Nuti Pepa
Titema-Tianuare 2015-2016

We at Te Ipukarea Society hope you had a happy and relaxed Christmas and New Year season. This newsletter will cover activity from December 2015-January 2016. We look forward to working on a number of projects in 2016 which will help strengthen and preserve our beautiful island environments in the Cook Islands.

Through our monthly newsletters we will keep you updated with these projects and other activities which our staff and members are involved in!

Jolene Wins Woman of the Month

One of Te Ipukarea Society's founding members, Jolene Bosanquet, has been recognised for outstanding service to the Cook Islands Community, spanning nearly 30 years, by being awarded the first Woman of the Month award for 2016. Apart from her passion for the environment put into action through Te Ipukarea Society, Jolene was also recognised for her contribution to sustainable tourism, the Business and Professional Women's Association, the Pan Pacific South East Asia Women's Association, sailing, and Cook Islands Virtues. Nobody deserves this award more than Jolene.

Manager of the Bank of the Cook Islands, Vaine Arioka, presents the photograph of Jolene which will hang on the Woman of the Month Wall of Fame at BCI's main branch in Avarua. Looking on are Woman of the Month committee members Neti Tamarua Herman and Lydia Sijp.

Te Ipukarea Waste Management Project Kicks Off

It is no secret the waste problem in the Cook Islands, particularly on Rarotonga and Aitutaki, is an urgent issue effecting our environment. In 2016, TIS will implement a new waste management programme to address this problem. The project has three main areas:

1) Teaching youth the importance of using natural resources to fertilise the land through worm farms and compost bins. TIS has plans to install a brand new worm farm and compost bin in each school in the Cook Islands, as well as teach the students how to best utilise these scrap-consuming devices. TIS staff will also educate students about how to use the worm-tea and compost which are produced by the worm farm and compost bins, in order to fertilize their school or home gardens and boost plant growth. The Enviro-Squad of Araura College were the first school to receive a worm bin in late 2015.

2) The second part of the project will be to propose beneficial initiatives about efficient recycling systems, including an ‘Advance Recycle Fee’ which could finally
solve the Cook Islands’ dire electronic waste problem. TIS is well qualified to do this, as they set up the first recycling centre based on Rarotonga in 1996. Currently there is no permanent system in place to dispose of electronic waste (e-waste) items in the Cook Islands. TIS aims to change this, and wants to help government introduce the ‘Advance Recycle Fee’ in order to fund an e-waste recycling centre.

Liam Attends Meeting for Marine Protected Areas

From 7-11 December Liam was in Fiji representing Te Ipukarea Society and Marae Moana at a regional meeting for Large MPA’s titled Strengthening Cooperation between Large Marine Protected Areas in the Pacific. Paul Allsworth was also there representing Cook Island traditional leaders (Koutu Nui). The meeting lasted for three days (8th-10th December) and involved a number of presentations from Paul and Liam, as well as engaging with the other participants in order to achieve the meeting’s goals and to learn from one another. This meeting is held annually and organised by IUCN Oceania Regional Office.

The meeting had a number of outputs, including the sharing and updating of information regarding conservation activities occurring in respective MPA’s (including marine spatial planning, biodiversity data, invasive species eradication and restoration of species and habitats) and exchange of lessons learnt between established MPA’s with those in early implementation stages (eg. Marae Moana). The meeting provided a forum for exchange of knowledge on legal aspects of MPA’s and discussed ways to combat illegal, unreported and unregulated (IUU) fishing. Paul and Liam also helped to plan for the next proposed meeting which will be in the Cook Islands this year.

Vaine Angaang Toa – an Enabled Women’s Collective (under the Creative Centre) has provided their support for Rarotonga’s switch to biodegradable containers, by adding biodegradable containers to their products for sale at their Punanga Nui Market stall. This will be of convenience to market vendors who currently have to travel to pick up more takeaway containers when stock gets low. Sales of these environmentally-friendly containers will generate a bit of income for Vaine Angaanga Toa.

This picture taken at the Muri night market highlights the polystyrene/foam container problem in the Cook Islands.

3) An awareness programme targeting food vendors in order to replace polystyrene takeaway containers with biodegradable ones. Usually made out of bamboo or sugar-cane fibres, biodegradable containers are proven to be more environmentally friendly than polystyrene containers. In the right environment, biodegradable containers will break down within a year, while polystyrene containers take hundreds of years to break down (and even then, still only into tiny little pieces!).

Paul and Liam (front, centre and far right) listen to one of the presentations at IUCN ORO in Suva.
What Can We Do With Muri’s Algae?

With all the talk about the negative impacts of the seaweed in Muri, it was good to read the letter in Saturday’s (16th Jan) Cook Islands News about a possible use of the seaweed. Unfortunately, while some Caulerpa species, such as our sea grapes rimu, are edible, it is unlikely that this Caulerpa species, or the other problem seaweed, Boodlea sp., can be eaten. However a possible use for the weed that washes up on the beach, or collected from in the water, is in our gardens, it can be used as a mulch, compost and fertilizer for home gardens and even in agriculture plantations. A quick Google search reveals many overseas examples where this has been done, and hints on how best to use it.

Seaweed is known as one of the best soil conditioners because it contains so many trace nutrients. It is not so much of a fertilizer as a tonic, because it contains low amounts of nitrates and phosphates, but is high in trace elements. It also seems like the salt content may not be a problem for plants, based on the available information.

Apparently the sand and salt water clinging to it contains essential elements that will benefit plants, unless you happen to have a high sodium content in your soil already. If in doubt, spread it out and leave it to wash in the rain. Because it is slightly alkaline, it is also not recommended for some plants that like a lot of acid such as rhododendrons and strawberries.

To make a plant tonic from seaweed soak it in a container of fresh water for several weeks. You can put the seaweed into an old onion sack first, so you can later squeeze it out like a tea bag! This solution will contain all the trace elements and nutrients released from it. It is quite concentrated, so only add about 500mls to a full bucket of water and pour this around your plants. You can also spray it on the leaves. Then use the seaweed that was soaking as a mulch. One problem with this is that rotting seaweed may not smell very nice, as some residents around Avana have noticed recently! So keep it away from your house and neighbours, or put an aerator in the bucket, such as those used in home aquariums. To solve the problem of the excess seaweed growing in the lagoon, we need to significantly reduce the septic tank and agricultural runoff into Muri.

Meanwhile, people can at least get some benefit from it by walking along Muri beach and filling some bags with free mulch! The tourist resorts in the area would no doubt be very happy for the public to help themselves! However, we do suggest an internet search first to make sure we have not missed any risks!

Liam Learns While On Holiday Part 1 - Tawharanui

While in New Zealand for the Christmas holidays, Liam participated in two separate work attachments in the fields of biosecurity and conservation. The first of which was a three day attachment at Tawharanui Regional Park and the second was with Flybusters Antians (FBA) during the annual National Invasive Ant Surveillance (NIAS) programme, also for three days. While at Tawharanui from the 4th-6th Jan, Liam spent time with three Auckland Council Park Rangers (David on Monday, Maurice on Tuesday and Lois on Wednesday) to learn more about how the rangers run this regional park and the conservation activities that take place.

Tawharanui is 90km north of central Auckland and is New Zealand’s first integrated open sanctuary – where
farming, recreation and conservation of native species combine behind a predator proof fence. During Liam’s time at Tawharanui, he was given a tour of the Council buildings and native tree nursery, observed public relations between rangers and campgoers, performed maintenance work, fed endangered Takahe, and assisted in re-baiting and setting of baitlines. Liam took many ideas and skills away from this attachment which may be of benefit to the Cook Islands and would like to thank the Park Rangers for being such great hosts and Matt Maitland and Steve Cranwell for organising the placement.

Ranger Lo retrieves a rat from a DOC 200 trap just outside the pest-proof fence.

Part 2 – National Invasive Ant Surveillance Programme

From 11th–13th January Liam worked with FBA, who are contracted to do invasive ant surveillance work at a number of sites at Auckland. NIAS is a very successful programme which has been fine-tuned through trial and error since its inception in 2001. The survey is undertaken during January and February when ants are most active and it is carried out at every international port in New Zealand. While Liam was with FBA they were based at the Auckland Airport. A group of university students are employed by FBA over summer and Paul Craddock leads the team.

Paul briefs the team of surveyors before they start their routes. Below, the use of GPS technology benefits the programme greatly.
The process of ant surveillance starts with the laying out of baited specimen pots – alternating between protein (peanut butter, oil and sausage meat) and carbohydrate (cotton dipped in sugary water) at spaces of 10 metres. The students carry a GPS which has a barcode scanner, and each pot is scanned upon put-down, this provides data which is used to create very impressive maps of the surveyed areas.

The pots are left for two hours for ants to find the bait before being picked up and scanned again. At the end of the day hundreds of specimen jars are taken back to FBA diagnostics for identification. Liam found it very interesting working in the laboratory identifying ants, and on the third day he was introduced to Disna Gunawardana from Ministry of Primary Industries and given a tour of the MPI entomology laboratory and shown their invasive species specimen collection. Lastly, Liam was introduced to Souad Boudjelas of Pacific Invasives Initiative and had a very productive meeting with her. Liam would like to thank Paul and Disna for hosting him and Souad for organising the attachment.

Aside from having solar-powered home and vehicle, they have converted all lighting in their home to LED lighting – which are known to use much less electricity than traditional lights. The couple also informed TIS they have a net-metering contract with Te Aponga Uira (the country’s electricity provider) where any excess electricity generated by the panels is turned into credit which can be used when demand exceeds supply (resets annually). Through daily recording, John and Helen have been able to monitor system performance and even create graphs to show accumulated energy created by the solar panels.

Rarotonga Couple Leads the Way in Solar Power

Te Ipukarea Society members John Hay and Helen Henry have had solar hot water heating in their home since its construction in 1994. After 21 Years of zero maintenance, the single panel unit finally needed replacing in 2015! Also in 2015, the couple installed a 10 panel 2.5 kilowatt DC solar system with 2kW inverted AC system to cover their household electricity needs including energy to run their new car!

In 2015 the couple replaced their petrol-fuelled car with an all-electric 2012 Nissan Leaf. According to the couple, the on-the-road cost (shipping to Rarotonga and all additional expenses) was $30,000. After two hours of charging, a fully charged battery will allow the car to travel 160km, the equivalent of driving five times around Rarotonga!

Helen’s car runs on electricity created by solar power – no emissions!

We would like to thank John and Helen for sharing in their successes with solar power and for being awesome examples of using renewable energy to reduce their impact on the environment and also save money.

Thanks for reading our newsletter, stay tuned for February’s edition!

Ka kite, the TIS team.