



PACIFIC INVASIVES LEARNING NETWORK

SOUNDBITES – NOVEMBER 2012

Pacific Invasives Learning Network
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The monthly electronic newsletter of the Pacific Invasives Learning Network (PILN)
– reporting on invasive news from PILN teams and the Pacific Invasives Partnership.
Past issues are available online: <http://www.sprep.org/piln>



This edition of the Soundbites is dedicated to our colleague, friend and mentor – Mauigoa Lui J. Bell.

With heavy hearts and great sadness – we advise of the sudden passing away of a dear friend, colleague and a servant to the people of the Pacific – Mr Lui J. Bell. Lui was SPREP’s Marine Species Advisor who spearheaded campaigns on cetacean, shark and turtle conservation. He successfully championed and coordinated the 2011 Pacific Year of the Dugong; his effort to raise the profile and awareness on our vulnerable marine species. Lui was not only a mentor but a good friend – humble, hard-working and dedicated to his family, conservation and to the Pacific peoples. He will be sadly missed by us

at SPREP, as well as his colleagues throughout the Pacific. Our thoughts are with his family. May you rest in peace Lui.



Every Action Counts
Reduce, Reuse, Recycle

PILN TEAMS AND COUNTRY UPDATES

Commonwealth of Northern Mariana Islands (source: Russell Benford)

Invasive species monitoring and response in the CNMI have increased significantly in recent months. In September, the CNMI’s Brown Tree Snake Program welcomed a new Supervisor, Ron Rozar (USFWS). Since Dr. Rozar’s arrival, the BTS Program has increased its monitoring of ports and cargo, and it continues to respond to calls on its 24-hour hotline (28-SNAKE). The BTS staff includes Marja Onni, Ike Seman, Joshua Lizama, Norbert Cabrera, Anthony Castro, and Shelwin Taisacan. They monitor 140 traps along the perimeters of the airports and seaports, and they inspect approximately 60 commercial flights, an increasing number of military flights, and all cargo shipments arriving at the seaports in the CNMI for invasive snakes.

In October and November, CNMI’s Wildlife Section and Conservation Law Enforcement Section are training their staff as rapid responders for BTS sightings. This team, including Tony Mereham, John Tagabuel, Marvin Pangelinan, Tyler Willsey, Paul Radley, and Russell Benford, are attending a three-week course on Saipan and Guam led by James Stanford (USGS). After completion, they will be joined by experienced responders from Guam to perform an incipient snake search on Saipan, and they will be included among a growing number of trained first-responders that can be deployed in the region for snake sightings.

Dr. Ross Miller from the University of Guam and Leroy Sablan and Rob Leon-Guerrero from Northern Marianas College are conducting regular surveillance surveys for little fire ants and red imported fire ants, as well as Asian citrus psyllids carrying citrus greening disease (CGD) on Guam, Rota, Tinian, and Saipan. Both ant species are present on Guam and Saipan. They are abundant on Guam but not on Saipan. Psyllids are present on Guam, Saipan, and Tinian, but not abundant on any of these islands. Most citrus on Guam appears to be infected by a virus that initially tests positive for CGD, but subsequent DNA sequence analysis reveals that the infection is a different organism.

Finally, the CNMI has appointed two new representatives, Ron Rozar from the Brown Tree Snake program and Russell Benford from the Wildlife Section, to the Regional Invasive Species Council.

Guam update (source: update at the RISC 2012 Meeting)



Guam highlighted that of the 100 worst invasive species published by the IUCN-Invasive Species Specialist Group – Guam has the unfortunate reputation of hosting 33 of them. For a small island country – this is a serious problem. Guam's Invasive Species Council (GISC) meets on a regular basis and continues to work with the Department of Agriculture to find innovative ways to fund an Invasive Species Coordinator and other GISC activities.

The Christmas season is again a time for heightened awareness on invasive species, as imported Christmas trees will be ideal vectors for unwanted hitchhikers. In the past, interceptions have been made on some trees carrying snakes, frogs and countless insects. Guam is imposing a new policy requiring pre-treatment of Christmas trees at the place of origin. Some awareness materials were prepared for this, see the PILN Soundbites (December 2011).

Guam continues the battle against the Little Fire Ants (LFA), which were discovered in November 2011. To date nine areas are now confirmed to have LFAs and still no resources to manage the problem. The exact distribution and the mode of entry remain unknown. There is hope that if LFAs remain in discreet sites then this could be managed. Managing green waste and plant movement will be key to prevent its spread.

The Coconut Rhinoceros Beetle (CRB) eradication efforts continue with island-wide surveillance, pesticide application and breeding site sanitation (removal of infested plant material). Biocontrol efforts include the distribution of a CRB-specific fungus, which saw the decline in numbers of CRB.

The Cycad Aulacaspis Scale (CAS) continues to be a serious threat to the endemic Micronesia cycad. Efforts to import a biocontrol (*Aphytis lignaensis*) from Hawaii are ongoing.

The Cocos Island Restoration Project is ongoing and positive results are showing the Ko'Ko' birds are thriving with eight chicks confirmed. So far no signs of rodents or snakes, however monitor lizards are still present. Their (lizards) removal from the island is also ongoing.

Guam continues to raise awareness on invasive species through campaigns such as appreciation of native species. Other awareness activities including the CRB eradication, the Go Native – Ko'ko' for Cocos, and the ListenUP Guam Coqui Frog. Public presentations, distribution of material and media spots to encourage the public to report invasive species through the hotline (475-PEST).

Brown Tree Snake control efforts are being led by the US Department of Agriculture, Wildlife Services in partnership with other agencies. The focus is around port areas to ensure that BTS is not being shipped via the transport network. The USDA's Wildlife Services and the national Wildlife Research Centre are embarking on a field test involving aerial application of acetaminophen baits across a 90 hectare forest.

Guam Pig Derby II and Pork in the Park Cook-Off

This event was held for the first time in April of this year, hosted by the Guam Coastal Management Program and the Guam Department of Agriculture. These agencies had hoped to do a couple of things: (1) To bring community-wide awareness of the destructive over-population of the wild boars and (2) create an event around an annual pig hunt that would invigorate sportsmen to get out there and help control the population of wild pigs. They succeeded. Although it was held in the dry season (not an ideal hunting time), over 70 hunters participated in the derby and over 300 people attended the free cook off at Ypao Beach the weekend following the derby. Prizes for best dishes were given by judges and by peoples' choice. Hunters loved it, chefs loved it, and the crowd loved it.

A second Pig Derby will be held December 1-2, with the cook off the following Sunday, the 9th. Why another one so soon? Well, the invasive ungulate problem is huge, so anytime is a good time to control that population - the forest habitats they destroy release alarming quantities of top soil upon the reefs. Additionally, December is a better time to hunt (wet season) and the hope is that it becomes an anchor December event in the years to come. The Micronesian

Image Institute (MII), is a non-profit organization that helps groups across Micronesia grow their conservation initiatives in the marketing and communications areas.

Republic of the Marshall Islands



The following update was provided by Henry Capelle on behalf of RMI – Marshall Islands Invasive Species Committee to the Regional Invasive Species Council meeting (Nov. 27-28, 2012).

- On-going monitoring and treatment of new species of caterpillar found at the Port Authority area at the Delap Dock;
- Ongoing control of mealy bug, spiraling whitefly and coconut rhinoceros beetle on Majuro and in the outer islands
- On-going monitoring of *Chromolaena*, *Merremia*, *Mikania* on Majuro, Bikini and Kili – monitoring is a problem due to transportation.
- Mimosa weed (*Mimosa pudica*) was sighted at the airport past Jerry Kramer’s dredging site – was sprayed with herbicide (Garlon 4). Needs to be followed up;
- Team from SPC assisted in conducting a Plant Health Survey and Weed Survey on Majuro and Arno and also on new pest on Papaya which is called Papaya Mealy Bug was confirmed from University of Guam.
- The Marshall Islands Biosecurity Bill is currently with the Attorney General’s office for review. A new submission to strengthen the aquatic component of the Bill was recently made.
- Marshall Islands 5 year Strategic Action Plan will need to be revisited and revised with assistance from SPREP

Recommendations/Way Forward

- MR&D to prepare cabinet paper for approval and then submitted to Nitijela for endorsement
- Pursue further collaboration and assistance (technical and financial) with regional and sub-region partners
- Implementation of the new GEF funded, IAS project in collaboration with SPREP – OEPPC in charge
- Need to seek assistance to revise the SAP on IAS for RMI 0 there are plans to undertake this year with SPREP, UNEP for RMI
- Develop new Invasive Species project for the GEF-5 cycle
- Assign the MR&D Chief of Agriculture and Quarantine as permanent and full-time invasive species coordinator for RMI (as per recommendation by the Chiefs)
- Funding for participation at future RISC meetings (through the GEF-PAS)
- Provisions of USD\$2500 towards its commitment to RISC

Yap



The following update was provided by Tamdad on behalf of Yap State to the Regional Invasive Species Council meeting (Nov. 27-28, 2012).

Yap continues to work on their key invasive species especially *Imperata cylindrica*, chain-of-love and African tulip. Work on *Imperata* started in the early 1970s, although it’s presence on Yap dates to the second World War. Yap identified land ownership as one of the key ingredients for addressing some of the invasive species problems. It provided opportunities to engage with local communities including involving chiefs to help with the work. About 60 acres of land is being treated and restoration effort includes planting of native trees and other soil-improvement trees. A small grant from UNDP – through the Sustainable Land Management is also helping with restoration.

One of the biggest challenges faced by Yap is the loss of momentum. It has been more than 20 years since efforts to manage invasive species started and there is a feeling of being over-whelmed by the issue. There is constant arrival of new potential invasive species, there have been exhaustive efforts to find new seeds/seedlings and there’s insufficient staff to manage a big area. There is also too many species with seemingly lack of prioritising – so staff are often distracted by other new species. Coordination is key to resolving some of this issues as well as sound planning.

Yap currently has a strategy for 2013 that includes securing additional funding to recruit more workers (especially with consideration to gender issues). There are also plans to divide the 60 acres into 74 sites, with two working groups, each to be assigned half of the sites each. Encourage the staff to work through positives incentives and bonuses.

Pohnpei – iSTOP met

The invasive species taskforce of Pohnpei (i-STOP) held their meeting on 27 November. The team discussed many issues including the update provided by Francis on the CABI-Invasive Species Compendium training, which she attended.

Kosrae update

The following update was provided by Leonard Sigrah and Erick on behalf of Kosrae State to the Regional Invasive Species Council meeting (Nov. 27-28, 2012).

Kosrae's focus is on the Giant African Snail, Citrus Canker and *Mikania micrantha*. Efforts on the Giant African Snail include removal of the snails from 18 sites. Awareness on how to prevent the spread of the citrus canker was also carried out. The control of the *Mikania micrantha* – known as mile-a-second in Kosrae is also a priority. Efforts are also being made to control other pest and invasive species.

Some pressing issues that Kosrae is dealing with includes the infestation of the white-fly. The identification is currently being confirmed by SPC. The fly affects many important crop plants, especially the Kosraean *sakau*, Solanaceae and other ornamentals. Surveys were carried out and it was found to be prevalent, present in most communities.

Kosrae successfully controlled four of the 18 sites surveyed for the Giant African Snail in 2012. Some financial support was provided by SPC to develop awareness materials for the GAS. Technical support was also provided by SPC's FSM based office to undertake survey and control efforts for the whitefly.

Assistance was also provided by SPREP that allowed the participation of Kosrae staff to attend meetings at the 3rd PILN meeting, as well as the CABI-Invasive Species Compendium Training.

Biggest challenge for Kosrae's invasive species battlers is the participation of local communities.



Top picture – Giant African Snail. Middle picture – Mikania micrantha. Lower picture – Citrus canker affecting citrus trees.

Fiji

Be on the lookout for Fiji's new bank notes and coins, soon to be released in December. The new change will include getting rid of the two-dollar note for a two-dollar coin. Gone will be Her Majesty Queen – Elizabeth II to be replaced with Fiji's native flora and fauna. Some of the species to be depicted are endangered – hopefully will help our friends and communities working towards conserving our island species.

Hawaii (source: Jono Blodgett)

State of Hawaii, Dept. of Land and Natural Resources, Aquatic Invasive Species

Alien Invasive Algae:

The Department of Land and Natural Resources (DLNR) Aquatic Invasive Species (AIS) team just began mechanical removal of alien invasive algae on the last of three large patch reefs in Kaneohe Bay, Oahu. Since late August, over 92,000 pounds of smothering seaweed has been removed from this reef which is ~29,000 square meters in area.

Removal of invasive algae on the first two reefs was completed in March and early August respectively. Since then, hatchery raised collector urchins (*Tripneustes gratilla*) (Photo 1) have been



Photo 1. Hatchery raised collector urchins (*Tripneustes gratilla*) eating alien invasive algae.

steadily transplanted to these reefs to prevent the regrowth of this algae with over 35,000 urchins transplanted to the first reef and over 15,000 urchins transplanted to the second reef. Our goal is to maintain an urchin density of 2/m² and we will continue to monitor all native and invasive algae, recruitment of new coral, and abundance/diversity of fish.

In addition, The Nature Conservancy completed the building of the second Super Sucker barge that will work along with the State's barge to help in the removal of invasive algae. This will allow us to take on the offensive and begin to push back current growth and prevent the further spread of invasive algae outside of Kaneohe Bay.

Japanese Tsunami Marine Debris:

With the first arrival of marine debris from the March 11, 2011 Japan tsunami, the AIS team has been busy responding to reported items for possible introduction of invasive species via marine debris. The first confirmed tsunami item to arrive in Hawaii was on September 18, 2012. A blue box with markings "Y.K. Suisan" (Photo 2) used to transport sea food was reported to DLNR floating off Waimanalo, Oahu. The box was retrieved and samples of the biofouling were taken and revealed goose-neck barnacles and pelagic crabs that are commonly found in the Pacific, therefore there was no AIS concern. The box was taken to Sand Island to Anuenue Fisheries Research Center and decontaminated where it is kept today. DOH tested for radioactivity and did not detect any concerns (below background levels).

On September 20, DLNR received a report from local fishermen that reported a large floating concrete dock North of Molokai. A range of state and federal agencies quickly immobilized to discuss options for responding to the report, with the first priority of securing a geographical location. A number of flights went over the area where the dock was last sighted, including the north shores of Molokai and Lanai (to confirm the dock had not made landfall) and unfortunately the dock was not located.

Possible options for dealing with the dock could have been

Once located, putting a tracking buoy on the dock to track its trajectory.

Secure and tow for treatment out of water OR attempt to wrap at sea to contain potential high risk AIS before towing or alternate disposal.

The reason for the high alert from the invasive species perspective was because the dock looked remarkably similar to the dock that washed up in Agate Beach, Oregon in June 2012. The dock in Oregon was carrying over 90 species, 1.5 tons of marine organisms, and over a dozen are known invaders. Assuming the same species composition, this created a serious threat for a number of possible introductions of species not yet found in Hawaii. This item has not been relocated, but all agencies are on alert and ready to respond if it is found again.

The next item was a 20 x 6 foot skiff found on September 29, 2012 by a fisherman 700nm NE of Maui. The fisherman retrieved the skiff and cleaned all organisms off the hull before it was returned to shallow waters where the species would have had the potential to spread. The biofouling assemblage was similar to that found on the blue box: organisms that are both pelagic and common to the Pacific, meaning they are not an invasive species risk. This suggests that both the box and the skiff were colonised by organisms once they got into the water. In comparison to items that were sitting in Japanese waters for a considerable amount of time (such as the dock) before the tsunami and would therefore have had time to be colonized by local Japanese organisms. DOH also undertook radioactivity testing on the skiff and confirmed that there were no levels of concern (within background levels).

Response plans and working groups are being developed to ensure the proper procedures are followed and a rapid response plan is engaged for any future marine debris items.

For any further questions, please contact Jono Blodgett at jb88@hawaii.edu.



Photo 2. Member of the AIS team removing gooseneck barnacles from the first confirmed Japanese tsunami marine debris item.

Looking for rat info

Rebecca Stirnemann is looking for any publications on rats in your country/island. She's after reports that are not necessarily published in journals. Little bits of information sure will be helpful. Hopefully, Rebecca can provide us a summary of what she will collect so that we get a clear picture of rats and their impacts to our islands. Please send her an email - and feel free to copy me. I'm sure I can assist with sending some of the reports to her and back-up here at SPREP's Library for other researchers.

PACIFIC INVASIVES PARTNERSHIP (PIP) – NEWS

Micronesia Regional Invasive Species Council meets



The Micronesia Regional Invasive Species Council (RISC) held their final meeting for the year in preparation for the 18th Micronesia Chief Executive Summit (MCES) in Majuro, Marshall Islands. The two-day meeting held from 27-28 November brought together the six Micronesian jurisdictions – Guam, Pohnpei, Kosrae, Yap, Chuuk, CNMI, Marshall Islands and Palau to provide updates of invasive species activities and progress made since their last meeting earlier this year.



RISC reported on many positive achievements including establishing invasive species councils and taskforces within the jurisdictions, drafting biosecurity

legislation and appointing dedicated invasive species coordinators. Other achievements include developing emergency response plans for Yap and other FSM states, 2013 Calendar, the Micronesia Biosecurity Plan and regional achievements made through the Pacific Islands Leaders Forum (Cook Islands) and at the 23rd SPREP meeting.

RISC members requested the Chiefs to re-affirm their commitment to Invasive Species Management in the region, through appointment of dedicated invasive species coordinators, provision of support such as USD\$2500 towards RISC activities and identifying two members from their jurisdictions to be part of RISC.

RISC made a presentation to the Chiefs iterating the importance of biosecurity measures and highlighting 'prevention is more cost effective' than trying to manage invasive species once they become established. Regional and local partners support was seen as crucial to RISC and to invasive species management in each jurisdiction.

NISC (source: Phil Andreozzi update at the RISC meeting)

Candidates as part of the Advisory Committee to NISC are currently awaiting confirmation from the Government. The delay has been attributed to the recent presidential elections in the USA. It is anticipated that by early 2013 – this will be finalised and made known to all. Phil further advised of his presentation at the 23rd SPREP meeting, highlighting the impacts of invasive species to the various government sectors.

Island Conservation (source: Alex Wegeman at the RISC meeting)



Island Conservation is working with the Palau Conservation Society to address the Macaque Monkey problem on Anguar. The monkeys cause agricultural and biodiversity problems. Survey carried out in October explored trapping methods and potential baits. The collaboration is now in stage 2. Island Conservation and partners are looking for funding support to assist with stage 2.

The organisation is also working with Conservation Society of Pohnpei and the Micronesian Conservation Trust to reinvigorate efforts on the eradication of invasive invertebrates from some of the remote islands.

Island Conservation is currently managing two databases on threatened islands biodiversity and the database for islands invasive species eradication.

The recent COP 11 of the CBD saw Island Conservation partnering up with GLISPA to support the programme of works for islands. This also saw attention to the small islands, big difference campaign. A call for international support to this campaign was also made.

Island Conservation has recently entered in to an memorandum of understanding with BirdLife International – Pacific Programme.

VACANCY AND OTHER OPPORTUNITIES

GEPP Executive Summer School on Global Environmental Policy (University of Geneva in partnership with UNEP)

The Summer School is from 1-13th September, 2013. The Executive Summer School provides a special opportunity for participants from both the public and the private sectors to enlarge their competences in order to address complex environmental issues. Beyond enlarging the knowledge base of each participant, the modules of this trans-disciplinary programme bridge the gap between scientific knowledge and concrete decision-making, problem-solving and negotiation skills. The GEPP Executive Summer School aims to bring together not more than 25 selected participants with diverse origins and professional backgrounds, including decision makers from the public and private sectors, and non-governmental organisations. The closing date for applications is **31st March 2013**. More information about GEPP, including the programme of the Executive Summer School held in September 2012, can be consulted at: www.unige.ch/gepp/ess. Please do not hesitate to contact Mr. Jean Chamel, our Scientific Secretary (jean.chamel@unige.ch) if you have questions.

A full-time research for a systematic botanist for a four-year term. The starting salary of \$74,872. U.S. citizenship is required. See announcement number 13A-JW-297816-DEU-NMNH at www.suhr.si.edu or www.usajobs.gov for details

about the application process for this position. Applications must be received online by November 15, 2012 and must reference the announcement number. Applicants will be notified by email when their applications are received.

INVASIVE NEWS GLOBAL

DOHA, Qatar (28 November, 2012)_New estimates have shown that when coastal ecosystems suffer degradation or are converted for aquaculture, upstream dams, dredging or urban development, up to one billion metric tons of carbon is emitted into the atmosphere every year – with over half of that coming from mangrove destruction alone.

Read more at: <http://blog.cifor.org/11920/why-negotiators-at-doha-should-care-about-the-worlds-forgotten-mangroves/#.ULa32mfoBSM>

Some of the activities also contribute to the spread of invasive species.

New campaign to find that one worst invasive species

An important campaign is being launched by ISSG in cooperation with the research group of Franck Courchamp, and with Dan Simberloff. You are all aware of the list “100 of the worst invasive species worldwide”, developed by ISSG; the list has indeed been very successful in communicating the impact of invasive species. Recently, this list was reduced to 99 due to the successful eradication of the Rinderpest Virus from the wild.

Together with Franck Courchamp and his research group (<http://max2.ese.u-psud.fr/epc/conservation/pages/Franck/equipe.html>) and with Dan Simberloff, decided to take this opportunity to launch a campaign to select the NEW 99+1 of the worst, involving all the ISSG community in this exercise.

The aim of the campaign is mostly in terms of communication, as it can help us all to show examples of impacts caused by invasive species, and to emphasize the need of increasing the efforts to struggle invasions. But the method that Franck developed with our support is indeed very interesting, and could potentially be used more widely in the future to help identifying key invasive species through a participatory approach.

So we are asking your help to select that 100th species through a simplified voting system. The preparatory work has required compiling information about over 10,000 invasive species from many sources, and then to shortlist the number of species on the basis of several criteria, arriving to identify 10 candidates. What we ask you to do is to go through the website we developed (www.ese.u-psud.fr/epc/conservation/pages/The100th/index.html) and vote by leaving a score for the 10 candidate species. All methods, criteria and steps are clearly explained in the website (for any question or doubt, please contact Franck at franck.courchamp@u-psud.fr).

All scores will be tallied until the 30 of December. Once the vote is closed, we will notify you by email about the species that the community has chosen to add to the ISSG list. All the system has been designed to ensure that the voting will not take much of your time, so PLEASE VOTE!! The results will indeed help us raise the profile of the issue of invasive species.

INVASIVE SPECIES PUBLICATIONS

Scientific articles

Shackelford, N., R. J. Hobbs, et al. (2013). Finding a middle-ground: The native/non-native debate. *Biological Conservation* 158(0): 55-62.

UPCOMING EVENTS

December	Event	Participating partner & Notes
12-13 Dec	International Bio-Conference and Event, Hyderabad, Andhrapredesh, India	
14-15 Dec	Strategic Planning Approaches to improve biodiversity conservation,	

	Sydney, NSW, Australia	
29-30 Dec	2012 – International Conference on Biodiversity & Climate Change, Hong Kong, China	
2013	Event	Participating partner Notes
12-15 Feb	Capacity Building for Conservation – an international exchange of opportunity and best practice. Humboldt Institute, Villa de Leyva, Colombia (http://www.ert-conservation.co.uk/Conf_Aims2.htm)	
March	11 th Applied Environmental Economics Conference, London, UK	
4-8 March	4 th International Symposium on Biological Control of Arthropods, Pucon, Chile	
25-30 March	World Teak Conference, Bangkok, Thailand	
13-19 April	Final CEPF Meeting. Suva, Fiji	PIP, CI, CEPF Final meeting for the CEPF Polynesia-Micronesia Hotspot
8-11 April	Freshwater Invasives – Networking for Strategy (FINS), Galway Bay Hotel and Conference Centre, Salthill, Galway, Ireland (www.finsconference.ie) – call for abstracts till 14 th Dec. 2012	
21-25 April	18 th International Conference on Aquatic Invasive Species, Ontario, Canada	
8-12 July	12 th Pacific Science Inter-Congress (www.psi2013.usp.ac.fj). Science for Human Security and Sustainable Development in the Pacific Islands and Rim. USP, Laucala Campus, Suva, Fiji	USP
22-25 Oct	24 th Conference of Asian-Pacific Weed Science Society. The role of weed science in supporting food security by 2020. Padjadjaran University Convention Hall, Bandung, Indonesia.	
November	9 th Pacific Island Conference on Nature Conservation and Protected Areas. Natural Solutions: building resilience for a changing Pacific. Suva, Fiji	SPREP, IUCN-Oceania, USP, Fiji Government, PIP

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