



Research partnership with Seychelles Fishing Authority



The SIF and SFA staff that were onboard SFA research vessel L'Amitie © SIF

The Seychelles Fishing Authority (SFA) and Seychelles Islands Foundation (SIF) carried out a pilot phase of a potential research partnership this month at Aldabra to undertake some collaborative marine monitoring.

The SFA vessel RV L'Amitie arrived at Aldabra on 2nd April with a full crew and three members of the SFA research department. One of the aims of the trip was to repeat surveys of the coral reef communities (fishes, benthos and coral juvenile abundance) at nine sites around Aldabra Atoll, which are part of SIF's long-term marine monitoring programme, to assess the extent and severity of the current coral bleaching event that is underway around Aldabra and Seychelles. A team of four SIF and SFA divers carried out these surveys over a period of six days.

The Aldabra Scientific Coordinator, April Burt, led the survey team and undertook the benthic community and coral recruit abundance and composition surveys, assisted by SFA research officer Ketyna Constance. SIF ranger Stephanie Marie undertook the fish surveys along with SFA research officer Rodney Melanie. Initial findings were that there was a high level of bleaching at all sites ranging from 60-99% of all corals being affected to some degree.



One of the staff members under supervision by SFA research technician Maria Cedras © SIF

The second aim of this research trip was to extend the data set and sampling collected from Aldabra's subsistence fishery to include valuable information about fish stocks, stock health and genetic connectivity. SFA research technician Maria Cedras was stationed on Aldabra for a week and led the training of the research staff in extracting the otoliths (ear bones) that can be used to age fish; gonad samples for information on spawning productivity and seasonality; fin clips for DNA analysis to assess population structure and connectivity; and liver and muscle samples for analysis of stable isotopes, content of lipids, fatty acids and heavy metals, which will be analysed to determine fish



World premiere of 'Aldabra - Once Upon an Island' 3D film in Seychelles



An Aldabra Giant Tortoise, one of the stars of the new 3D film © Fotonatura

After much anticipation, the world premiere of the 3D film 'Aldabra – Once Upon an Island' was shown in Seychelles on 21st April.

The film was well attended by international and local press, as well as many important local figures who have contributed to the protection and management of this UNESCO World Heritage Site. One special guest was Mrs Jenita Brutus who is one of only a few surviving people who were born on Aldabra. Mrs Brutus was delighted to experience her birth place through this film and grateful for this opportunity. The film was initially screened in Prague, Czech Republic on 19th November. It was the third most watched film nationwide on its opening weekend in Prague with over 1500 paying visitors. Following this showing in Seychelles the film will be released in cinemas in the USA and Canada followed by the UK, France, Germany, Italy, Poland, Russia, China, Korea, Japan and the rest of the world.

The 73 minute long family film was produced and directed by Czech film company Starlite Pictures in collaboration with Disney. With the support of SIF, the film crew from Starlite Pictures visited Aldabra in 2012 to undertake the complex and difficult process of obtaining footage for the film. *Aldabra – Once Upon an Island* weaves fact and fiction into a story of this island and its heroes, Elvi the tortoise, Tory the turtle, robber Buster the robber crab, and many others in a tale full of excitement, emotions and unexpected twists.

More details on the film and a trailer can be found at www.aldabra3D.com

Up to SCR 2000 for information on Ring-necked Parakeets: New appeal will also reward sightings!



Senior citizens of Praslin enjoy the Vallée de Mai



The senior citizens enjoying the bird watching activity © SIF

The Vallée de Mai opened its doors to a group of 20 senior citizens from Grande Anse and Baie Ste Anne districts on Praslin this month. SIF had organised a half day of activities at the Vallée de Mai for them to socialise, exercise and learn more about this World Heritage Site.



Taking a guided tour of the Vallée de Mai forest and learning about the unique plants © SIF

During their retirement many senior citizens do not have many opportunities to socialise; research has shown that physical exercise and social interaction can provide many health benefits. It was with this in mind SIF organised a range of activities for them that they could choose from depending on their interest. The activities they could choose from were; dancing and jogging, bird watching, a presentation on black parrots, construction of traditional games/crafts, and cooking. The senior citizens were very active in all the groups and a great deal of fun sharing stories and knowledge with each other and the Vallée de Mai staff.



health and information on trophic ecology. The sampling programme will focus on four species that are currently being caught at Aldabra and are on the priority list of species on the SFA Demersal Management plan. These include; *Aprion virescens* (Zob Gri/Green Jobfish), *Lutjanus bohar* (Varavara/Red Snapper), *Epinephelus fuscoguttatus* (Vvey Goni/Brown Marbled Grouper), and *Epinephelus polyphedakion* (Vvey Masata/Camouflage Grouper).

The week was a fantastic opportunity for the two organisations to work together and cement a research partnership for the future. A great deal was achieved but a lot of fun was also had with many new friendships made. Our sincere thanks to Captain Gerard Ernesta and his crew for such a successful week.

Aldabra escapes the destruction of Cyclone Fantala



Aldabra looking calm and undamaged after avoiding Cyclone Fantala © SIF

On April 13th the Seychelles National Meteorological Services (SNMS) issued an advisory warning for the Aldabra group and Farquhar regions due to predicted progression of tropical cyclone Fantala. Fantala formed on April 11th to the south of Diego Garcia, and then moved westward for several days while gaining strength, aided by warm waters until it reached sustained winds of 250 km/h (155 mph). This was the highest on record in the Indian Ocean basin and a peak of 1-minute sustained winds of 280 km/h (175 mph), made it one of the strongest cyclones on record in the south-west Indian Ocean. Unfortunately it was during this peak when the cyclone passed over the Farquhar Group of Islands in Seychelles, causing devastating damage to the infrastructure and environment of the island.



Track map of Tropical Cyclone Fantala with points showing the location of the storm at 6-hour intervals. The colour represents the storm's maximum sustained wind speeds (with the colours intensifying as wind speeds increased).

SIF Head Office and Aldabra staff followed the predicted path of the cyclone closely after the first warning was issued on April 13th. Following its arrival at Farquhar and its continued projection towards Aldabra, the staff started to secure the station as much as possible against possible wind damage. The team on the atoll spent a night sheltering in a room at the research station which is a secure structure and away from large trees. Despite a windy and stormy night Aldabra did not suffer any serious impacts from the cyclone. The staff were put on alert and evacuation stand-by in case the cyclone continued towards Aldabra. However, due to a change of steering currents, Fantala reversed direction and accelerated southeast back towards Farquhar. This brought the cyclone over cooler waters previously upwelled by the cyclone itself, which caused it to weaken. By April 22nd, Fantala stalled again but then moved back northwest as only a moderate tropical depression. With this change in strength it no longer posed a risk to the staff on Aldabra and there was no need for evacuation. The research station and the atoll sustained no serious damage to the environment or the infrastructure from the cyclone. However, this near miss highlights the need for a cyclone-proof shelter on Aldabra for the staff's protection in the eventuality of any future major cyclonic event.

Return to Takamaka in search of Madaqascar Fodies



The Kato Ver can be in two colour variations in Seychelles; green (left) or yellow (right). All birds should be reported. © SIF

The Ring-necked Parakeet eradication team continue with their efforts to eliminate any remaining parakeets in Seychelles. Since the SCR 2000 bounty for information on these birds was introduced last month, three more parakeets have been culled following essential information provided by members of the public. All of these people, reporting from Bel Ombre, Anse Royale and Foret Noire, received their bounty payments soon after the team culled the respective birds and it was entirely due to their help that the team were able to target these birds and get an important step closer to completing the eradication.

The reports included a parakeet which was well-spotted roosting in a tree cavity at Anse Royale, a parakeet reported in a garden in Foret Noire, and more recently one of two birds seen at Grand Anse. The second bird of this Grand Anse pair has still not been targeted and we ask people particularly in the west coast area of Mahé around Grand Anse, Port Glaud, Barbarons and Anse Boileau to keep their eyes peeled and keep the number of the RNP team on hand in case of any sightings. The Grand Anse bird is extremely wary after its partner was culled, so is proving to be a difficult target for the team.

The bounty payment has since been revised to an award of **SCR 200 for any RNP sighting which is then confirmed by the RNP team. The SCR 2000 bounty will remain in effect for any sightings which lead to a cull by the team.**

If you see a Ring-Necked Parakeet (Kato Ver) on Mahé, then we ask you to call the RNP team on **2523623** to report the sighting as soon as possible and the team will come and investigate. If the team can confirm the sighting, the caller will receive **SCR 200**. If the team are then able to cull the bird with this information, the caller will be rewarded with the rest of the **SCR 2000**.

The bounty payment is **only eligible** if the RNP team culls the parakeet and no reward shall be given for any other bird culled in any other manner. Please note that the more detail provided on the sighting (e.g. time of sighting, exact location of RNP, feeding observations, behaviour), the more likely it is that the team will be able to target the bird. A few of these parakeets display the yellow colour morph so if you see a bright yellow parakeet which otherwise looks like the Kato Ver it is the same species and should also be reported.

Training for Vallée de Mai staff with Earthwatch Institute



The research programme team sharing ideas and knowledge © SIF

Vallée de Mai Field Research Assistant Mariette Dine joined a research programme with the Earthwatch Institute this month that was held on Curieuse and Praslin Islands.

Earthwatch Institute is an international environmental charity which aims to engage people worldwide in scientific field research and education to promote the understanding and action necessary for a sustainable environment. In Seychelles, their research programmes include studying the coral reef communities around Curieuse Island alongside learning about the socio-economic impacts on coral communities. Mariette was based on Praslin Island and her team focussed on conducting surveys of the local community of their fish consumption. These surveys will provide information on the dependency of the Praslin community on the local fish stocks and how vulnerable these stocks might be to impacts such as fishing or coral bleaching events.



Mariette and one of her programme colleagues undertaking the survey with local residents © SIF

The senior citizens with some of the traditional crafts that they made © SIF

The Nurse Manager for Praslin and La Digue from the Ministry of Health, Ms Dina Hibonne, was invited to give a health talk to the senior citizens. They also had the opportunity to check their blood sugar levels and blood pressure. The senior citizens gave many positive comments about the day and more activities for the senior citizens are planned at the Vallée de Mai.

Black parrot breeding season ends with poor nesting success



Seychelles Black Parrot © SIF

The 2015/16 black parrot season was already winding down in March after exceptionally low activity, and there was no further nesting activity found in April, bringing the season to a close. This season saw low nest numbers, and even lower nest success, with unfortunately no monitored chicks surviving to fledging.

A total of only three nests were located, all in December and January. Of these nests, two chicks hatched, one of which died at only a few days old. The other survived for more than 20 days but sadly was also found dead in the nest just before it was due to be ringed. The cause of their deaths is unclear but there are many factors which may have been responsible, such as lack of food or predation.

Although none of the chicks found by the team survived, there were several sightings of fledglings being fed in the Vallée de Mai and Fond Ferdinand. These observations indicate that at least a few females missed by the team must have been successful this year so the outcome of this season is not quite as gloomy as the figures suggest.

This season is only the 7th year for which breeding success has been monitored by SIF and there is still many gaps in the knowledge of this species that need to be filled, not least of which is the question of why the breeding activity fluctuates so much across seasons. This is not the first season in which the activity has been so low. We also saw minimal breeding four years ago in the 2011/12 season, when the team only located one active nest, which fledged one chick successfully. Other seasons have seen over 20 nests monitored. The fluctuations are thought to be naturally occurring, possibly due to seasonal variation in food resources, but this has yet to be studied.

It is only with continued monitoring and data collection on the parrots, their breeding, habitat and dietary requirements that we will be able to piece together an understanding of their needs and limiting factors to their breeding, ensuring that we can conserve this iconic bird into the future.

Visit to Cousin Island and Night Safari to celebrate Earth Day



The Friends of Vallée de Mai members on their guided tour of Cousin Island © SIF

Two different events were organised by Seychelles Islands Foundation this month to commemorate Earth Day which is celebrated each year on the 22nd April.



The survey team at Takamaka © SIF

A small team visited Takamaka on Grande Terre this month to search for any remaining introduced Madagascar Fodies in the area. The team spent 10 days at Takamaka, conducting fine-scale sweep surveys in selected areas looking for any signs of these birds.

After three years of intensively eradicating the introduced Madagascar Fodies in this area, the team were confident in April 2015 that there were few, if any, pure Madagascar Fodies remaining; however, further monitoring was essential to confirm this. Since then a first monitoring trip was made in October 2015, when no Madagascar Fodies were seen. The second visit, this month, applied fine-scale surveys in areas of former Madagascar Fodies occurrence. All GPS tracks of the sweep surveys were logged to show the area covered.



GPS tracks of points covered by sweep surveys © SIF

The weather conditions at Takamaka during the visit were unfortunately not favourable for the surveys. A strong south-easterly wind and heavy rain (due to the approaching cyclone) affected the behaviour of the birds and they flew low, remained silent and/or stayed amongst dense foliage. This made detecting Madagascar Fodies more difficult for the team. The Aldabra Fodies at Takamaka were coming to the end of their breeding season and showing various moulting stages, which made it more difficult to distinguish the two species. However, the team is confident that they did not encounter any Madagascar Fodies either by sight or sound, and no Madagascar Fody nests were located. Subsequent monitoring trips to the same area will be needed next breeding season to confirm the eradication.

Surveys completed on coral bleaching



A bleached Porites coral colony at Aldabra © SIF

In response to the coral bleaching event that was first reported in January 2016, surveys have been undertaken to monitor the progress and extent of the bleaching.

In January individual coral colonies were tagged and these have since been monitored throughout the bleaching event with regards to stage of bleaching and coral health. A wide-scale survey was also conducted by manta tow. Population transects were carried out at a number of sites to assess the extent of bleaching. On these 20m transects every coral colony over 10cm in diameter was recorded and graded according to evidence of bleaching stress. Lastly, as part of the SIF and SFA

Mariette commented on the training "The Earthwatch Scientists Dr Julien Clifton, Dr Sarah Laborde and Katherine McGavin all made sure we were getting as much out of the programme as possible in order to sharpen our skills and broaden our minds. The open group discussions were insightful, as everyone could share their knowledge and experience in a friendly environment. The course also gave us the boost we needed to keep pushing ourselves forward in achieving our goals, in order to be successful in our career path."

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To mark the day, Friends of Vallée de Mai club members on Praslin visited nearby Cousin Island to learn about the different habitats, animals and plant species there. Upon arrival on the island the Friends of Vallée de Mai chairperson, Ms Jeanette Larue ensured that they were familiar with some of the special regulations that need to be followed when visiting a reserve as special as Cousin. The children were then guided around the island by the knowledgeable Nature Seychelles rangers who pointed out some of the important bird species there, such as the Seychelles Magpie-robin and Seychelles Warbler. They also had time to learn about the giant tortoises and some of the seabirds that nest there. The children were particularly impressed by the efforts of the staff to remove invasive species such as rats from the island. This was evident from the many bird species that were nesting on the ground, which was great to see.



A nesting Noddy on Cousin Island © SIF

SIF also organised a night safari in the Vallée de Mai for its partners to commemorate Earth Day. Visiting the Vallée de Mai at night is a special experience and this activity was a great way to learn more about the nocturnal species of the forest that cannot be seen during the day. Present for this amazing adventure in the Vallée de Mai reserve were staff from Global Vision International (GVI), teachers, parents and Friends of Vallée de Mai club members from Vijay International School, as well as other Vallée de Mai enthusiasts. A variety of species such as chameleons, tree frogs, giant bronze geckos, and slugs were spotted during the visit. Some freshwater species such as the endemic crayfish, and crabs were also seen much to the delight of the participants.

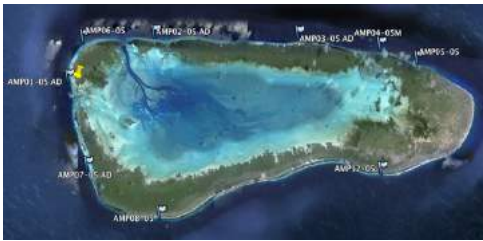
SNYC continue outreach programme at the Vallée de Mai



S1 students in the Vallée de Mai © SIF

The Vallée de Mai was once again happy to open its doors to more secondary school children under the SNYC national outreach programme. The Seychelles National Youth Council (SNYC) organized a visit to the Vallée de Mai on 19th and 20th April for 305 S1 students from English River, Pointe Larue, Beau Vallon and Plaisance. The children were divided into smaller groups and given a special guided tour by the Vallée de Mai staff. They were also given worksheets to test their knowledge and see what they had learned on their tours. All the students thoroughly enjoyed the visit and we are pleased to be a part of this valuable national programme.

research partnership this month, 50m point intersect transects were carried out at each of the nine permanent survey sites around the atoll and all bleaching was recorded.



Sites where bleaching surveys were undertaken © SIF

Initial findings from these most recent surveys show a high level of bleaching at all locations with 60–99% of all corals being affected. The surveyed corals were categorised into three bleaching levels. Most corals were recorded as category two, whereby the whole colony was pale or fluorescent (or more than half the colony was completely white) but not yet dead. An average of 14% of corals were recorded as recently dead, and in many cases these corals already had turf algae growing over the dead coral skeleton. Just 13% of corals were healthy. Bleaching affected all coral genera to differing degrees. The most abundant genus to be affected by bleaching was *Porites* (a genus of stony corals), which also had the most recently dead colonies. Other genera impacted were *Isopora*, *Acropora*, *Pocillopora*, *Goniastrea*, *Montastrea* and *Leptoria*. Additionally, 76% of all coral recruits less than 5 cm in diameter were affected by bleaching, with the genus *Porites* most affected and genera *Coscinarea* and *Favites* least affected. The site with the lowest coral cover (in the south-east of the atoll) also had the lowest percentage of corals affected by bleaching. Some transects had 100% of corals affected by bleaching and the overall highest bleaching rate was recorded at West Grande Terre.

Following these results additional surveys were carried out close to the Research Station on Picard, to determine the impact of bleaching at depth. Sadly bleaching was evident to a depth of 26 m, which was the maximum depth surveyed, and more than 80% of corals were affected by bleaching at 15 m depth. At the end of April the sea temperature had dropped from a recorded prolonged high of around 31°C to 28°C, which is below the bleaching threshold and, we hope, will allow some of the bleached corals to regain their symbiotic algae and recover. For a closer view of the bleaching at Aldabra you can watch this video - <https://vimeo.com/162247885>.

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