sup> November accompanied by Mr Andrew Wyatt Senior Vice President, Horticulture and Living Collections and two staff from 6<sup>th</sup> to 15<sup>th</sup> November 2017. Visits were made to the Minister of Agro Industry and the President of Mauritius. Discussions were held with MWF and NPCS both separately and together on the joint project supported by a three way MoU to secure the critically endangered plants of Mauritius.

Stéphane Buord: from the Conservatoire Botanique National de Brest (France) arrived in Mauritius on the 28<sup>th</sup> November until 7<sup>th</sup> December with a visit to Rodrigues with Dr Vikash Tatayah from 29<sup>th</sup> November to 1<sup>st</sup> December. The visit was to supervise the repatriation of rare plants which were quarantined at the NPCS nursery at Robinson Road, Curepipe and then would be allocated to different partners for planting in protected forest reserves. The action is under a CEPF project.

## 4. Presentations and Talks

These are held when we have visitors as part of our staff capacity building and our staffs also delivers talks. In 2017 the following were held which were open to all MWF staff and council members:

### Internal Presentations and Talks

- Mr Peter Widman, Director Katala Foundation in Palawan, Phillipines, on 'Flagship species programmes of the Katala Foundation'
- Miss Amber Cripps, Community Sensitisation Consultant and Mr Benny Henry, Sensitisation Assistant, on 'South East Islets sensitization project'
- Prof David Hedding, University of South Africa (UNISA) and Prof Werner Nel from University of Fort Hare, South Africa on 'An investigation of rainfall characteristics, erosive and soil erosion on Round Island, Mauritius'
- The Pg Dip Students presented their projects to MWF staff on the following subjects:
- Running along the wall: trap preference for the invasive Asian musk shrew *Suncus murinus* on Ile aux Aigrettes.
- Feasibility and Risk Assessment for Eradication of Black Rat (*Rattus rattus*) on Nosy Manampao, Madagascar'
- Distribution of skinks on Ile de la Passe and Ile aux Fouquets

- Seabird Translocations for Conservation: Are we doing it right? A case study from Islands in Mauritius
- Use of Supplementary food by endangered Mauritius fody (*title subject to change*)
- Parasite screening in Pink Pigeons
- Mapping Mauritius Cuckoo-Shrike *Lalage typica* territories to inform a translocation project
- Conservation of island raptors: nest-sites characteristics and breeding success in the Mauritius Kestrel *Falco punctatus*
- Adaptive conservation management in Mauritius: consequences of feather plucking in the endangered parakeet *Psittacula eques*
- Applying the theory of planned behaviour to community-based conservation: what are we doing?
- Ecotourism for conservation: does visiting a protected Mauritian island alter environmental attitudes and behavioural intentions?
- Outreach and public engagement in conservation: conserving Mauritian endemic butterflies
- Conservation Contradiction (*title subject to change*)
- Fantastic boas and where to find them: habitat selection and spatial distribution of the endangered Round Island boa *Casarea dussumieri*
- Boat tour operators' perceptions and attitudes towards protected areas: A case study of the Northern offshore islands Nature Reserves in Mauritius
- Human motivation in a team: case study in Dahari NGO
- Never getting off the life raft: conservation reliance on a global scale
- Dr Malcolm Nicoll, Senior Research Fellow, Institute of Zoology, Zoological Society of London on
- The population ecology of the Echo parakeet;
- The decline of the Mauritius Kestrel in the BRGNP;
- Olive white-eyes and Mainland Islands;
- The impacts of extreme weather events on Mauritius avifauna.
- Sara Shopland, Veterinary resident in Zoological Medicine at Bristol Zoological Society on her Masters project at the University of Bristol "Health survey of the captive European pink pigeon population' to use as part of a disease risk assessment prior to reintroduction of birds back to Mauritius".
- Ganishta Poonyth, Conservation Biologist at MWF on her University project "Foraging ecology of the Mauritian Fruit bat: the role of native habitat quality"
- Prof Carl Jones, MWF Scientific Director, Chief Scientist for Durrell on "The training role of MWF, what do we want to achieve?"

## Public lectures

- A public lecture entitled "Extraordinaire Flore Mauricienne" was held on Thursday 30<sup>th</sup> March at L'Institut Français de Maurice. The speakers were Dr Stéphane Buord: from the Conservatoire Botanique National de Brest (France), Dr Laurence Guillaume from Klorane Botanical Foundation, and Dr Tatayah from the Mauritian Wildlife Foundation.
- MWF was invited to present at a Mauritian flora and fauna evening on Tuesday the 21<sup>st</sup> of November at Ecole du Centre, alongside Dr Christine Griffiths from the Ebony Forest, Assoc. Professor Vincent Florens from the University of Mauritius, Dr Claudia Baider from the Mauritius Herbarium. Dr Vikash Tatayah from the Mauritian Wildlife Foundation spoke about the project in Rodrigues and St Brandon. A number of students also presented their environmental projects and ideas on the conservation of Mauritian plants and animals. The MWF photo exhibition was also set up at the school for over a week.

## 5. Island Restoration Research

There are a number of research initiatives being conducted in collaboration with overseas partners.

- In December 2016, MWF's Round Island Warden, Aurelie Hector attended ZSL's EDGE Fellowship selection and training course in Madagascar. With Dr Nik Cole's support Aurelie resubmitted the final proposal in January for work on Round Island boas, which was successful.
- Two Cardiff University BSc students completed the genetic work on the SE island Bojer's skink populations to help guide further management of these systems.
- Annette Stephani (University of Zurich MSc on tortoise movement and mapping of Round Island) completed the drone mapping flights over Round Island and submitted her thesis on tortoise dispersal behaviour. Annette created a digital elevation model of Round Island with an accuracy of 20cm permitting innovative research and modelling of systems on the island.
- In collaboration with Swansea University, two MRES students, Alice Connell (tracking tortoise movement, behaviour and energetic) and Adam Fell (tracking Red-tailed Tropicbird provisioning rates) arrived in Mauritius in February for two months on Round Island.
- A proposal to Mohammed Bin Zayd was submitted through Durrell to enhance our understanding of plant species distribution and survival on Round Island, through which permanent study plots will be established. The proposal was accepted and a staff recruited to lead the project from October.
- Kevin Ruhomaun (Deputy Director, NPCS) submitted his research project on the survival and recruitment of Red-tailed Tropicbirds on Round Island and successfully completed his MSc.
- Rose Moorhouse-Gann (Cardiff University) completed her PhD thesis on tortoise herbivory.
- Dr Nik Cole has been developing the following projects, funding applications and student research: An application to continue research on tortoise movement behaviour was submitted to the National Geographic Society (Swansea University). Funding for a PhD on optimal survey design and modelling to track species abundance trends has been approved and will start in 2018 with Rachel McCrae (University of Kent). PhD student Thalassa McMurdo Hamilton has started research on the health and survival of translocated seabird chicks with John Ewen (Institute of Zoology). Developing research on the impact of habitat restoration on the Round Island Gunther's gecko population and reproductive biology with MRES student Markus Roesch, co-supervised with Dennis Hansen (University of Zurich).