

PII NEWS

JUNE 2013

This summary of invasive species management activities undertaken by people and agencies that the Pacific Invasives Initiative (PII) works with is collated and circulated by the PII Team. Contributions are welcome. Thanks to all those who contributed to this one! Feedback is also welcomed - contact either the PII Team (pii@auckland.ac.nz) or the people directly involved in projects. The views expressed by authors are not necessarily those of PII. Visit our website or find us on Facebook for more information.

PII ACTIVITIES

Pacific Invasives Partnership Annual Meeting

This year's meeting was hosted by the Secretariat of the Pacific Community's (SPC) Land Resource Division in Nabua, Suva, Fiji, from 10th to 12th April 2013. A total of 15 partner organisations were represented at the meeting: BirdLife Pacific, Conservation International-Pacific, Island Conservation, Invasive Species Specialist Group (ISSG), International Union for the Conservation of Nature, Landcare Research, PII, Pacific Invasives Learning Network, Micronesia Regional Invasive Species Council, SPC, Secretariat of the Pacific Regional Environment Programme (SPREP), US National Invasive Species Committee and University of the South Pacific (USP). Also participating in the meeting were representatives from the Fiji Departments of Environment and Forestry and the University of Guam.

The meeting was productive and started with a series of updates and discussion on major regional and international initiatives that took place in the preceding months, such as: engagement with the Pacific Islands Forum; development of a regional strategy for invasive species management; the current GEF-PAS regional invasive species project and the Micronesia Biosecurity Plan; input on invasive species to review and update of the World Bank's safeguard policies. This was followed by exploring, and agreeing to develop, a regional invasive species programme for GEF-6 and the first step towards this will be to get the concept endorsed at the SPREP meeting in September. How to re-energise the Pacific Ant Prevention Programme and facilitate the implementation of the Pacific Biocontrol Strategy were also discussed. A significant part of the meeting was dedicated to planning PIP's contribution to the 9th Pacific Islands Conference on Nature Conservation and Protected Areas in late November.

As the official Invasive Species Working Group of the Pacific Roundtable for Nature Conservation, PIP is responsible for tracking progress being made on the invasive species component of objective 4 of the strategy: "Manage threats to biodiversity, especially climate change impacts and invasive species".

A small group of partners who were participating at the CEPF End of Term Evaluation (see below) met on Thursday, 18 April to brainstorm the concept for the regional invasive species programme. A group was formed to further develop the concept for the programme.

PII is delighted to introduce Josua Wainiqolo from SPC, as the new PIP Chair. Josua has taken over from Souad Boudjelas from PII, who chaired PIP for the past 3 years.

CEPF End of Term Evaluation Conference

PII participated in the End of Term Evaluation Conference of the Critical Ecosystem Partnership Fund (CEPF) for the Polynesia-Micronesia Biodiversity Hotspot in Suva, Fiji, 15 – 17 April 2013. This conference brought together 58 representatives of 35 civil society organisations from 13 Pacific Island Countries and Territories.

The conference was an opportunity to reflect on the outcomes of the 5-year, US\$7 million investment to help preserve the hotspot's threatened species and ecosystems. There was general consensus that CEPF was successful in catalysing conservation action on the ground throughout the hotspots and resulted in many successes, not only in terms of biodiversity conservation but also in strengthening civil society.

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Of note, is the large number of projects targeting invasive species, a strong indication of the seriousness of this threat to the hotspot's biodiversity and people and the region's willingness to address this threat. In fact, over 45% of the total projects investment was disbursed under the Strategic Direction 1: "Prevent, control, and eradicate invasive species in key biodiversity areas". As a result, a number of threatened species and sites have been protected through invasive vertebrate eradications or control, invasive plant management and implementation of biosecurity measures. Other positive outcomes reported by grantees included, increased capacity managing invasive species and engagement by communities in the issue.

Grantees strongly voiced to CEPF their wish that CEPF would undertake a re-profiling of the Polynesia-Micronesia Biodiversity Hotspot to build and consolidate the gains ob-

tained during the last 5 years.

PII recognises that CEPF has been pivotal in engaging civil society in invasive species management and increasing successful implementation of the on-the-ground action in the region. The CEPF has also been forward looking in recognising the need for technical support on the issue and ensuring that grantees have access to this through its partnership with PII, as invasive species management can be complex at best and can be risky at worst.

PII would like to take this opportunity to thank CEPF for their support to PII since 2005, and contributing to strengthening PII's role as the lead provider of technical support and capacity development for invasive species management in the Pacific islands region and making a difference.

From Fatu Hiva Island to New Zealand - in search of up-skilling in cat control

In May, following a request from the Ornithological Society of Polynesia "Manu", PII hosted Arthur Matohi for a week's visit to New Zealand. The purpose of the visit was to provide Arthur with an up-skilling opportunity in feral cat control. Arthur is Manu's field technician on Fatu Hiva Island in the Marquesas. His work focusses on the conservation of the endangered Fatu Hiva monarch (*Pomarea whitneyi*). Engaging the community in the conservation of the monarch and controlling rats and cats to reduce predation on them are significant components of Arthur's work. This work is essential for the survival of the monarch.

PII facilitated a 2-day visit to the Department of Conservation (DOC) Office in Twizel in the South Island during which, Arthur was able to discuss with DOC the cat control on Fatu Hiva and obtain technical advice on how to improve it. He also had the opportunity to hear about different conservation projects being undertaken by DOC that involve controlling feral cats and learn about general cat behaviour and home ranges, cat control techniques being used in New Zealand, cat monitoring techniques including spotlighting and the use of trained dogs to track feral cats. He also learned about different cat traps, how they work and advantages and disadvantages of each in terms of effectiveness, pricing and ease of purchase.

Back in Auckland, we arranged for Arthur to meet with DOC staff involved in island biosecurity in the Auckland region, to learn about measures to protect islands from re-invasion and new introductions of invasive species including engaging stakeholders and using trained detection dogs. Arthur also spent time with the PII team to discuss the conservation of the monarch, community engagement and what he had learned and what he would do differently as a result of the information he had acquired during his visit to New Zealand.

In Arthur's words (translated from French) "It has been a very enriching experience, I have learned a lot of new things. I enjoyed meeting new people and sharing ideas with them". He also said that he will not lubricate the cat traps (to stop them becoming rusty and stiff) with used car oil as he learned that its strong smell would probably repel cats; that he would discuss with colleagues at Manu the possibility of utilising more effective traps, as suggested by DOC staff, and look into increasing the control area to ensure better protection for the monarch.

PII would like to thank DOC for their continuing support to PII and its Pacific partners. PII's support for Arthur's visit was from a grant from the Critical Ecosystem Partnership Fund (CEPF).



Arthur with trained detection dogs used for island biosecurity (L) and predator trap (R) (Photo: Shaun Aitcheson)

National Invasive Species Strategy & Action Plan, Kingdom of Tonga

PII has been contracted by the Ministry of Land, Environment, Climate Change and Natural Resources (MLECCNR) to assist the Kingdom of Tonga with developing its National Invasive Species Strategy and Action Plan (NISSAP). The purpose of the NISSAP is to help protect the natural heritage and livelihoods of the people of Tonga.



NISSAP Stakeholders and facilitates (Photo: MLECCNR)

The work to date includes reviewing existing documents such as Tonga's National Biodiversity Strategy and Action Plan (NBSAP) and baseline information collected by ISSG, designing and delivering a questionnaire to gather additional information from key stakeholders and holding a 2-day (18-19 June) participatory workshop to identify priority native species and valued sites, invasive species priorities and management strategies.

The workshop was attended by 16 stakeholders representing: MLECCNR, Ministry of Agriculture, Fisheries, Forestry and Food, Ministry of Infrastructure and Civil Society for Tonga and SPREP's Invasive Species Adviser.

Using data collated by ISSG, stakeholders identified and prioritised the threatened species of Tonga and valued sites including protected areas and the invasive species affecting them. The ISSG Review identified 392 species as introduced, of which 150 are invasive. The status of the remaining species is not clear and work is required to clarify the status.

Stakeholders then agreed on the strategies for addressing priority invasive species and priority sites and drafted an Action Plan. The NISSAP addresses Theme 3: Species Conservation and Objective 3.3 Invasive Species of Tonga's NBSAP. The Guidelines for Invasive Species Management in the Pacific (2009) are being used to prepare the NISSAP. PII is now preparing the draft NISSAP and a second stakeholder workshop to finalise the NISSAP will be held in August after the completion of surveys to address some of the information gaps. Completion of the NISSAP is a deliverable for Tonga under its GEF-PAS Invasives project.

PII SUPPORTED AGENCIES

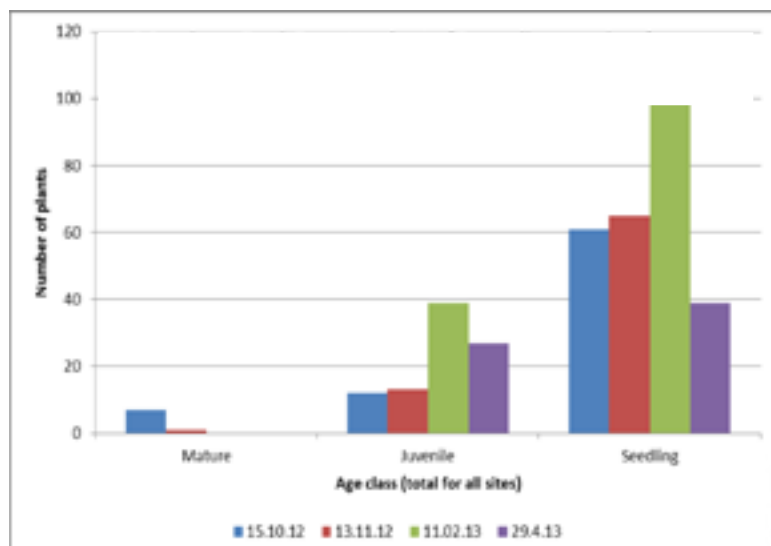
COOK ISLANDS: Red Passionfruit (*Passiflora rubra*) Management From Basilio Kaokao, National Environment Service

In the late 90's red passionfruit (RPF), *Passiflora rubra*, was identified as an invasive plant on the Island of Mauke, Cook Islands. It was located in only one area and the leaders of the Island as well as the Environment Committee decided to remove the plant. Large plants were removed, however no monitoring and follow-up work was conducted.

In 2008, I was employed as the Environment Officer to manage RPF. I tried several methods in an attempt to manage RPF such as: pouring off seawater into the makatea (uplifted coral reef), hand-pulling and applying Roundup, with no success. RPF is still found only in one place on Mauke but it is very difficult to manage due to the fact that it grows between cracks in the makatea.

In 2012, I attended the PII Invasive Plant Management Training in Samoa. From this training I learned the importance of collecting data to assist my management decisions and check progress. Prior to this training no data had been collected on the different management methods and their results. I also learned the importance of on-going surveillance to make sure that any plant germinating from the seed bank is removed. The following graph shows the results of work completed. PII are planning a visit to Mauke in July, hopefully then we can discuss other management options for RPF.

Number of plants of RPF removed on Mauke in each age class from October 2012 to April 2013.



Cook Islands continued ...

This year on the 24th March, wedelia (*Sphagneticola trilobata*) was found on Mauke. It had covered an area of five square meters by the main water tanks. The plants were uprooted using a spade and left in the sun to dry and for the people to see. A public notice was aired on television asking people not to transport the plant. We acted very quickly against the incursion of wedelia, and we are still maintaining surveillance to make sure that there are no additional incursions.

Fiji: Invasive Plant Activities 2013

From Baravi Thaman, National Trust of Fiji Islands

The National Trust of Fiji (NTF) has been working on invasive species management at a number of their natural heritage sites in Fiji with assistance from PII. These include the Sigatoka Sand Dunes National Park, Monuriki Island and Yadua Taba Crested Iguana Sanctuary. The end of 2012 was a tough period for invasive work, mainly due to the occurrence of Tropical Cyclone Evan in December. Activities however recommenced with the start of the New Year.

Monuriki Island Habitat Restoration Project

Goats and rats have been removed from Monuriki in the Mamanuca Group in a joint operation conducted by BirdLife International's Fiji Programme and NTF, aimed at protecting unique wildlife on Monuriki. Monuriki was the location for the film "Cast Away", starring Tom Hanks. The 41 hectare island is home to less than a hundred critically endangered Fijian crested iguana (*Brachylophus vitiensis*) and nationally significant breeding colonies of wedge-tailed shearwater (*Puffinus pacificus*). The rapid decline in the iguana population was a result of major habitat degradation by goats. In 2009, BirdLife International undertook surveys that showed that rats and goats were also posing severe threats to the breeding seabirds on the island (For more information see PII News September 2010, March 2011 and September 2011).

To deal with these threats, NTF and BirdLife International carried out an intensive and complex operation to rid the island permanently of goats and rats. Further funding was obtained from CEPF to extend conservation work on Monuriki, specifically for on-going biosecurity for goats and rodents and to deal with the increase in invasive plants following the removal of goats and rats.

A vegetation survey was conducted by Randy Thaman and Shingo Takeda of USP and a prioritisation exercise identified the suite of invasive plants to be managed: *Sphagneticola trilobata*, *Mikania micrantha*, *Piper aduncum* and *Merremia peltata*.



Monuriki Island (Photo: BirdLife Fiji)

Cyclone Evan that occurred in December 2012 may have made matters worse by assisting the dispersal of seeds and burying invasive plants roots deeper, making it more difficult to uproot them, especially those on sandy beaches.

Activities carried out on all visits to the island by the weed team now include the hand-pulling of *Sphagneticola trilobata*, *Mikania micrantha* and *Cenchrus echinatus* that occur on three beaches as well as the continuous assessment of the spread of *Merremia* until an effective control method is agreed upon.

After three site visits, and the initial removal of two juvenile individuals in 2012, no further individuals of *Piper aduncum* have been observed which is a good step towards its eradication.

A nursery for native tree seedlings has been constructed within the school compound in the village of Yanuya, on neighbouring Yanuya Island and 100 native tree seedlings were potted to kick-start the initiative. The seedlings will be used by the school in tree planting projects on Monuriki in 2013 and is managed by the volunteer ranger and school staff.



Mikania micrantha (Photo: NTF)

Yadua Tabu Crested Iguana Sanctuary

Herbicide trials on a total of 270 individuals of the invasive plant *Leucaena* (*Leucaena leucocephala*) were carried out on Yadua Tabu in October 2012. Trees were treated under three concentrations (100%, 75%, 50%) of the herbicide Glyphosate (GLYPHOSATE 450). Monitoring of the treated trees was carried out by the ranger and preliminary observations 13 days after initial treatment showed that the herbicide was taking effect. These herbicide trials are to establish the most effective and economical method for the control of *Leucaena* on the island are part of the wider Yadua Tabu invasive plant project.



Yadua Tabu Crested Iguana Sanctuary (Photo: Baravi Thaman)

Since the initial herbicide trials, no further progress has been made due to a couple of factors. Firstly, the devastation caused by tropical cyclone Evan to the islands of Yadua Tabu and neighbouring Yadua put a halt to most conservation activities in the area, as relief efforts needed to take priority. Secondly, the illness of the senior ranger put him out of action for a couple months, resulting in no monitoring of the treated plants. Following cyclone relief efforts and the return of the ranger to full health, monitoring of the treated plants recommenced and unexpected effects were seen. It was observed that the majority of treated plants had sprouted from the base of the trunk. Initial thoughts were that this could be due to the diminishing effects of the herbicide due to heavy rainfall diluting the concentration of herbicide in the plant system. However, other factors may have also contributed to this regrowth, such as incorrect application method of the herbicide. Further training and practice in this area is required by the weed team.

FRENCH POLYNESIA: First control campaign for *Acridotheres tristis* and *Pycnonotus cafer* on Tahiti Island, 2012

From Susana Saavedra-Cruz, Thomas Ghestemme & Caroline Blanvillain

Susana Saavedra, an invasive bird management expert, was contracted by la Société d'Ornithologie de Polynésie (SOP Manu), to reduce myna (*Acridotheres tristis*) and bulbul (*Pycnonotus cafer*) abundance and their interactions with the critically endangered Tahiti monarch (*Pomarea nigra*).

Because of the difficulty of controlling these two species in the forested valleys, monarch habitat, the aim of the invasive bird control was to decrease the number of myna and bulbul entering the valleys. In 2012 intensive trapping was carried out over a period of 6 months in the urban areas near to the entrance of the valleys, as these species prefer disturbed environments. (For more information, see PII Newsletter, Dec. 11). The work led by Susana involved SOP Manu staff, two paid workers, 69 local volunteers trapping in their own gardens, two other local NGOs and two municipalities of Tahiti. Trapping was conducted in two phases: initially building and testing the best trapping systems on the island (June-July) and then, the control campaign itself, running from August 13th to December 21th 2012, 5 days a week.



Fig 1: View of two monarch valleys with the urban area below (Photo: Google earth)

The majority of volunteers required staff supervision and without this attention from the staff, the trapping rate would have decreased. Other types of control were tested in the valley: trapping, shooting and poisoning. Only poisoning in one valley seemed to be effective but it is difficult to quantify the numbers of birds removed by this method.

Main results of the trapping campaign

A total of 2,735 mynas and bulbuls, were trapped in urban areas in less than 5 months. Figure 2 shows the different species trapped during the campaign. It also indicates the high specificity of the traps on the two targeted species.

Point abundance indices of both species inside the monarch territories showed a significant decrease of these invasive birds following the trapping period, see Fig. 3. Myna index was reduced by 4 and bulbul index by 2.5.

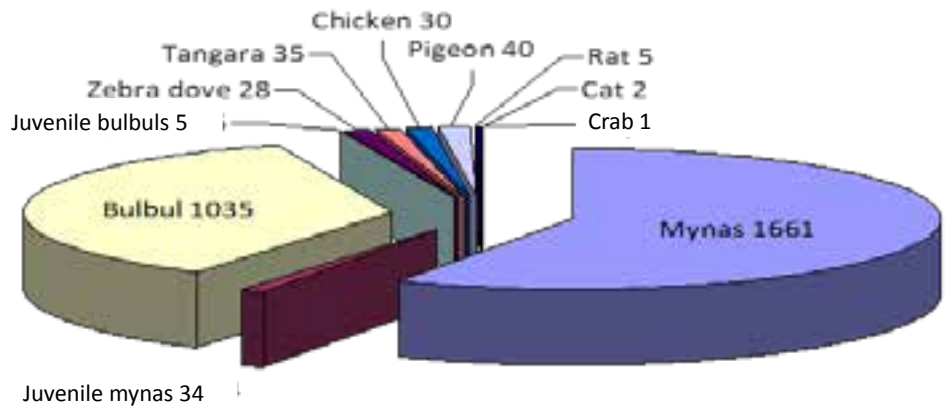


Fig 2: Number of species trapped during the campaign

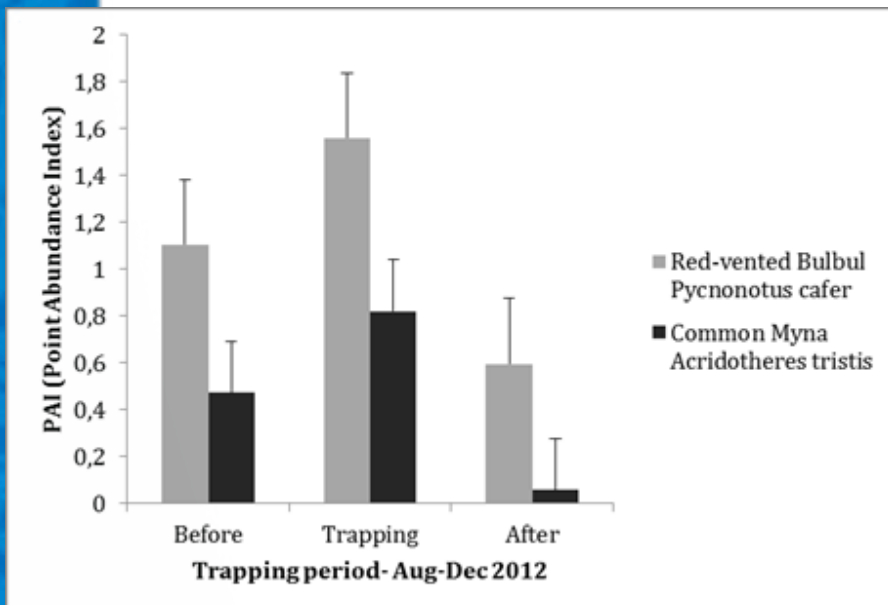


Fig 3: Point abundance index for both species inside the monarch territories (From Withers 2013)

Since February to May 2013, NO mynas have been observed in Papehue valley, although some pairs remain in the Maruapo valley. Intensive trapping in the urban areas near the monarch valleys allowed the mynas to move from valleys to their preferred areas. This is less evident for bulbul which can live in the forest easily.

Outcomes 2012-2013:

- There were no monarch nest failures this year.
- Monarch territories increased by 29%.
- A record of 10 young fledglings produced.
- There was a large community involvement with the trapping
- This operation led to a high level of interest in monarch conservation from the inhabitants of Tahiti (207 phone calls in 2 weeks after a press release).

Conclusion

This experimental campaign has been successfully completed with the resources available. The operation in the urban area started to have effects in the valleys 2 months after the start of trapping. The second round will start in July 2013 and trapping will continue as well as attempting to remove the remaining bulbuls from the forest. Another aim for this year will be to train people to become area “coordinators” so that the operation can be conducted again in 2014, using only volunteers.

Acknowledgements

This project was funded by the European Union, the French Polynesia Government, National Ministry of Environment and CEPF. Some local societies also supported the project financially in 2012 (OPT, EDT, Reva Tahiti Magazine, Tikiphone). PII and BirdLife Pacific must also be acknowledged for their help in the reviewing process and in general for their assistance on SOP Manu predator control and biosecurity projects.

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Traps used to capture the myna and bulbul, these were developed by Susana and improved by the local team during the trial period (L). Local communities were happy to help with the project because of the effect the invasive birds were having on their fruit (R) (Photo: SOP Manu)

REGIONAL UPDATES

MEXICO: Community involvement on island restoration and conservation

From Federico Méndez Sánchez and Alfonso Aguirre Muñoz, Grupo de Ecología y Conservación de Islas, A.C.

It is common knowledge that for any conservation project to be successful, it has to be recognised and strongly supported by the local community. This is true for projects occurring on inhabited islands worldwide. In particular, community involvement is crucial to sustain the benefits for island biodiversity derived from strong conservation actions such as eradications. Ultimately, it will be the islands’ inhabitants —with the aid of the government and local NGOs— the ones responsible for keeping the islands pest-free. Therefore, community awareness and environmental outreach must be incorporated as part of every project manager’s tool kit, and should be put into practice from the start of the project. This will not only contribute to having public acceptance of the project but will also facilitate engagement by incorporating the community in the decision-making process. The fundamental idea is that local people have a sense of “belonging”, so they can assume the project as their very own, facilitating, for example, the implementation of, and the compliance with, biosecurity measures.

The above can be exemplified through different notable cases that are occurring on some Mexican islands. Along the Pacific Ocean, off the Baja California peninsula (northwest Mexico), a group of fishing cooperatives has been sustainably harvesting valuable marine resources such as abalone and lobster in the highly productive waters around islands like Guadalupe, Cedros and San Benito. These cooperatives — grouped under a federation called FEDECOOP— are amongst the oldest (1930s) in the

country, being responsible for the contemporary economic and social development of this particular region. For decades, thanks to the federal government's willingness and facilitation, and the support of local NGOs, the FEDECOOP cooperatives have been managing their fisheries under a community-based co-management arrangement with the government, which has had positive outcomes. For instance, the lobster fishery is growing gradually, achieving its maximum recorded catch in 2012. Because of their good practices, they have been internationally recognised by the Marine Stewardship Council (MSC) as a sustainable fishery. The key to this remarkable successful case is the fact that the community (fishers) and the government have a constant and open dialog, which goes from the assessment of stocks in joint collaboration, to lobbying together for changes in regulations.

Besides the obvious reasons in conserving the islands' marine resources on which their livelihoods depend, these cooperatives have gone one step further to also protect, conserve and restore the islands they call home. Together, the cooperative "Pescadores Nacionales de Abulón" and "GECI" (Grupo de Ecología y Conservación de Islas, a Mexican NGO) have been lobbying for the creation of the Baja California Pacific Islands Biosphere Reserve, which aims to protect more than 20 islands and their biodiversity. If enacted, all of the islands in Mexico (>1,600) would be protected by law. As well, with this same cooperative GECI has been planning for the eradication of an introduced mouse on San Benito Oeste Island, where they have a fishing village. Interestingly, they not only support the project, but contribute with in-kind resources related to accommodation, transportation, and operational logistics.

Another cooperative, "California de San Ignacio", has been our key partner in restoring seabird populations —through social attraction techniques— that were extirpated by rats and cats on Asunción and San Roque islands. On both cases, thanks to a continuous awareness and outreach programme, cooperatives' board members as well as fishers and their families alike recognise the value and importance of their islands, and understand the threats that invasives pose to these ecosystems. Therefore, they are now starting to understand the benefits of island biosecurity, which GECI is reinforcing, mainly through education.

For example, we recently conducted an "Environment, Birds and Art Week" at the fishing community of Bahía Asunción, near Asunción and San Roque islands. The purpose of the event was to encourage appreciation and care for the seabirds that nest on these islands with the slogan "Vivan las Aves" —which translates to "Long live the Birds". The programme included educational sessions on diverse topics, such as seabirds, islands, the history of the community and its bond with the environment. Activities took place both in the classrooms and in the outdoors. The latter included: bird watching, beach cleaning campaigns, and mural paintings. Furthermore, different and original games were designed for each educational level, from kindergarten to high school, such as: memory game, lottery, puzzles, colouring books, seabird figures for cutting and colouring, among others. Also, some artistic workshops were offered, such as music, creative writing, painting, drawing, and radio. An island biosecurity workshop took place as well, where a plan for the islands was drafted by members of the fishing cooperative.

Given the importance of community involvement on island conservation and restoration in Mexico, and in light of encouraging experiences as the ones briefly described here, GECI is developing a national education and communication programme to target all the communities that inhabit the islands, as well as those coastal communities that are located near them. We, as a group, strongly believe that only by doing so we will be able to keep the current pace in restoring our islands —with the overall goal of removing all invasive mammals by 2025, and maintaining them pest-free for the future generations. For more information please contact: federico.mendez@islas.org.mx or alfonso.aguirre@islas.org.mx



*Fisherman from the cooperative "California de San Ignacio" pulling up a bag with abalone delivered by the "hookah" diver.
(Photo: J.A. Soriano/GECI Archive)*



*Educational sessions with kindergarten children using didactic materials designed for learning about the islands and their birds.
(Photo: A. Marichal/GECI Archive)*

EXPERT OPINION

Effectiveness of padded leg hold traps for trapping feral cats

From Luciana Luna and José Mariá. Barredo, Grupo de Ecología y Conservación de Islas, A.C., México.

Trapping is one of the most effective ways to capture feral cats, which is why it is widely used for management and for conducting population studies. Leg hold traps (LGT) are very effective for this purpose. There are several types of LGT commercially available but one that has proven to be more humane (minimizing harm to captured animals) is padded. Other kinds of traps that have been used for capturing feral cats are cage traps (e.g. Tomahawk Live Traps) but their efficacy is limited to animals that are familiar with urban environments.

For capturing feral cats on Mexican Islands, the padded LGT (Victor Oneida Soft Catch No. 1 and 1.5) is the trap commonly used, and has been quite effective for management (eradication and control) programs, especially for cats that are difficult to capture with other methods.

The setting of the traps is one aspect that should be considered carefully. Cats are cautious and difficult to catch so it is critical to capture them in the first attempt to avoid them becoming trap shy.

Trap setting. The description of how to adjust traps to be used for the first time is detailed by the trap provider (Oneida Victor 2013).

- The first step is to secure the trap, attaching it to a rock, log, or something solid to avoid an animal running off with the trap.
- Next, the trap is set and placed inside a hole at ground level (Fig. 1 image 1). This is to stabilise the trap. It is important that nothing interferes with the trap once it is triggered by an animal; the use of a cloth to cover the trap pan is advised (Fig 1 image 2).
- The trap should be covered with material found in the surrounding environment (e.g. sifted soil, grass), trying to mimic the natural environment as much as possible. Large objects that could prevent the trap from closing completely should be avoided (e.g. sticks, pebbles, etc.). Setting up barriers (made of sticks or small rocks) helps to ensure that a cat will place its paw on the trap's pan to be captured (Fig 2).
- The traps should be checked as regularly as possible to minimise injury to trapped animals

Different methods have been described for setting traps to capture feral cats. From these methods, two have proven to be quite effective: the walk-through and the cubby (or cave) sets (Fig 2). The walk-through is typically set on trails used by feral cats, making some changes (narrowing the paths) to ensure that the animal encounters the trap. The cubby set method is preferable in some cases (i.e. to avoid capture of non-target species), and consist basically of setting the trap in natural or artificial places that simulate a cave with just one entrance. In the walk-through set a lure is optional but for the cubby set it normally has to be used to ensure a cat will enter it.



Fig 1. Setting a leg hold trap in three steps (Photos: J.M. Barredo)

Lures. Sometimes a good lure has to be used to attract animals to traps, especially in areas with low cat density. Typical lures used are either olfactory (smell) or auditory (hearing); visual lures are sometimes used as well, typically in combination with the first two. The olfactory lures can be commercial attractants or natural-based scents of attractive substances to cats (i.e. raw food, cooked food, catnip) or a combination of urine and faeces. The auditory lures are devices that emit sounds that attract cats to the trap. The efficacy of lures can vary depending on the site and season. Therefore, it is useful to do preliminary trials at the trapping site. On Mexican islands the baits that have proven to be effective have been Shellfish™ (Tomahawk Live Trap), fried fish (that remain attractive only for few days), fish oil and bobcat urine (Wildlife Control Supplies).

Euthanasia. There are several methods that can be used to euthanize trapped animals. One very effective way is the application of a lethal injection. Trapped cats are anaesthetised with Tiletamine/Zolazepam at 10-15 mg/kg (Zoletil®, Virbac) given intramuscularly (Virbac 2009) and euthanized with a heart lethal injection using potassium chloride (Kelefusin®, PiSA), at a dose of 75-150 mg/kg (AVMA 2013).

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Fig 2. A leg hold trap in the walk-through (left) and cubby set (right). (Photos: J.M. Barredo)



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