Record-breaking month for dugong sightings!

During July and August the Aldabra team were excited and surprised by nine separate dugong sightings! These have been the only sightings of dugong so far this year and is already the highest number of opportunistic sightings recorded annually in the history of the Aldabra research station (more dugongs were seen in 2013 when a dedicated aerial survey was conducted), and 2016 is not over yet. The location and size of the dugongs encountered, along with photographic evidence, suggest that of the nine encounters, there are at least three individuals.

In the Seychelles archipelago dugongs are now only known from Aldabra Atoll. Historically there were large numbers of dugongs in Seychelles but persecution by early settlers and traders to the islands led to their local extinction around all islands, except Aldabra. Even at Aldabra the population steeply declined and there were many years during which dugongs were not recorded. It is unconfirmed but there is a high possibility that dugongs returned to Aldabra less than 20 years ago. Dugong populations worldwide are declining and the species is currently listed as Vulnerable to extinction on the IUCN Red List, due to population decreases and habitat loss, a trend that is particularly accelerated in the Western Indian Ocean (WIO).

Graph showing number of dugong sightings per year at Aldabra © SIF

There are indications (i.e. increased frequency of sightings) that Aldabra’s dugong population is increasing; furthermore, several observations of female dugongs with juveniles in Aldabra’s lagoon suggest that the site plays an important regional role as a dugong breeding/nursery area. The distribution and status of the dugong population at Aldabra remains little-known however, despite previous attempts at aerial surveys. Aldabra’s well protected seagrass beds provide a critical foraging ground for dugongs, as well as food, shelter and nursery grounds for many species of fish, invertebrates and other migratory species.

There are extensive gaps in the quantitative knowledge of dugong population status, distribution and behavioural characteristics at Aldabra. Research into these aspects will help to fill these knowledge gaps and determine the most appropriate management strategies for their protection at a national and regional level. SIF are hoping to secure funding to conduct research on this species to unravel some of the mysteries of the Aldabra population, including whether the population is indeed increasing and determining whether the Aldabra dugongs are resident or migratory.

SIF staff capacity building with Eden Project, UK

Two SIF staff members from the Vallée de Mai joined the Eden Project in the UK for a short but very valuable work placement in August. The aim of this visit was to allow for exchange of ideas and practices with the hugely successful Eden Project to improve the visitor experience and education programme at the Vallée de Mai.

The Eden Project, in Cornwall, England, is one of the most popular visitor attractions in the UK. Eden has an outside botanical garden which is home to thousands of plants native to the UK, however the main visitor attractions are the two large biomes that are filled with various plants from different climates and environments. The largest biome houses a rainforest environment and the second biome recreates the Mediterranean environment.

The holiday camp programme at the Vallée de Mai

Through its holiday camp programme SIF has once again ensured that schoolchildren on Praslin are not left behind when it comes to learning about the natural environment. The environmental education programme at the Vallée de Mai teaches the children on Praslin about the local flora and fauna and examples used from Seychelles’ two UNESCO World Heritage Sites. This programme allows the children to be more connected to the natural world around them. This August 24 children from Praslin attended the programme. The holiday camp students exploring the Vallée de Mai forest for educational purposes.

SIF Education and Outreach Programme Supervisor Maria Briache with a group of students at the Eden Project © SIF

One of the core principles of the Eden Project is education and they have a well developed and structured programme carried out by the education team at the site. Many schools groups visit Eden every day and the education team carry out interactive workshops to allow the students to discover and connect with the natural environment around them. SIF Education and Outreach Programme Officer, Maria Briache, spent four days at Eden working with this team to experience how they implement their education programme. Maria worked alongside the education team conducting their sessions which taught her new ideas and skills which will help to strengthen the education programme at the Vallée de Mai. Maria said of her experience at Eden, “This has helped me improve how I approach and deliver environmental education sessions, I have gained tips on how to deal with difficult learners and have a better connection with the children under my care. I have also gained new ideas to develop a better community programme for the Vallée de Mai which will help connect the local community to this site.”

The group of students from this August holiday camp programme © SIF

The group of students from this August holiday camp programme with the children under my care.

A variety of interesting activities were organized during the holiday programme at the Vallée de Mai. They took a guided tour of the Vallée de Mai forest on the first day of the programme to learn about the local flora and plant species in the Vallée de Mai. Then as birds are one of the most admired species in the Vallée de Mai, a presentation was given on them to increase the pupil’s knowledge of them. The children were quick to learn the birds’ names and enjoyed identifying them when they went birdwatching later that day. After experiencing the Vallée de Mai forest first-hand the students took this learning further during an interactive workshop and a craft activity where they had to build a mini forest ecosystem model. This activity helped them to understand the value of all the organisms in the forest environment.

Officer, Vallée de Mai. Maria said of her time there, “I have also gained new ideas to develop a better community programme for the Vallée de Mai which will help connect the local community to this site.”

The holiday camp students exploring the Vallée de Mai forest for educational purposes.
My experience on Aldabra
by Ella Nancy

I am currently working with SIF as a research ranger at Aldabra Atoll. I arrived at Aldabra at the start of May and it all felt like a dream in the beginning. Aldabra was that one destination in Seychelles I always wanted to visit and experience but I never thought that I would get this opportunity. From the first day I arrived here I started to notice things in nature that one would never see elsewhere.

Life on Aldabra is simple, but at the same time adventurous and exciting. The size alone of this place is impressive and every part of Aldabra I have been to has its own unique features and its own unique beauty. Even though my job is physically demanding I am always keen to go out into the field. When I am working in the field I have a better chance of spotting something fascinating. There is a constant stream of entertainment provided by the wildlife here! As it is the southeast monsoon season it was the ideal time for me to come here as I have the opportunity to learn as much as I can before it gets busier in the northwest season. As a team we also take this time to explore and enjoy Aldabra. We often organise snorkelling and diving trips at weekends, and recently I was lucky enough to see a dugong!

SIF presents at international symposium on sustainable oceans

SIF CEO, Dr Fleischer-Dogley, recently attended the International Symposium on Capacity Building for Sustainable Oceans hosted by the Nippon Foundation and the Government of Japan at the Capitol Hotel in Tokyo, Japan. This forum, organized in collaboration with The Nature Conservancy, explored innovative practices and pragmatic approaches, from communities around the world, to improve the health of the world’s oceans and coasts. They profiled practical examples of successful programmes at the community level, as well as cross-boundary networks to identify what works, what doesn’t, and where there are opportunities to improve on how we care for the ocean. Specifically, the forum explored practices that are particularly effective at building capacity in relation to issues such as ocean education, fisheries, marine and coastal planning, climate change adaptation, and multi-stakeholder networks. Dr Fleischer-Dogley received very positive feedback on her presentation on the Seychelles and SIF’s experience of the national Marine Spatial Planning Initiative led by The Nature Conservancy. This initiative was presented as an excellent example of a successful programme that will protect and preserve ocean health.

The surprising history of Wright’s and Seychelles’ skinks

SIF is very pleased to present newsletter articles by external researchers who have worked on the biology, ecology and conservation of Seychelles biodiversity. The following article is contributed by Dr. Ann Boucault, a veterinarian and

Research staff start further education at UniSey

Two valued research team members at the Vallée de Mai, Mariette Dine and Brian Souyana, left SIF this month to start Environmental Science courses at the University of Seychelles. Mariette has been working with SIF at the Vallée de Mai Research Assistant since 2014. She had previously worked as an Environmental Office Assistant on North Island and was eager to expand her knowledge and develop her passion for the environment even further. She has played an import role in managing the coco de mer regeneration scheme. She is truly proud to have been part of the SIF Vallée de Mai family and that she has gained the necessary skills and knowledge forward in her career. A big thank you to all of my colleagues, Mariette, sure you miss you all, and to SIF for all their support and guidance.

New volunteer assisting with Vallée research programme

Brian began working with SIF as a Trainee Field Assistant during a work attachment placement in 2013. He returned to work full-time at the Vallée de Mai in November and has been a crucial part of several research projects, including the black parrot monitoring and the recent giant bronze monitor monitoring. Brian said, “Throughout the time I’ve been working with SIF I have learned and developed skills through team work and persistence, and I am grateful to have been part of the SIF team. I would like to thank all my colleagues and SIF for the excellent opportunity I received. All the good memories will be cherished and I look forward to working once again with such an amazing team after my studies.”

We wish Mariette and Brian all the very best with their future careers, and thank them both for their hard substantial contributions to the Vallée de Mai programme.
The researchers used morphological and molecular data to examine the diversity and relationships of these two species across the islands. A long-standing question was whether each species represented exclusive groups, having differentiated from each other at some point in the past. The Wright's skink, now restricted to some offshore islands and islets, is a gigantic form in relation to other skink species and gigantism has certainly evolved multiple times in other oceanic island taxa.

The results showed that the two skink species did diverge a few million years ago, and that there is also ancient hybridization between them. In fact, all the populations of Seychelles skink from Mahé, Silhouette, North, and Fregate currently have DNA which seems to be originally from the Wright's skink, so they can, to a certain point, be considered hybrids. In other words, at some point in the past, female Wright's skink mated with male Seychelles skinks, producing fertile hybrid offspring that expanded across these islands. Interestingly, current hybridization does not seem to happen, although more research would be needed to confirm this. The geographic location of these species is also important, with a clear separation between populations from 'southern' (Mahé, Silhouette, North, and surrounding) and 'northern' (Praslin and surrounding) islands both at a molecular (genetics) and morphological (body measurements) level. The results also show contrasting population trends of these species with an expanding Seychelles skink population versus a decreasing Wright's skink population.