



Planning underway for fourth season of marine monitoring



Previous participants of the marine monitoring programme © SIF

The fourth consecutive season of the Aldabra Reef Monitoring programme will start in December 2016. A great deal of work has gone into designing and establishing this programme over the past few years and this season will be the first time that it will be conducted solely within the SIF Aldabra staff team.

As the largest marine protected area in Seychelles, and a UNESCO Marine World Heritage Site, the marine monitoring programme at Aldabra is extremely valuable as an indicator of reef health at a site that is not impacted directly by human impacts. The monitoring season will start with SCUBA surveys of fish, coral health and benthic cover at two depths at each of twelve permanent sites. Following this, Baited Remote Underwater Video (BRUV) surveys will be conducted to assess fish abundance and composition both within and outside the new Aldabra food security zones.



Screenshot from some previous BRUV footage taken at Aldabra © SIF

Aldabra is well-known for its isolation and the logistical difficulties faced in maintaining the research station and conducting research. These factors are accentuated in the marine monitoring programme and therefore many things need to be considered to ensure the safety and success of the work. The staff have a wealth of experience at Aldabra and work together well to ensure that every safety aspect is covered. The team are very much looking forward to commencing the marine work, which, despite the challenges, will also be extremely rewarding. Further updates on their progress will be made in December, wish them luck!

New apps to assist Aldabra research programme

Climate change and illegal activities top on the agenda at the SIF AGM



Some of the board members at the Vallée de Mai © SIF

The members of the SIF board of trustees met for their Annual General Meeting at the Vallée de Mai in the second week of October. At the meeting the board pledged to find ways to better protect the two Seychelles World Heritage sites from the effects of climate change and illegal activities.

For the first time in April this year, Aldabra was forecast to be hit by the tropical cyclone 'Fantala' which devastated Farquhar. Luckily 'Fantala' lost its strength and no damage was recorded at Aldabra. However this was a reminder to SIF that the effects of climate change are triggering these extreme weather events, and that preparations need to be taken to mitigate the impact of these events. Furthermore, illegal fishing activities from neighbouring countries have also forced SIF to look at other ways they can protect this remote site.

Illegal activities have also marred the daily activities at the Vallée de Mai. Fetching a price of US\$ 450-700, the largest nut in the world, the Coco de Mer, not only attracts thousands of tourists every year but also merciless poachers. Unfortunately these incidences of poaching of coco de mer nuts are on the rise again and SIF will continue to work closely with other agencies and authorities to prevent this from escalating further. The Vallée de Mai is also constantly under threat from forest fires whilst a low season of breeding success for Seychelles Black Parrot last year was also of concern at the board meeting.

The board were, however, delighted to see the appointment of the first Vallée de Mai Scientific Coordinator, a Praslinois, Ms Vicky Stravens. This appointment echoes the continuing commitment to research by SIF and consolidates the progress SIF have made in publishing this research internationally.

The board of trustees, which is nominated by the President of the Republic, has a mandate of three years and two more meetings are scheduled for 2016. This will allow SIF to keep moving forward in our protection and management of Seychelles' two UNESCO World Heritage Sites, and tackle some of these wider issues.

Come and join SIF!!



Seychelles black parrot breeding season begins



The black parrot research team checking potential nest cavities © SIF

The breeding season of the Seychelles Black Parrot has started once again and the team at the Vallée de Mai are ready to start their monitoring of the parrots for the eighth consecutive breeding season.

Starting in late October, the breeding season usually ends around April. This season the team will be comprised of senior ranger and Black Parrot Team Leader Terance Payet, research and data officer Willow West, ranger Shannon Adeline and fieldworker Tessa Athanase. With the season just beginning the team has been busy checking all potential nest sites in the known breeding areas of the Vallée de Mai, Praslin National Park and Fond Ferdinand. A total of 95 cavities have been checked so far of a potential 146 sites. On one occasion the team spotted a female parrot atop a dead palm trunk and flying in and out of the cavity, which suggests that she is prospecting the nest and getting ready to lay eggs. Unfortunately rats remain a significant threat to black parrot chicks and eggs, and the team has already found proof of a rat using one of the potential nests. The team will continue with nest checks and hope to find eggs soon. We are all hoping that this breeding season will be more active and successful than last season when none of the handful of monitored chicks fledged.

Festival Kreol at the Vallée de Mai



Some of the senior citizens making traditional crafts © SIF

Creole Festival is one of the most important events in Seychelles calendar of activities. The week of 23rd to 28th October was full of activities that focused on our tradition and cultures whilst also embracing the opportunities of the present. Seychelles Islands Foundation participates in this national celebration every year to showcase the traditions of the Creole culture to visitors that visit the Vallée de Mai during the Creole festival week. To share the traditional Creole spirit with the visitors, various activities were organized. Antique household items were on display on the deck and it was great to see that everyone was fascinated by these



The library room at Aldabra © Fotonatura

Research volunteer Fernando Cagua contributed two further software applications to the Aldabra programme before his departure from the atoll at the end of October. The SIF apps suite is now comprised of three valuable tools; the tidal app (see September e-newsletter), the Aldabra library app, and the Aldabra fishing data app. These in-house apps are an incredibly useful addition to our data management tools for the atoll.

Library App

Aldabra's small library contains hundreds of scientific books, a significant proportion of which were brought here many decades ago by scientists from the Royal Society and other visiting researchers. The collection has slowly grown over the years and is now quite a treasure trove. There is no up-to-date catalogue of these books, and the creation of one has been needed for several years. The process of cataloguing, structuring and organising a library of books can be a daunting, difficult and time consuming task.

By checking the collections of more than 72,000 libraries in 170 countries, the Aldabra library app is able to use a barcode scanner (or a search by title, author, etc.) to automatically locate and download all of a book's details, in addition to the Library of Congress Classification Number, which identifies the book and indicates its shelf location. The details of each book are retained and logged within a simple database in the app allowing easy searches of the catalogue from both Aldabra and SIF head offices. The Aldabra team hope to have the library fully catalogued before the start of 2017.



Home page of SIF app site © SIF

Fishing App

To allow SIF management to have an immediate visualisation of the monitoring data collected during subsistence fishing trips, a comprehensive application was developed which enables the exploration of the new subsistence fishery database. The app graphically displays a variety of information and gives an overview of trends in the fishery's statistics, in regulation compliance, and of sustainability indicators. It can be used to efficiently produce graphs and summaries for monthly and annual reports and is a fantastic tool allowing for the early identification of any changes in catch composition or fishing behaviour.

SIF are extremely grateful to Fernando for all his efforts over the past five months. He has made a significant contribution to management and research on Aldabra and will be greatly missed by the Aldabra team and SIF staff.

Preparations underway to build a cyclone shelter on Aldabra



Enterprise moored off shore at Aldabra © SIF

During October the Aldabra team were looking forward to the occurrence of a very high spring tide, so that the IDC supply boat Enterprise II could beach on Aldabra and unload construction



Come and join the SIF team © SIF

Are you looking for a new opportunity? Do you want to make a difference and work towards protecting Seychelles' unique environment? We have several job vacancies for **Seychellois nationals** that we are looking to fill immediately. A brief description is given below, but to make an application and for further information please contact Bernadette Julie on hr@sif.sc or 432 17 35.

Aldabra:

- Assistant Aldabra Scientific Coordinator (to have a BSc in an environmental subject)
- Field research assistant (to have A-level qualifications)
- Junior skipper (to have 10 mile licence)
- Cook (post-secondary school leaver with 5 years relevant work experience)

Vallée de Mai:

- Sales clerk (post-secondary school leaver, with training in customer service and 2 years relevant work experience)
- Security Officer (post-secondary school leaver with 2 years relevant work experience)
- Ranger (post-secondary school leaver with 2 years relevant work experience)
- Field research assistant (to have A-level qualifications)

Vallée de Mai Science Coordinator attends workshop on biological invasions in Reunion



Participants in a group session at the workshop © SIF

Vallée de Mai Science Coordinator, Vicky Stravens, had the opportunity to attend a three-day regional workshop on biological invasions at the University of La Réunion. The organisers of the workshop were the University of La Réunion, University of Stellenbosch (Centre of Excellence for Invasion Biology), National Parc of Reunion Island, CIRAD and IUCN.

The aim of this workshop was to provide training on risk analysis and management of invasive alien species for regional actors involved in the fight against biological invasions in protected areas. There were participants from a number of countries in the region including Madagascar, Mauritius, Seychelles, Comoros, South Africa, and Reunion.

The workshop featured presentations on the management of invasive species in the Pacific, South Africa and the Comoros. Students from the University of La Réunion also presented case studies on invasive plants and animal issues in Indian Ocean countries. Training was also given in risk analysis, in the context of the protected areas at the local and regional level. The exotic species risk assessment involved identifying those species not yet introduced in a given area and those already present, that required control actions. The training covered the analysis of the risk of invasion, the potential impact in new habitats and the management of such risks. The methods of introduction of these non-native species, their installation success, their dispersal ability, their impacts and management challenges were also discussed.



Group photo of the participants at the workshop © SIF

To maintain momentum on the progress against invasive species and to strengthen links between partners, a number of priority actions on the issues of biological invasions were proposed at the end of the workshop. Vicky, who has worked extensively on invasive species with SIF in the Vallée de Mai, found the workshop excellent for exchanging ideas, success stories and methods that can be adopted between countries to increase the success of eradicating invasive species from the region.

objects. Two traditional houses were on display to demonstrate the evolution in the construction of houses in Seychelles, and the materials that were traditionally used. Some local artisans were also invited to the Vallée de Mai to display and sell their products to visitors. At the kokosye café visitors also had the opportunity to try traditional local drinks and Creole snacks such as gato bannann, gato mayok and moukat.



Visitors examining the antiquities on display at the visitor centre © SIF

Extra activities were organised on Wednesday and Friday. Groups from local schools and from the community as well as the senior citizens from each district were invited to participate in a Creole quiz competition where they were tested on local riddles (zedmo), Creole expressions, Creole proverbs and Seychelles history. A fashion show of modern clothes made from recycled materials and traditional clothes was performed on Friday. The recycled clothes were made by students from Praslin secondary school and the senior citizens displayed the Seychelles traditional dresses they already had in their collection. Students from Plaisance primary school who were visiting Praslin also participated in the Creole festival activity at the Vallée de Mai. The Creole festival at the Vallée de Mai ended with a "Bal Creole" with the attendance of some of our faithful partners and a Halloween party for all the Vallée de Mai staff.

Paper published on evolutionary history and species separation of the Seychelles bronze geckos



The three endemic species of bronze gecko; *Ailuronyx seychellensis* (left), *A. tachyscopaeus* (middle) and *A. trachygaster* (right) © SIF

An SIF co-authored paper was published this month in the peer-reviewed *Biological Journal of the Linnean Society* in collaboration with researchers from the University of Vigo, Spain and CIBIO, Portugal.

The paper reports findings from a genetic study of the three bronze gecko species of Seychelles (the giant bronze gecko *Ailuronyx trachygaster*, the bronze-eyed gecko *A. seychellensis* and the dwarf bronze gecko *A. tachyscopaeus*). The researchers found that the giant bronze gecko has the most ancient evolutionary lineage, having split off from the smaller two species around 10 million years ago. The two smaller bronze gecko species then split from each other more recently and, as with all other reptile genera studied so far in the Seychelles, there is a clear genetic divide between populations in the northern and southern granitic islands.

The researchers also found useful morphological differences between the species. Identification can be difficult between the two smaller species, with even seasoned observers sometimes mistaking them. This analysis will therefore provide useful information to identify the different species in the field.

One important finding for conservation is that the giant bronze gecko has relatively low genetic diversity and small effective population size. This is not surprising, as it has the most restricted distribution of the three species, but it is important information for conservation management of this species.

The full paper details are: Rocha S, Perera A, Bunbury N, Kaiser-Bunbury CN & Harris DJ. (In press) 'Speciation history and species-delimitation within the Seychelles Bronze geckos, *Ailuronyx* spp.: molecular and morphological evidence'. *Biological Journal of the Linnean Society*.

SIF staff attend chainsaw training course

materials for the construction of Aldabra and unloading construction materials for a new cyclone shelter on Aldabra.

Beaching the supply boat on Aldabra is a rare event since the vessel requires an especially high spring tide and very careful manoeuvring to be able to come close enough to shore and biosecurity risks are substantially increased with beaching. Normally the supply boat remains outside the reef whilst staff ferry the supplies to and from the vessel in a smaller boat. However the construction of the cyclone shelter required materials 160ft long to be unloaded, which would be difficult in such a small boat! There was also a large amount of accumulated waste and rubbish over the past 2.5 years which needed to be removed from Aldabra. The crew of the supply boat and SIF team worked hard late into the night to unload all the construction materials and get around 250 drums and 20 slings of waste loaded onto the supply boat.



Staff at Aldabra loading up the waste drums for the supply boat © SIF

Unfortunately during the departure of the supply boat the wind and strong currents were not favourable and the vessel was pushed onto a sandbank. To clear the sandbank and leave Aldabra the supply boat will have to wait until the next very high spring tide at the end of November. Until then the crew are making themselves useful around Aldabra and assisting the SIF team with some much-appreciated manpower.

SIF is grateful for the support of IDC in delivering supplies to Aldabra Atoll despite the logistical challenges and difficult sea conditions which require experienced seamanship. IDC has been a partner of SIF for many years, helping to supply this UNESCO World Heritage since before its inscription in 1982.

SIF on Twitter!



Follow us on Twitter! As one of the top ten most used social media websites, Twitter offers us a chance to connect and share with a truly international audience. If you are regular Twitter user then you can find us under @SIF_Seychelles. For those of you new to this social media page why not sign up now? You can find the link to our page here, https://twitter.com/SIF_Seychelles, and follow all of our latest updates and news.



Don't forget to like our Facebook page! The page has regular news and updates on research and events at both World Heritage Sites. We would invite all friends, supporters, partners, colleagues, and anyone else who has an interest in staying up to date with the management and protection of the UNESCO World Heritage Sites in the Seychelles, or in Seychelles' biodiversity and conservation in general to become a fan of our page. For those who have a Facebook account already please use this link https://www.facebook.com/pages/Seychelles-Islands-Foundation-SIF/1414466072110654?hc_location=stream and 'Like' our page. For those that are not on Facebook then perhaps you can receive updates through a friend or family members account, or maybe now is the time to join Facebook for yourself! We look forward to welcoming you onto this page!



Participants at the chainsaw training course © SIF

Senior Ranger Terance Payet and Vallée de Mai Science Coordinator Vicky Stravens attended a three-day training course on basic forestry management with chainsaws at the Seychelles National Parks Authority (SNPA) office on Praslin.

The course was organized under the UNDP/GEF/GOS national Ecosystem Based Adaptation project and aimed to equip the participants with safe and correct techniques for handling chainsaw equipment. The participants were from a number of organisations such as SIF, SNPA, and Terrestrial Restoration Action Society Seychelles (TRASS) and individual tree felling contractors.



Learning more about the use of chainsaws © SIF

The course was led by professional instructors from the UK and started with an introduction to the personal protective equipment that is needed before handling a chainsaw. The purpose of the equipment was briefly explained to all participants and they were all assigned their own protective gear for the duration of the course. A detailed explanation on the different features of the chainsaw was also given. The instructors then guided the participants through the steps of dismantling and reassembling of the chainsaw to enable routine maintenance before and after use.

The following day the participants were able to put in practice the theoretical parts of the chainsaw. The instructors demonstrated the different techniques that can be used to cut and fell a tree. These different techniques were brushing, pruning, a standard felling cut, a double "V" cut and step cut. All participants were reminded that it is important to plan a tree felling very carefully as it is important that trees must be felled safely and in the direction that you want to fell.

This course will be invaluable for both Terance and Vicky in the management of introduced tree species in the Vallée de Mai, and they are looking forward to applying the skills they have learned.

Birdwatching with Friends of Vallée de Mai members



The students looking for birds © SIF

To commemorate World Bird watching day on the 7th October a group of Friends of Vallée de Mai members from Vijay International School participated in a bird watching session at Fond Ferdinand. The kids were very excited to see all of the different bird species and a worksheet was prepared for them to record what they saw. A variety of bird species were observed during their visit, including Seychelles black parrots, Seychelles blue pigeons, Seychelles sunbirds and Seychelles bulbuls. It was

not only the birds that the children were excited to see, but also a friendly freshwater eel they found in a stream in Fond Ferdinand!

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