



SIF presents eradication projects at Island Invasives Conference

SIF's Director of Research and Conservation, Dr Nancy Bunbury, attended the Island Invasives Conference 2017 which was held in Dundee, Scotland from 10th to 14th July. The conference was the third in a series of international conferences focusing on invasive alien species on islands, the previous iterations being held in 2001 and 2010. As is the case for many island ecosystems, invasive alien species pose one of the biggest threats to the ecological integrity of the Vallée de Mai and Aldabra Atoll, and the conference was therefore highly relevant for SIF. It was a fantastic forum for island conservation practitioners from across the world to get together and share experiences and knowledge on invasive species management and island restoration.



Dr Nancy Bunbury delivering her presentation © Oliver Prince

During the conference Nancy gave a presentation on the lessons learned from SIF's work on invasive bird eradications. She presented an overview of the five eradications of three bird species from three islands; the

successful eradications of the red-whiskered bulbul and Madagascar fody on Aldabra and Assumption, and the ongoing eradication of the ring-necked parakeet from Mahé. The presentation covered the motivation, methods and challenges encountered during the projects, as well as results and recommendations for other practitioners considering invasive bird eradications from islands. The presentation received a lot of positive feedback and stimulated much discussion on similar eradication projects worldwide and on possible collaborations in future.



Eradication presentation © Oliver Prince

The conference was a great success, with about 275 participants and 177 talks. A proceedings of the conference is in preparation, to which SIF is contributing a manuscript addressing the subject of the presentation in more detail. Some of the most significant conservation advances and successful partnerships come out of conferences like this and SIF is looking forward working with other world experts and using the ideas showcased for future invasive alien species work.

Lone ring-necked parakeet sighted several times at Morne Blanc



Ring-necked parakeet at Sans Soucis © SIF

The search for all remaining ring-necked parakeets is still ongoing, and a single bird has now been seen by SIF on several occasions in the Morne Blanc area. The focus of the team moving forward is to narrow down on the bird's flight lines, feeding and roosting sites and to confirm whether it is a lone bird or if there are more. Once we have a better understanding of its behaviour, a hunter will be recruited to target the remaining bird or birds, taking us one step closer to the successful eradication of this invasive species in Seychelles.

Bounty awards of **RS 200 for a parakeet sighting** which is confirmed by the eradication team, and **RS 2000 for a confirmed sighting which then leads to a cull by the team**, have been in place for much of this year. Due to the difficulty sighting any remaining birds, from the 1st September the bounty will be increased to **RS 500 for a confirmed parakeet sighting**, and **RS 5000 for a confirmed sighting which then leads to a cull by the team**. If you have any information on recent sightings of these birds please contact the team as soon as possible on 2523623. Any remaining birds are likely to be very wary and cautious so please do not attempt to catch or approach them, just take note of what the bird is doing and the date, time and place, and then call SIF!



Team members conducting observations © SIF



Inva'Ziles project to control introduced tenrecs in the Vallée de Mai

The tenrec (*Tenrec ecaudatus*), locally known as 'tang', was introduced to Seychelles from Madagascar, probably as a food item. The small mammal is an important food source for the people of Madagascar and is consumed in Reunion and Mauritius, but not in Seychelles. Tenrecs are extremely common on Mahé and Praslin and although their impacts on native species are unknown, it is generally assumed that due to predation they affect endemic amphibian, reptile and invertebrate fauna.

One component of the IUCN-funded Inva'Ziles project, which is starting in the Vallée de Mai, will be to control introduced tenrecs in the palm forest. The team will investigate various ways of catching tenrecs and will collect the first baseline set of data on the species in Seychelles, including information on population dynamics, size and impacts on native fauna. SIF will be collaborating with experts elsewhere in the



Tenrec in the Vallée de Mai © SIF

region, where tenrecs are already targeted (e.g. in Mauritius tenrecs are caught opportunistically and in targeted efforts). Routine monitoring of reptiles and amphibians will also be set up as part of the project to monitor before and after impacts of tenrec control.

Routine control of tenrecs in the Vallée de Mai is a new initiative for the country, and as such this component of the Inva'Ziles project is likely to identify novel invasive species management techniques within the Seychelles and further afield.

Presentations at tourism establishments share Vallée de Mai research



Invasive alien species presentation © SIF

In an effort to increase scientific knowledge among Praslinois and tourists about species in the Vallée de Mai, as well as increase

understanding of the work being done in the forest by SIF, the research team has begun giving presentations at hotels on Praslin. The first establishment to receive the presentation was the Oasis Hotel.



Hotel staff at the presentation © SIF

The presentation included general information on the Vallée de Mai and Aldabra Atoll and on the services being provided at the Vallée de Mai visitor's centre. Different research team members also presented basic scientific information related to the various research monitoring programmes undertaken in the Vallée de Mai, including the Seychelles black parrot, coco de mer growth, herpetofauna (reptiles and amphibians) and invasive species. Following the presentation, staff responded to several questions from the audience about the species they were most interested in. Popular topics for enquiry were the life cycle of coco de mer palms, the Seychelles black parrot, snakes occurring on Praslin, the famous white black parrot and the invasive ring-necked parakeet.

In future SIF intends to give this presentation in more hotels on Praslin, as well as any other interested organisations. Doing so will allow the research team to share information on the conservation work that SIF has undertaken, and its importance in the safe guarding and management of the two world heritage sites in Seychelles, Aldabra Atoll and the Vallée de Mai. If there are any other establishments on Praslin

that would be interested in having presentations for their staff or guests please contact Maria Brioche, the SIF education and outreach programme officer, on 2562836.

Seychelles black parrot takes flight in Seychelles schools

SIF runs an active environmental education programme, with activities taking place on Mahé, Praslin, La Digue and even Aldabra every year. This school term, as part of continued efforts to educate school children on the various species found in the Vallée de Mai, senior ranger, Terance Payet, and education and outreach programme officer, Maria Brioche, gave several presentations on the Seychelles black parrot in the schools on Mahé, Praslin and La Digue. The last presentations were held on Thursday 20th July at La Digue and Baie Ste Anne Primary schools.



Terance delivering the presentation © SIF

The presentation includes information on the ecology, breeding and lifespan of black parrots. Terance and Maria also explain the work done by SIF to monitor and protect the birds and the environment in which they thrive. A video of the white black parrot is frequently a highlight of the presentation! The SIF team love sharing our passion for the species and ecosystems of Seychelles UNESCO World Heritage sites with equally passionate youngsters, and look forward to many more school presentations in future.



Seychelles black parrot © SIF

These presentations were conducted partly to give pupils adequate and accurate information about the black parrot so they could be well equipped to take part in the poem and song competition that SIF launched in primary and secondary schools earlier this year. The black parrot was selected as the topic for the competition because it is Seychelles' national bird, and a flagship species of the Vallée de Mai. The competition will be taking place in September and we wish all participating students the best of luck!



aldabra atoll

In-depth study on Aldabra frigatebird breeding cycle to start



Males in breeding plumage © April Burt

Aldabra's breeding frigatebirds are about to be the subject of an in-depth study by SIF research staff. The Aldabra research team will follow each of the four frigatebird colonies for two years through the various stages of their breeding cycles. Aldabra plays a very important role as a breeding ground for greater and lesser frigatebirds – it supports the largest breeding population of frigatebirds in the Indian Ocean and possibly the world! SIF has conducted a census of the breeding population once a year since 2011 and estimates that between

6,000 and 11,000 birds attempt to breed each year (numbers fluctuate due to factors such as food availability and irregular breeding). However, the census misses birds that have already finished breeding or whose breeding attempt failed or that are hidden by vegetation and these estimates are therefore the *minimum* breeding population. The new in-depth study will increase current knowledge of frigatebird breeding cycles, which in turn will assist SIF in producing a more accurate estimate of the breeding population.



Busy frigatebird colony © April Burt

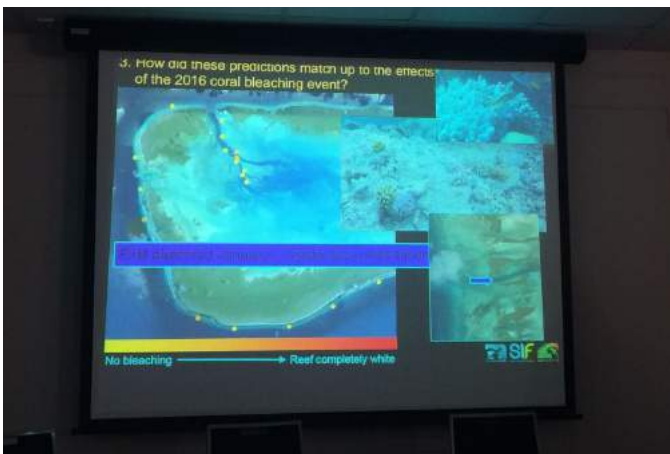
Over the next two years we will learn how breeding stages differ between greater and lesser frigatebirds and also how they have changed since the last detailed study that was carried out 40 years ago. We will also be able to get a picture of how the two species are distributed across the atoll. This information will help us to manage activities around breeding colonies in order to avoid times when breeding birds are most sensitive to disturbance. This is important because Aldabra's frigatebirds are very quick to take flight when people or boats come too close, sometimes leaving their nest exposed to be plundered by other adults without a nest of their own.

Research staff are excited to begin this project and learn more about their most common resident seabird. This is also the perfect time of year to begin monitoring as male birds are busy trying to attract a mate. With their red

'gular sacs' inflated like balloons and their wings outstretched, they put on an eye-catching display of shaking and calling to females with their distinctive sound.

Aldabra marine monitoring results presented at Australian Coral Reef Society Conference.

Recent efforts at re-establishing the marine monitoring programme focussing on Aldabra's coral reefs are culminating in some interesting scientific discussions. A study that uses the 2015 monitoring data and 2016 coral bleaching data to generate resilience assessments of the atoll's coral reefs was presented at the 90th Australian Coral Reef Society Conference held in Townsville, Australia in July.



Presentation © Tessa Hempson

The study has found that at the atoll-level, coral reefs appear to have strong resilience, meaning that SIF can be quite confident that most of the reefs should be able to recover and survive in the face of any disturbances that might affect them. Indeed, the 2016 coral bleaching event was such a disturbance and enabled us to see how well the predictions matched reality. Based only on preliminary data, it seems that most corals on the three 'best' reefs around the atoll were not succumbing to the intense bleaching

they were subjected to, and seemed to be on the road to recovery. SIF's efforts at enforcing Aldabra's protective status and managing the conservation of the precious ecosystem are paying off, enabling the reefs to have the best possible chance to survive in the face of global climate changes.



Panel discussion © Tessa Hempson

The presentation was given during a session on monitoring, which included a talk focused on updates to the United States National Oceanic and Atmospheric Administration's global monitoring and predictive tools that were invaluable to SIF's response to the 2016 coral bleaching event. The ensuing discussion revolved around the importance of the predictive models and the empirical data (i.e. observed and collected from real sites) that are constantly required to update and refine the models—which SIF's marine monitoring programme has also been able to contribute to.

Humpback whales arrive at Aldabra!

During July the annual humpback whale migration arrived at Aldabra and the staff couldn't be more excited. On a recent scuba dive the team could hear the calls of humpback whales vibrating through the water. Shortly after surfacing they encountered a female and a juvenile humpback, followed by a likely escorting male – a magical experience! Whenever these



Humpback whale adult and juvenile © SIF

whales are encountered, staff record the sighting for monitoring purposes, noting the location, number of whales, life stage and behaviours observed. So far there have been 47 sightings since the beginning of July, sometimes with groups of up to four humpbacks per sighting.

How did the humpback whales reach Aldabra Atoll and why? Using the seafloor as a map, the humpbacks have circumnavigated along the east coast of Africa, migrating from summer foraging grounds in the Southern Ocean to spend winter in the South West Indian Ocean. Reaching Aldabra meant crossing fishing grounds and noisy shipping lanes while avoiding plastic entanglement and predators. Some travelled alone, others in small groups, drawn to warm tropical sea temperatures, favourable for finding a mate and giving birth. Aldabra's Marine Protected Area is a playground for new-born calves, learning from their mothers and becoming accustomed to their underwater world.

Humpback whales are regularly spotted cruising up and down the western side of Aldabra but have also been sighted roaming the reefs on the south and north coasts of the atoll. Staff observe the whales breaching and slapping their pectoral and tail fins against the ocean's surface. These behaviours are thought to be used for communicating with nearby whales, displaying physical abilities for courtship and dominance, or simply as a form of play.

The team often spot humpback whales when they surface to breathe, called 'spouting', and in preparation for a dive the whales humped back becomes pronounced showing their dorsal fin, a key identification feature. When the humpbacks dive from the surface, patterns are exposed on the underside of the tail flukes. These markings are a personal identity and when photographed and resighted provide insight into life histories and movements of individuals and whale populations - an important tool for the conservation of a once exploited and endangered species.



Humpback whales © SIF

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