



Earth Day

Every year we celebrate Earth Day on 22 April to demonstrate our support for environmental protection. This year we ran activities with Seychelles National Park Authority and Global Vision International (GVI) to remove invasive plant species near the GVI base on Curieuse Island. Twenty participants from Seychelles Public Transport Corporation (SPTC), National Youth Service 1983 and SIF teamed up for this worthwhile activity.



The group at Curieuse island © SIF

Before getting started, the GVI programme officer, Alan Grant, showed the group the different types of plants growing on Curieuse, stressing the importance of ensuring they remove the right plants! He also explained various techniques for removing them.



Clearing invasive plants at Curieuse island © SIF

The participants then dispersed into smaller groups and spread into the target areas around the GVI base to remove the invasive plants. After only an hour's work, the group had made a significant impact on the invasive plants in the area. Well done to everyone involved!

Vallée de Mai staff

visit Aldabra

Two of our Vallée de Mai staff recently enjoyed a once in a lifetime opportunity to visit Aldabra. Terance Payet, a senior ranger and Gerry Rose, a field worker got the chance to experience living and working on Aldabra for two weeks as to reward their long service with SIF.

Terance joined the research team and Gerry assisted the logistics team with maintenance work on the island. Terance learnt how to monitor turtle emergences and tropicbird nests, count frigatebirds on nests and sample fish. Gerry helped with the construction of Aldabra's

SIF Vacancies

We have a vacancy at the head office on Mahé which needs to be filled urgently. We are actively seeking Seychellois and international applicants for this position. Details can be found on our website at <http://www.sif.sc/jobs> or contact HR on 432 17 35 if you are interested in the following position:

Mahé:

- Science and Projects Coordinator



Terance exploring Aldabra © SIF

new biosecurity building and other maintenance work at the research station. They both had the opportunity to visit one of the most remote camp sites of the atoll at Cinq Cases and were able to explore another part of Aldabra away from the comfort of the research station.

Terance said, “Our time on Aldabra was awesome and unforgettable, despite being challenging at times. SIF made an excellent decision to take us on this trip and we hope other staff get this opportunity in future”. Terance and Gerry were awarded the trip as part of a long service recognition provided by SIF, having both worked at the Vallée de Mai for eight years. Terance and Gerry would like to thank everyone who made their trip a success, especially the Aldabra team, who made them feel very welcome.



Gerry exploring Aldabra © SIF



Hidden surprises while surveying

The month of April heralded the end of reptile and amphibian (herpetofauna) surveying fieldwork. Louise, our Herpetofauna Officer, and the Vallée de Mai research team surveyed the Vallée de Mai, Fond Peper, and Fond Ferdinand to record the animals along fixed pathways (transects). A total of 100 transects were surveyed at least twice of which 52 were in the Vallée de Mai.

The team covered almost 5 km of transects and recorded a total of 425 animals. Six species were detected, including five endemic gecko species and the endemic tree frog. The most common gecko observed was the dwarf bronze gecko *Ailuronyx tachyscopaeus*. The data should be

sufficient for Louise to derive the first population estimate for this species in the palm forest.



Tiger chameleon © Robin Duborget

One exciting additional find for the team was spotting a tiger chameleon! This tiny chameleon, usually about the length of a forefinger, was spotted on one of the ropes used to mark out the transect. The species is known for its delicate features and the black markings make it look like a work of art! Louise is now analysing the data to get an idea of population abundance and density for some of the herpetofauna that call the Vallée de Mai home.

Coco de mer poaching on the decline

One of the greatest threats to the Vallée de Mai is the poaching of coco de mer nuts. This illegal act has been on the decline over the last few years, but the threat remains and poachers keep finding new ways of getting hold of coco de mer nuts.

The nut and the kernel inside have a high retail value and, despite legal protection under Seychelles' law and international regulations, poaching still jeopardises the future of this iconic species and all that depend on it.

Recently a tourist visiting the Vallée de Mai reserve was caught trying to leave the site with a freshly peeled nut poached from the forest floor. Thankfully they were stopped before

leaving and the nut was recovered. This was an unusual occurrence and highlights that the threat is not only locally-based.

Over the last year, we have put procedures in place to improve and maintain high levels of



Coco de mer nuts © SIF

security in the Vallée de Mai, such as increased patrols. As a result, illegal poaching of coco de mer nuts was lower in 2018 than in previous years. The decline in poaching has been observed since 2014, resulting in more nuts remaining in the Vallée de Mai to grow and contribute to the long-term health of the forest.



Coco de mer trees in the Vallée de Mai © SIF

While it's reassuring to see the sustained decrease in poaching over time, it's a concern that poaching incidents like these persist. With continued monitoring and surveillance, and ongoing anti-poaching awareness activities,

we hope that future poaching attempts will be prevented and the coco de mer will be allowed to thrive.

Celebrating World Heritage Day

This year World Heritage Day on 18h April was celebrated under the theme “Rural Landscapes”. Seychelles Heritage Foundation, Seychelles Islands Foundation and the Friends of Vallée de Mai spent the day cleaning two national cultural heritage sites on Praslin.



Cleaning the World Heritage sites © SIF

The team focused on two cultural sites at Anse la Blague. The sites hold an old oven that is dated back to the 17th century and a distillery that was used back in the days of the cinnamon plantation. The oil extracted for the cinnamon was an important source of revenue for Seychelles at the time. The cleaning team worked hard to remove invasive weeds which had grown in the compound of the two sites.

The children were rightly proud of their contribution to preserving these special places and ensuring their existence for many more years to come. Well done and thank you!



The team after cleaning © SIF



Coral reef recovery at Aldabra

Coral reefs are fascinating and complex ecosystems which provide food and shelter to a multitude of life forms. They also protect our shorelines from wave action and erosion.

The three mass coral bleaching events have dramatically impacted coral reefs worldwide. Global warming means there will be ever shorter time frames between such events, and our reefs will have less and less time to recover.

Former SIF volunteer and current PhD student Anna Koester has recently finished her second field season on Aldabra where she collected



Terracotta tile on coral reef at Aldabra © SIF

data for her PhD, 'Patterns and drivers of reef resilience at Aldabra Atoll'. The collaborative project between SIF and the University of Bremen in Germany examines the susceptibility of Aldabra's reefs to the last bleaching event and their subsequent recovery.



Anna Koester with terracotta tiles © Anna Koester

Coral cover at Aldabra reduced by around 50% after the most recent 2016 bleaching event, but inside the lagoon corals seem to have fared better. The masses of water that enter and leave the lagoon at high and low tide create a variable environment for corals to live in. Water

temperatures here can change by as much as 7°C within a single day! Lagoon corals are therefore adapted to extreme temperature changes and can better withstand the abnormally high temperatures they experienced during the bleaching.

We have been following the recovery of Aldabra's reefs through the Aldabra Reef Monitoring Programme, and can already see positive signs three years after the bleaching event. The juvenile coral density is almost the same as before the bleaching and inside the lagoon, coral cover is back to about 70% of pre-bleaching amount. Other reefs around the outer rim of the atoll also show an increase in cover.

Alongside the reef monitoring, Anna and the SIF Aldabra team have been studying coral reproduction by leaving terracotta tiles on the reefs. Two months later they count the number of little corals that have settled as larvae on the underside of the tiles. The last tiles will be taken out this August, but they have already encountered high numbers of up to 120 baby corals per tile!



Terracotta tiles with corals © Anna Koester

There is still much work to do to better understand the recovery of Aldabra's reefs, and we're excited about what we will discover.

For now this means full-time data analysis and write-up for Anna!

Aldabra Clean-Up follow-up activities (what happened to all the trash?)

April was another extremely busy month for the Aldabra Clean-Up Project. The team continued to raise awareness of plastic pollution through national television, radio and newspaper interviews, and talked about their experience of volunteering on Aldabra and overcoming its various challenges.



Collecting marine waste from Aldabra © SIF

We also started sorting and cataloguing immense amount of footage from the expedition. This will be used to create documentaries for national, regional and international audiences. In fact some of it has already been used in Sky News's '50,000 flip-flops in paradise' (https://www.youtube.com/watch?v=G4A_yqf8hDs) programme that aired over Easter.

Analysis of the plastic waste collected from Aldabra is in progress. While there are already some indicative results, co-project lead April Burt will be conducting more in-depth study as part of her PhD, which will yield results in the coming months.

There has been a shift in attention towards the project's final and perhaps most ambitious objective of reprocessing the collected waste. The final weigh-in confirmed the plastic waste at 25.75 metric tonnes. That's as heavy as a humpback whale! Considering plastic's lightness

and Aldabra's terrain and location, this is a truly incredible effort.

We owe a big thanks to the Government agency, Landscape and Waste Management, who have shown an unwavering commitment to weighing and storing our marine debris mountain. Several organisations and individuals have not only expressed interest in helping to reprocess the collected plastic, but have already started to take some! Anse Etoile and Baie St Anne schools took over 1000 pairs of flip flops. Anse Etoile school plans to use them to make a welcome sign and create a shade. The Seychelles National Parks Authority also took over 75 buoys that will be used for demarcation and other conservation work in the marine parks.



Sky News documentary "50,000 flip flops in paradise" which aired over Easter © Sky News

We plan to organise a further sort-out and take home day in the coming months and provide opportunities for more interested organisations, businesses, entrepreneurs and creatives to help our project. We hope that everyone can be encouraged to reuse waste and invest in a circular economy. Please do reach out to research@sif.sc or call +2482631167 for more information.

Fish sampling training on Aldabra by the Seychelles Fishing Authority

Aldabra's marine resources have been strictly protected and conserved since the early 1980s and its fish community spared from negative human impacts such as overfishing. Unsurprisingly then, Aldabra has among the highest fish biomass in the Seychelles.

In 2016, SIF teamed up with the Seychelles Fishing Authority to research the effect of human fishing pressures and assess how fish populations on the Mahé Plateau and the Outer Islands are linked, to compare the differing levels of human impact. This research involved fish sampling from Aldabra, an area of minimal human impact, and around Mahé, where human impacts on fish resources are substantial.



Staff taking part in fish sampling training
© Jessica Moumou

Staff from the Seychelles Fishing Authority joined the Aldabra staff on the atoll in early April for fish sampling training, which started with a fishing trip on board the SFA research vessel L'Amitié. The regulations for fishing only in the designated Aldabra food security zones were followed, which includes fishing at depths less

at depths less than 50m and live release of any restricted species caught, such as potato groupers. The team managed to catch approximately 40 fish for sampling, including white-blotched grouper, two-spot red snapper and green jobfish.

The sampling training took place at the research station the next day, and all staff were trained how to collect and store biological samples such as liver, muscle, gonads, fin clips and otoliths (ear bones). These samples are now being analyzed by the Seychelles Fishing Authority and the results are expected to provide valuable information to guide sustainable fishing practices in the Seychelles.



Staff taking part in fish sampling training
© Jessica Moumou

The SIF Newsletter can be downloaded at www.sif.sc/downloads, or subscribe to the mailing list at www.sif.sc

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