

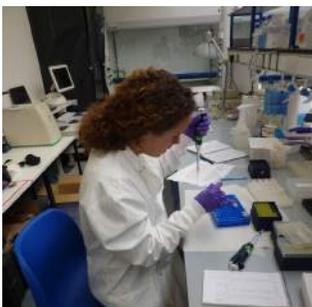


Landbird genetic research continues



The Aldabra Rail, one of the species being researched © R Baxter

SIF researcher Dr Janske van de Crommenacker has returned to the Durrell Institute of Conservation and Ecology (DICE) at the University of Kent in the UK to continue genetic analyses of Madagascar and Aldabra Fodies and Aldabra Rails in collaboration with Dr Jim Groombridge. The first aim of her research is to confirm and further resolve the hybridization dynamics between Aldabra and Madagascar Fodies. This research follows the introduction of a small Madagascar Fody population in the Takamaka region of Aldabra, which is the subject of a continuing intensive eradication programme. The Madagascar Fodies are thought to have arrived from Assumption Island where they were introduced in the 1970s, and where they are also being eradicated (see article on this in same issue). Using phylogenetic analyses Janske will be able to confirm whether the invasive Madagascar Fodies did originate from Assumption as is currently assumed. Janske will also try to estimate the approximate size of the founder group of this population, and when the invasion occurred, hopefully confirming whether the invasion is a very recent event, or if the population has been present and undetected on Aldabra for much longer.



End of season report for Assumption



Madagascar Fody © SIF

The last update on the Assumption introduced bird eradication appeared in the March 2014 newsletter issue when the intensive hunting phase of this project was in full swing and there were thought to be fewer than 300 birds of both introduced species remaining on Assumption.

We are very glad to report in this issue that substantial progress has been made since the previous update. The intensive hunting phase with a big team came to an end in mid-May and was highly effective in reducing the numbers of Red-whiskered Bulbuls and Madagascar Fodies to relatively tiny populations. Mist-netting was continued but was fairly inefficient during the shooting-focussed phase particularly given the difficulties of predicting the birds' movements.

As a result of this four months of hunting with a large team, there are now thought to be between **one and three Red-whiskered Bulbuls** left on Assumption, and **20-40 Madagascar Fodies**. Reduced from original populations of more than 5000 Red-whiskered Bulbuls and more than 3000 Madagascar fodies this eradication already shows what can be achieved for invasive bird control on islands.



SIF Invasive Species Technical Officer Jessica Moumou © SIF

The eradication is continuing over the south-east season but less intensively, with SIF Invasive Species Technical Officer Jessica Moumou at the helm. Jessica has been a core and leading member of the Assumption team for more than a year and a half and her fantastic bird-targeting skills and observations will be key to completing the eradication. Eradication success by the end of 2014 is still on the cards but the fodies are likely to present the biggest challenge. For



SIF welcomes the President of Cabo Verde to the Vallée de Mai



President Fonseca inside the Vallée de Mai with SIF Chairman Mr Loustau-Lalanne © SIF

The President of Cabo Verde, H.E. Doctor Jorge Carlos De Almeida Fonseca, visited the Vallée de Mai on Praslin this month to experience the natural beauty of this UNESCO World Heritage Site. President Fonseca was accompanied by Minister Mitcy Larue, Minister Jean-Paul Adam and was welcomed to the Vallée de Mai by the Chairman of SIF, Ambassador Loustau-Lalanne and the SIF Vallée de Mai staff.

Ambassador Loustau-Lalanne accompanied the President on a brief tour of the visitor centre after which they took a short walk in the unique palm forest. He explained to the President the importance of this forest to the biodiversity of the Seychelles and why it is so unique. President Fonseca saw both the male and female Coco de Mer trees and had the opportunity to play the infamous 'Guess the weight of the Coco de Mer' game. The President was an enthusiastic participant and gave an impressive guess, only 2 kg more than the actual weight of 21 kg. Afterwards a Vallée de Mai staff member demonstrated the de-husking of a giant Coco de Mer nut and the President and his delegation were surprised at the strong odour of the Coco de Mer husk.



President Fonseca and Mr Loustau-Lalanne examining the male inflorescence of the Coco de Mer © SIF



SIF researcher Dr Janske van de Crommenacker working on the fody genetic samples in the DICE laboratory © SIF

The second aim of Janske's research is to verify the taxonomic status of both the Aldabra Fody and the Aldabra Rail. Currently both species are classified as subspecies but both are quite different to their sub-specific relatives, a pertinent difference in the case of the rail being that the Madagascar subspecies can fly, whereas the Aldabra rails are flightless! This research should help to clarify the situation and provide the genetic basis for assessing whether they can be classified as separate endemic species, as has recently been done for the Seychelles black parrot (see Issue #18, April 2014 of the SIF newsletter). This research is important for the continued protection of these populations and should be completed by the end of 2014.

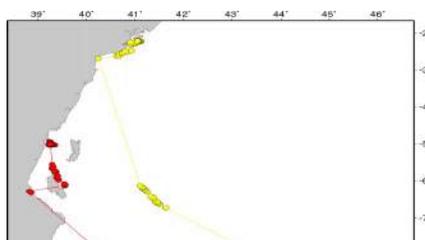
Aldabra's Green Turtles: Where are they now?



Green Turtle on Aldabra's reefs © Fotonatura

Every four days we wait with fingers crossed for location points or 'fixes' from the two satellite-tagged female Green Turtles from Aldabra. So far we can happily report that the satellite transmitters continue to transmit exciting information about where these two long-distance migrants have travelled since leaving Aldabra. Our previous satellite tagging efforts on the Aldabra turtles have, disappointingly and for unknown reasons, failed to provide more than two months of location information per animal, with several these tags transmitting for a much shorter time before the turtles had left Aldabra. So it can be a tense time waiting for each new location fix from the turtles, hoping that the turtles are fine and that the transmitters are still attached and working.

The first tagged turtle in 2014, 'Alda', departed Aldabra waters immediately after receiving her tag, meaning that the timing of attaching the transmitter was ideal, as she was covering her final nest of these season before migrating away from the atoll. Alda travelled rapidly west, then north-west to reach the Tanzanian coastline west of Zanzibar Island. In eight days Alda covered more than 900km! Following this massive journey she travelled to the shallow waters east of Zanzibar before continuing northwards to her current location north-east of Tanga Island on the Tanzanian coastline. Alda has remained in this location west of the Pimba Channel in the shallows around Fungu Nyama for over a month now. Interestingly, her location is just to the north of the Tanga and Coelacanth Marine Park, which is known to have numerous and extensive seagrass beds and the WWF has identified this area as an important feeding area for sea turtles. Three species of marine turtles are found in Tanga waters: the Olive Ridley (*Lepidochelys olivacea*), the Green (*Chelonia mydas*) and the Hawksbill (*Eretmochelys imbricata*).



cards but the holes are likely to present the biggest challenge. For now, the remaining bulbul(s) are acting as 'Judas' individuals; bulbuls are highly social birds and in small numbers it is hoped that they will actively search out other individuals, which can then be targeted. All of the remaining birds are being monitored and targeted by Jessica whenever there is an opportunity, which is rare, as these last few individuals are extremely wary and moving over large distances, making Jessica's job very challenging. Progress in this final stage is therefore slow, but steady. We send Jessica all possible moral support and wish her luck in targeting as many of these last few birds as she can over the next few months.

Invasive Sisal eradication within sight on Aldabra



Sisal patch in Ile Michel in May 2014, several months after herbicide treatment © SIF

In March 2014 a team of six intrepid staff visited Ile Michel, in the east of the Aldabra lagoon, to start eradicating Aldabra's densest remaining patch of introduced Sisal. Around 70% of the sisal plants in the patch were treated with herbicide, which then takes several months to kill the plants. The project officer, Martijn van Dinther, returned to Ile Michel in May to check the outcome of the treatment and assess plant mortality. He found that about 60 - 70% of the treated plants were dead or showing clear signs of dying, with no effects of the herbicide seen on non-target species.



Dead Sisal plants on Ile Michel after herbicide treatment © M van Dinther

The next visit to Ile Michel will be in early July, when high tides will allow the team to return to this remote island of Aldabra. The surviving Sisal plants will then be treated again with herbicide. With all other sisal areas on Aldabra already treated and in decline or removed, the progress on the Ile Michel patch puts the goal of eliminating this invasive species from Aldabra this year well within the team's grasp.

Invasive mammal work continues on Aldabra



Rat caught in trap on Picard © M van Dinther

Invasive mammal work on Aldabra has also continued over the past

On their return to the Visitor Centre Mr Loustau-Lalanne took the opportunity to discuss with the President the importance of the Vallée de Mai in the support of Aldabra Atoll, and used some of the display items to show the unique wildlife of Aldabra. The President was then presented by Minister Larue with a Coco de Mer nut as a 'souvenir of Praslin'. Ambassador Loustau-Lalanne also presented a book co-authored by SIF CEO Dr Frauke-Fleischer Dogley on the history and biology of the Coco de Mer. "We are honoured to share this globally important natural World Heritage site with a public figure such as the President of Cabo Verde. It was a delight to host him and his wife at this unique site and we hope that our token will remind him of this experience, and the Vallée de Mai", said Ambassador Loustau-Lalanne.

Giant Bronze Gecko training comes to an end in the Vallée de Mai



Group photo of 'Team Gecko' © SIF

Last month we described a new research project on the movement of Giant Bronze Geckos in the Vallée de Mai. The intensive period of fieldwork for this project has now finished, with another few weeks of work catching geckos and follow-up monitoring spotting and tracking the marked and tagged geckos in the forest.

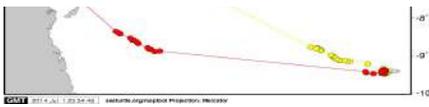
An amazing total of 51 giant geckos were caught and PIT-tagged in just under two weeks by a team of up to 14 staff! A total of 30 captured animals was hoped for so this was an outstanding effort and the team were over the moon to have caught so many. All 51 geckos were measured, implanted with a PIT tag and marked on their backs with a temporary UV-fluorescent number. Six animals were radio-tracked and followed for the next few weeks. The radio-transmitters need to be incredibly light to avoid affecting the gecko movements and health, so the batteries are tiny and all of them have now run out, bringing an end to the tracking. The fluorescent numbers are also slowly but surely being sloughed off, with probably only a few numbers of the 51 geckos still visible.

The beginning of June was very busy for the team, particularly for the rangers who were continuing the observations and tried to spot as many marked geckos as possible during the day and night. The staff are now in the process of re-catching the radio-tagged geckos and removing their transmitters.



Gecko number '3' recaptured, ready to have the radio transmitter removed © SIF

Re-sightings of marked geckos have been less frequent than expected, and many non-marked geckos have been spotted, making the detection rate very low and suggesting that the density of these geckos in the forest is higher than expected, which is a positive sign for this endemic threatened species.



Map showing the journey of Alda and 107899 from Aldabra to East Africa (RED line shows Alda, YELLOW line shows 107899)

Tanzanian turtle populations are generally in decline, mainly due to loss of nesting sites but also due to incidental and deliberate capture in gill nets. The taking of turtles is however, prohibited in Tanzania. The information obtained from Alda shows that, at least in this case, Aldabra is one nesting location for turtles that forage on the Tanzanian coastline.

Unlike Alda, the turtle fitted with the final satellite tag (107899), who has not yet been named, had not quite finished nesting and remained in Aldabra waters for a further two weeks. There were initial concerns that her tag could detach during mating or when coming ashore to nest again so the research team carried out beach patrols at her predicted nesting time to try to find her and check on the satellite tag. She was not encountered, but, following another nesting attempt, satellite data showed her leaving the atoll and confirmed that the tag was still attached and operational.

In a similar journey to Alda, 107899 travelled rapidly towards the African coastline, although on a slightly different path heading north-west and then north reaching the Kenyan coastline east of Kipini after a >1000km journey. She then travelled north along the coastline before reaching the shallow waters south of Pate Island. 107899 also seems to have found a locality which suits her as she has now been present in this area for over ten days.

It has been fascinating to follow the journeys of these two turtles so far and will be interesting to see whether they remain in these feeding areas or journey onwards. You can check directly on our satellite-tagged turtles and see the journeys of Aldabra's previously tracked Green Turtles at http://www.seaturtle.org/tracking/index.shtml?project_id=712.

few months. For the rat eradication feasibility study the team has started the fifth rat trapping season to assess the density of the rat population in different habitats on Picard. To estimate population density, a Mark-Recapture study is being used in three trapping grids on Picard. The captured rats are marked to recognize them on recapture. Their weight, size and sex are also recorded. Several rats marked in the mangrove habitat that have since been recaptured have been monitored by the team since February 2013, showing that these rats can probably reach over 2 years in age.

Grande Terre is the only island on Aldabra where feral cats still occur. Research on the density of the cat population was needed before an eradication could be planned. This research is now underway with the use of wildlife camera traps. These cameras have been placed at regular intervals on transects across Grande Terre. The cameras have a motion sensor and will be triggered by cats when they enter the viewfinder of the camera. A more accurate estimate of the density of feral cats on Grand Terre will be possible from these photos, something that the team has not been able to do so far. These traps will be checked over the next few months when the team revisits Grande Terre.

New publication on the impact of invasive ants in the Vallée de Mai



A Yellow Crazy Ant © C Mason-Parker

An SIF-authored paper about the invasion of Yellow Crazy Ants in the Vallée de Mai was published this month in the invasive species journal 'NeoBiota'.

Yellow Crazy Ants (*Anoplolepis gracilipes*) were discovered in the Vallée de Mai only in 2009, although they have occurred on Praslin for many years. This species is one of the most invasive species in the world and has caused devastating impacts on other tropical islands, triggering what scientists have termed 'ecological meltdown'. There was therefore immediate serious concern over their potential impacts on the palm forest ecosystem and endemic fauna of the Vallée de Mai. Surveys were organised to assess the extent of the invasion. The first survey and initial research into the potential impacts of the ants on several animal species was conducted by University of East Anglia MSc student Harriet Cuthbert in 2010. More surveys have been conducted since then to monitor the distribution and spread of the ants.

The results of the surveys as well as the research into their potential impacts appear in the new paper. The paper shows that the ants are not spreading as rapidly through the palm forest as they do in other habitats. In fact, there was very little change in the distribution of the ants over three years of surveys, which is reassuring but also very interesting. The invasion is so far limited to the north-east part of the Vallée de Mai, where there is more disturbance from the entrance to the park and the firebreak. Small outbreaks of the ants into other areas of the palm forest have occurred but not been sustained, leading to speculation that the palm forest has a certain level of 'resilience' to this particular invasive species.

In the invaded area, however, the research found that endemic tree-dwelling animals are less abundant where the crazy ants occur. The research assessed the abundance and diversity of gecko and mollusc (snails and slugs) species in the invaded and non-invaded areas and found that both abundance and diversity were lower in the invaded area. Of most concern was the finding that no molluscs were recorded in sample plots of the invaded area of the Vallée de Mai, although they were common in the non-invaded area. The status of snails and slugs, which are thought to be essential for the functioning of the palm forest ecosystem, would therefore be a major concern should the crazy ants spread further into the palm forest.

Unfortunately, eradication is impossible, since the crazy ant is well-established on Praslin including in the Praslin National Park forest which surrounds the Vallée de Mai. However, regular surveys of the crazy ants will continue in the Vallée de Mai alongside research into possible local control options to manage their numbers in case of an outbreak, and further exploration of the resilience properties of the palm forest.

of this endemic threatened species.

The location data on radio-tracking and re-sightings of the giant geckos is now being compiled, mapped and analysed to shed light on the movement ecology of this forest giant. Watch this space for future updates!

Thanks once again to Nik Cole and Rouben Mootocurpen (Durrell Wildlife Conservation Trust and Mauritian Wildlife Foundation) for their essential help and guidance on this project.

Fun run raises awareness of Coco de Mer poaching on World Environment Day



Racing up to the Vallée de Mai © SIF

To celebrate World Environment Day on the 5th June the Vallée de Mai organised a fun run on Praslin to raise awareness of the issue of Coco de Mer poaching.

Twenty different organizations participated in the race in teams of 10 people. The run started at Baie Ste Anne primary school and finished at the Vallée de Mai visitor centre. Before the run started the teams met at the starting line to join in a group warm up session so that they would all be ready for the run ahead. It was a tough, uphill route of around 5 kilometres so the teams ran relay style up the winding road through Praslin National Park. The last runner in each team had the challenge of racing through the Vallée de Mai on the North Circular path.

After an exciting race the clear winner was the Baie Ste Anne district youth team. Second place was taken by the JJ Spirit team and the third place was the Coco de Mer Hotel team. Feedback from the participating organisations was that they were proud to be part of this event and supportive of the cause it represented. After the run had finished each team read out a pledge on how they would help to reduce Coco de Mer poaching and raise awareness of this issue in the community.



The JJ Spirit team reading out their pledge © SIF

World Environment Day was the ideal opportunity to raise awareness on Coco de Mer poaching as this global annual event aims to promote positive environmental and sustainable actions to protect the natural world. The poaching of Coco de Mer remains a major threat to the future of the Vallée de Mai, and has increased considerably in recent months. Presentations, a public rally, and school competitions are some of the educational activities being run by SIF to raise awareness of the poaching issue. More work is needed, however, and it is hoped that the fun run will galvanise further action and support in the Praslin community to tackle this issue and reduce illegal exploitation of this amazing and highly threatened species.

Participation in annual

The paper is open access and can be down-loaded as a PDF at: <http://www.pensoft.net/journals/neobiota/article/6634/abstract/invasion-of-yellow-crazy-ant-anoplolepis-gracilipes-in-a-seychelles-unesco-palm-forest>

The full citation for the paper is:
 Kaiser-Bunbury C, Cuthbert H, Fox R, Birch D & Bunbury N. (2014) Invasion of yellow crazy ant *Anoplolepis gracilipes* in a Seychelles UNESCO palm forest. *NeoBiota* 22: 43–57

SIF attended Invasive Species workshop in Montreal



Group photo of participants in the workshop

CEO, Dr Frauke Fleischer-Dogley, and Science and Projects Programme Coordinator Dr Nancy Bunbury, attended the "Capacity-building workshop for Small Island Developing States (SIDS) to achieve Aichi Biodiversity Target 9 on Invasive Alien Species" on 14th-15th June 2014 in Montreal. The meeting was organized by the Secretariat of the Convention of Biological Diversity in collaboration with the Global Environment Facility and the International Plant Protection Convention among other partners.

The workshop facilitated the exchange of information between SIDS on known invasive alien species issues with the aim of prioritising invasive alien species, their pathways and their management. The workshop also provided a forum for information on potential funding resources for invasive alien species work.

During the workshop, there were many excellent presentations and opportunities to discuss invasive species problems with international experts. The second day of the workshop involved a brain-storming session in which the participants, in site-specific, national or regional groups, drafted and presented proposals for invasive species projects. It was an eye-opening experience to learn about similar work underway or needed in other SIDS and to be able to share the lessons learned from Seychelles invasive species work. The workshop underlined that invasive species are a problem common to all SIDS, and this stimulated discussions on the potential for connections and synergies between these islands in resolving or addressing the problems. Many thanks go to the CBD Secretariat for organizing this important workshop and to all the excellent presenters and fellow attendees.



SIF participates in 35th anniversary exhibition



Participation in annual Horticultural show



President Michel visiting the SIF stand at the show © SIF

SIF participated in the annual national Horticultural and Agricultural show that was held on Praslin this month as part of the Seychelles National day celebrations.

The annual Horticultural and Agricultural show usually takes place on Mahé, but this year for the first time the honour was given to Praslin to hold this important national event. The aims of the show were to provide a platform of interaction for buyers and sellers and to showcase the wealth of produce available in Seychelles. Food producing entrepreneurs, artists and other socio-economic actors on Praslin and La Digue displayed their products with fruit, vegetables, flowers, plants, chickens, ducks, cows, goats, guinea pigs and other animals all on show.

The SIF exhibition stand showcased the six different palm species found in the Vallée de Mai World Heritage Site. On display were specimens of the palms, including Coco de Mer nuts and an inflorescence, plus some items that can be made from Coco de Mer. The show was well attended with many people visiting the SIF stand, including SIF's patron the President of the Republic of Seychelles, James Alix Michel, and his delegation. The President was delighted to chat to some of the Vallée de Mai staff about the palm species and the importance of this biodiversity to the Seychelles. The show was an excellent opportunity to raise local awareness of the importance of Seychelles' endemic flora, in particular the endemic palms and we look forward to participating again next year.



The SIF stand at the exhibition © SIF

SIF participated in a small exhibition in Victoria to celebrate the 35th anniversary of the designation of some of Seychelles' National Parks.

Praslin National Park, Curieuse, Baie Ternay, Port Launay and Morne Seychellois were all designated as National Parks in 1979. To celebrate 35 years of protection Seychelles National Parks Authority (SNPA) held a small exhibition at Independence House in Victoria.

The exhibition was opened by the Minister for Environment and Energy, Professor Rolph Payet. To showcase the research and protection that had been invested in these parks, SNPA invited their partners to display and promote their work at the exhibition. SIF participated with a stand focussing on the Vallée de Mai and the importance of reducing the threat of invasive species to this palm forest. With the Vallée de Mai nestled in the heart of Praslin National Park, SIF has enjoyed a long-standing relationship with SNPA and we were delighted to show our support at this event.

SNPA had also held a public photography and short story competition with the theme 'My National Parks Experience'. There were many excellent entries reflecting the variety of experiences and uses of the national parks.

SIF on Twitter!



Continuing the development of SIF's communications and social media tools, we have launched our official page on Twitter! We hope that Twitter will allow us to reach and communicate with an even wider audience. 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 can follow all of our latest updates and news.



Don't forget to join us on our Facebook page that was launched last year! The page has regular news and updates on research and events at both World Heritage Sites and has been well received. 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!

Articles contributed by: *Rowana Walton, Nancy Bunbury, Maria Brioché, Heather Richards, Martijn van Dinther, Janske van de Crommenacker.*