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The Pacific environment, sustaining our livelihoods and natural heritage in harmony with our cultures.



PACIFIC INVASIVES LEARNING NETWORK

SOUNDBITES | MAY 2014

Pacific Invasives Learning Network
Secretariat of the Pacific Regional Environment Programme.
PO Box 240, Apia Samoa. Tel. +685 21929. Fax. +685 20231.

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>

WELCOME TO YOUR PILN SOUNDBITES

Malo Invasive Battlers and Friends.

We are already half-way through the year and what a month of May it has been. Here at the Secretariat a mid-term review of its 5-year strategic plan is being undertaken, as well as an independent corporate review of the organisation. Another milestone was achieved in the gathering of key countries and stakeholders for the Micronesia Biosecurity Plan and the Strategic Implementation Plan and the launch of the Regional Biosecurity Plan for Micronesia and Hawaii. This provides an ideal blue-print for a region-wide biosecurity plan for the Pacific Islands. We celebrated the United Nations World Biodiversity Day with a special focus on Island Biodiversity on May 22nd, which was a perfect launching pad for the Year of Natural Solution for a Resilient Pacific. We hope that your month was a productive one and we look forward to June with anticipation for what will be a busy and exciting month.

PILN TEAMS & COUNTRY UPDATES

American Samoa - Climate change project update

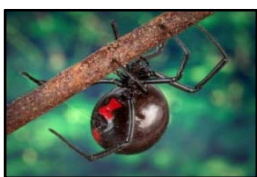


The big question is - how will our forests respond to increasing temperature, variable rainfall, severe cyclones and inundation by invasive species?

This was the question that the American Samoa's invasive battlers are currently addressing through research. A total of 23 survey plots were established in the two large islands of American Samoa (Tutuila and Tau), with each plot measuring at 60 metre diameter and placed at different elevations. Whilst the research is continuing, preliminary results indicate some interesting observations. The dominant *Barringtonia asiatica* in the lower elevation is replaced by a number of species including *Dysoxylum huntii* and *Crossostylis biflora*. Invasive non-native trees were common in the higher elevation compared to the lower flora due to persistent efforts by the National Park Service to remove them over the last 14 years. *Clidemia hirta* was the most common invasive plant in the higher elevation. The research is nearing completion. If you are interested and would like more information, please contact Tavita Togia at the American Samoa's National Park Service. [Text and image - provided by Tavita Togia]

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Cook Islands - Ministry on the hunt for the black widow



Several black widow spiders and their cocoons containing many baby spiders have been found at a freight company's warehouse at Rarotonga Airport. Officials from the Ministry of Agriculture are currently investigating how the spider arrived in the country, and also how far it has spread. The black widow spiders are native to America and Australia and are highly venomous. Dr Maja Poeschko, from the Ministry, said that that the spider is not aggressive, but advised people to be careful when sifting through dark storage areas where the spiders like to hide. She said someone bitten by a black widow may suffer trembling, cramping, vomiting, nausea and difficulty in breathing. The spider is distinguished

by a red or beige hourglass pattern on the underside of its abdomen. [image: Wikipedia]

Cook Islands wage war on the invasive myna



The Atiu community in the Cook Islands has waged a five year war against the invasive common myna, currently listed as one of the top 100 worst invasive species globally. Led by a passionate local, George Mateariki or Birdman George, the island is hoping that this year they will become myna-free. Spotting native birds on Atiu, which was once called Enuamano - Bird Island is now easier. George explained that when they first started, the myna population was around 12,000 to 13,000 birds. Now less than 100 birds are left. The war on myna began when the community witnessed a myna attacking a baby Rimatara lorikeet. The concerted efforts by the community saw a drastic drop in numbers of mynas. A few continues to elude George but he continues to deploy cages. He is hopeful of removing all the mynas by September, before the next breeding season.

Myna control is currently being carried out in Samoa, French Polynesia and Fiji. However, Atiu is the first to try eradicating the mynas.

Fiji - native bees could be agricultural saviors for honeybee diseases



Honeybees provide financially major pollination services for many agricultural crops, but recent global spreads of diseases that can decimate honeybee populations can have grave consequences for crop yields.

Honeybees are an introduced species in the southwestern Pacific Islands and now comprise important pollinators for agricultural crops in those regions. However, the recent introduction of honeybee diseases into the Solomon Islands decimated honeybee populations, with major consequences for primary industry. Introduction of those diseases into other Pacific regions and Australia seems almost inevitable over time, and could have similar consequences.

Studies by collaborating researchers from Flinders University (Adelaide), the South Australian Museum, and the University of the South Pacific show that another bee species, unrelated to honeybees and immune to honeybee diseases, has been

recently introduced to Fiji by accident. This new species, *Braunsapis puangensis*, may be an effective crop pollinator, and could provide insurance against future declines in honeybee populations. However, this new species may also pose threats to native Fijian ecosystems. Research on this newly introduced species has been recently published in the journals *Biological Invasions* and *Insect Science*.

A new study By Flinders University, South Australian Museum and the University of the South Pacific aims to assess the positive and negative consequences of this new bee species in the southwestern Pacific, and will determine whether this species is a potential "savior" of agriculture or a threat to endemic ecosystems. Results from the study will help decide whether the new bee species should be encouraged to spread or if it should be constrained via biological control agents. [Text by USP media - image PSkelton/PILN]

Hawaii



The Hawaii State Legislature appropriated \$5M in general funds for Fiscal Year 2015 for disbursement by the Hawaii Invasive Species Council. Several other key bills that would have appropriated funds for invasive species work, including bills for little fire ant control and outreach, coconut rhinoceros beetle control, biosecurity facilities, and invasive species control in fenced watersheds, were not passed.

Craig and Tracy Murray, dog training specialists from Australia, visited Hawaii to discuss the potential for using detector dogs to find infestations of little fire ant. The visit was coordinated by the Maui Invasive Species Committee and funded by the US Fish and Wildlife Service.

Hawaii participated in the final workshop for the Regional Biosecurity Plan for Micronesia and Hawaii, formerly known as the Micronesia Biosecurity Plan, and committed to submitting final comments on biosecurity recommendations for Hawaii by mid-June for inclusion in the final version of the U.S. Department of Defense document. [Text provided by Josh Atwood. Image - Hawaii AntLab]

Palau - President meets PIP members



Palau hosted a meeting for the Pacific Invasives Partnership (PIP) from 22-27 May, as part of the plan to raise the profile and commitment by leaders and countries to addressing invasive species. PIP members took the opportunity to meet with the Palau's President - His Excellency Tommy E. Remengesau Jr and his staff exploring opportunities for close cooperation at the upcoming Pacific Islands Forum (PIF) Leaders meeting planned for Palau in July. Whilst the focus of the PIF meeting will be on oceans, the importance of invasive species as a threat to biodiversity, national economies, food security and human health remains critical. One of the key points was preparation to hold a side-event at the Forum Leaders meeting to show-case progress on dealing with invasive species in the region. Over the last two Forum Leaders meetings, they have consistently made strong statements on the critical importance of addressing invasive species in the region. PIP members are hoping that this year a strong and united commitment will be made by Pacific Leaders to progress the urgent need to commit resources and capacity to dealing with the issue. [Text and image provided by Joel Miles]

PACIFIC INVASIVES PARTNERSHIP & REGIONAL BITES

Regional Invasive Species Project under GEF 6



Addressing invasive species must be done at the local and regional scale if we are to succeed. SPREP, SPC and Pacific Invasives Partnership members are currently putting together a proposal to the Global Environment Facility to help address invasive species, biosecurity and biosafety at the national and regional levels.

Invasive species challenges in the Pacific are often shared and while some countries have specific unique problems - such as the Macaque monkeys in Palau, Brown Tree Snake in Guam - many problems are common or shared amongst the countries. The concept for the proposal to GEF is that by coordinating better, the countries will benefit by ensuring that their specific issues are being addressed and that lessons learned are shared. Countries with the same or similar problem will learn from this and avoid pitfalls that often trap new projects and can discourage further efforts to manage invasives.

The project will also focus on enhancing the regional technical support to the countries through provision of best practice guidelines, standard operating procedures and fast response to assist countries. This will ultimately benefit countries by saving costs, having the best possible technical advice and assistance and a very high chance of succeeding in their projects.

The project is currently being spear-headed by Dave Moverley of SPREP. All Pacific Island Countries are strongly encouraged to be part of this project, as only when we work together we will make some inroads to managing invasives. The project will also build on existing initiatives such as the Regional Biosecurity Plan for Micronesia and Hawaii. *For more information, please contact Dave Moverley (davem@sprep.org) or tel. (685) 21929. [Text & Image - PSkelton/PILN]*

Biosecurity meeting for Micronesia and Hawaii



SPC and the University of Guam facilitated a three-day workshop to review and comment on the implementation strategy of the Regional Biosecurity Plan for Micronesia and Hawaii. About 65 participants from Guam, CNMI, Hawaii, Marshall Islands, Palau and the FSM states of Chuuk, Kosrae, Pohnpei and Yap and various partners attended the workshop.

Participants pledged their support of the RBP and affirmed their commitment to implement the plan. There are elements of the RBP that will need refining and urged jurisdictions to assist with this process. All agreed that the RBP is a living document that will need to be revised and updated from time to time.

The workshop noted the five overarching goals of the RBP:

- Biosecurity legislation for all jurisdictions
- Sustainable funding
- Engagement of all levels of societies
- Communication and cooperation at all levels
- Improve biosecurity for all ecosystems

Participants further noted the need to establish a regional biosecurity coordination, which in the interim will be coordinated by SPC. [Text compiled from information provided by James Stanford. Image by SPC]

SPC and partners lead biosecurity workshop in Micronesia



Pacific participants attending the biosecurity workshop



Invasive species march on across the Pacific, impacting small island economies and environments as well as human health and livelihoods.

A technical consultation to review risks posed by invasive species took place at the University of Guam (UoG) from the 19–21 May 2014. The Regional Biosecurity Plan for Micronesia and Hawaii Implementation Strategy Workshop aimed to review the implementation component of the Regional Biosecurity Plan (RBP). The RBP evaluates invasive species risks to marine, terrestrial and freshwater ecosystems in Micronesia and Hawaii and makes recommendations to remove or minimise and manage these risks. SPC and UoG facilitated the workshop, bringing in key stakeholders from jurisdictions throughout

Micronesia and Hawaii to review the draft implementation strategy.

The development of the implementation strategy involved extensive consultation with leaders and invasive species experts from throughout the region. Developed with over US \$3.7 million of direct funding from the United States Department of Defense (DoD) and in-kind support from the governments and non-governmental groups and organizations of the region, the RBP represents an unprecedented collaborative effort to enhance prevention and to minimize invasive species threats and impacts. The development of the RBP brought together DoD and other agencies of the US federal government, and the Governments of Guam, the Northern Mariana Islands, Palau, the Federated States of Micronesia (including the state governments of Yap, Chuuk, Kosrae, and Pohnpei), the Marshall Islands, and the State of Hawaii.

As stated by the Micronesian Chief Executives in Resolution 19-1 of the 19th Micronesian Chief Executives Summit,

'...invasive species management is a fundamental component of efforts to adapt to climate change, build resilient economies, communities and ecosystems and achieve social and economic development objectives including poverty alleviation and the enhancement of food security, fresh water availability, human health, biological diversity and coral reef health.'

The three-day workshop was convened to allow the jurisdictions and development partners to have a final joint working session in which to comment on and conclude the updating of the implementation component before finalising the RBP. [Text and images provided by SPC].

INVASIVE OPPORTUNITIES

Darwin Initiative - Round 20 Call for Proposals

Darwin Initiative is now inviting applications for - DI Main projects and post projects; and Darwin Plus projects in one or more of the UK's overseas territories. Projects will be expected to commence from 1 April, 2015. Guidance and application forms can be downloaded from <http://www.darwininitiative.org.uk> or email: Darwin-applications@itsi.co.uk. Closing date: Stage 1 - 3 July, 2014.

Free Webinair session - Invasive Species Compendium - an open access internet resource

When: Wednesday 4 June, 2014 - 0900-1030 AST. Registration - please send name, address, country, email and telephone number to compend@cabi.org.

The Rapid Response Facility (RRF)

Invites small grant applications for UNESCO inscribed natural World Heritage sites, and tentative sites facing emergency threats to their biodiversity. The RRF is a unique small grant programme jointly operated by Fauna & Flora International and UNESCO World Heritage Centre. With a target processing time for grant applications of just 8 working days, the RRF provides rapid support to enable conservation practitioners to respond quickly and effectively to emergencies in some of the world's most important sites for biodiversity. For more information visit – www.rapid-response.org

Craig S. Harrison Conservation Grants – Pacific Seabird Group

The objective of the Conservation Fund is to advance the conservation of seabirds by providing funds or supplies to individuals from developing countries as well as those from elsewhere working in those developing countries primarily in or bordering the Pacific Ocean, (1) for conservation and restoration activities that benefit seabirds in the Pacific Ocean; and (2) to help develop within-country seabird expertise in developing countries

within or bordering the Pacific Ocean. Send an email to Verena Gill (verena.gill@gmail.com) and Craig Harrison (charrison@hunton.com), briefly explaining what you want to propose and where you want to do the work. That way, you can get a rapid determination from them of whether your proposal is eligible for consideration for funding. If they determine that your study is eligible, then fill out and send the application form, the proposal/budget, and the letter of reference, as described below, to Verena Gill and Craig Harrison. Please note that applications/proposals may be submitted at any time—there is no fixed deadline for submission. All applications / proposals will be evaluated as they are submitted.

SPREP (Secretariat of the Pacific Regional Environment Programme)

SPREP has a number of vacancies and tender opportunities available. Please check out the SPREP's Job Vacancies page for further information. <http://www.sprep.org/Human-Resources/Job-Vacancy/>

SPC (Secretariat of the Pacific Community)

SPC has vacancies and consultancy opportunities. Please check out the SPC's website for further information. www.spc.int/job.html - or contact Christine Croombes (recruit@spc.int).

GLOBAL INVASIVE BITES

Stick it to the barnacles



Those who own ships or sea-going vessels know the challenge posed by little critters attached to the body or hull of the ship. Barnacles are one group of marine organisms that can cause serious fouling slowing down ships, which means fuel costs are higher. The shipping industry introduced anti-fouling paints that were effective in controlling the fouling, but also contributed to an environmental challenge of harming marine life. Scientists are now turning to a tree (*Maytenus*) for a solution. The root bark of the tree contains compounds that are similar to what is produced by bottom-dwelling ocean creatures. In the lab, the scientists found that the compounds were able to repel barnacles and inhibit the growth of algae, tube worms and other creatures from latching on.

[Giant African snail detector dogs and handlers graduate](#)



Giant African snails are in the line of sight for newly trained sniffer dogs and their handlers. The 10-week training included six weeks of on-the-job training in Miami county. This effort will greatly enhance eradication efforts and reduce further harm caused by the snail that was first detected in Florida in 2011. Over 150,000 snails have been eliminated. Involvement of the public has been key in stopping further spread. Originally from East Africa, the Giant African Land Snail, *Achatina fulica*, is one of the largest land snails in the world, growing up to 8 inches in length. Each snail can live as long as 9 years. In a typical year, an adult can produce about 1,200 eggs.

[Invasive species eye melting ice](#)

For the first time in roughly 2 million years, melting Arctic sea ice is connecting the north Pacific and north Atlantic oceans. The newly opened passages leave both coasts and Arctic waters vulnerable to a large wave of invasive species, biologists from the Smithsonian Environmental Research Center assert in a commentary published May 28 in *Nature Climate Change*.

[Vines choke a forest's ability to capture carbon](#)



Tropical forests are a sometimes-underappreciated asset in the battle against climate change. They cover seven percent of land surface yet hold more than 30 percent of Earth's terrestrial carbon. As abandoned agricultural land in the tropics is taken over by forests, scientists expect these new forests to mop up industrial quantities of atmospheric carbon. New research by Smithsonian scientists shows increasingly abundant vines could hamper this potential and may even cause tropical forests to lose carbon. In the first study to experimentally demonstrate that competition between plants can result in ecosystem-wide losses of forest carbon, scientists working in Panama showed that lianas, or woody vines, can reduce net forest biomass accumulation by nearly 20 percent. Researchers called this estimate "conservative" in findings published this month in *Ecology*.

[Climate change accelerates hybridization between native and invasive species of trout](#)

Scientists have discovered that the rapid spread of hybridization between a native species and an invasive species of trout in the wild is strongly linked to changes in climate. In the study, stream temperature warming over the past several decades and decreases in spring flow over the same time period contributed to the spread of hybridization between native west-slope cut-throat trout and introduced rainbow trout -- the world's most

widely introduced invasive fish species -across the Flathead River system in Montana and British Columbia, Canada.

[Biological control for Brazilian peppertree closer than ever](#)

A South American insect could help control the invasive Brazilian peppertree (*Schinus terebinthifolius*) in places where it supplants critical habitat for many organisms, according to University of Florida and U.S. Department of Agriculture scientists. Brazilian peppertree has clusters of hundreds of small, red berries, and grows about 10 feet per year, to about 30 feet. It is native to Brazil, Argentina, Paraguay and Uruguay. The tree has moved around the world as an ornamental plant and has become invasive in several countries, including Australia, Guam, Johnston Island, Midway Islands, New Caledonia, New Zealand, Norfolk Island. It has been introduced to Vanuatu, Samoa, Marshall Islands and French Polynesia.

Further information for this species can be downloaded from the CABI Invasive Species Compendium - [datasheet 49031](#).



[The truth about sparrows](#)

Pesky sparrows may look innocent nibbling on a piece of bread on the road-side. They are anything but adorable. They are cunning killers attacking native birds and their babies. Click on the link to read a blog by Peyton Marshall in the New York Times.

INVASIVE SPECIES PUBLICATIONS

Invasive Species Compendium - Pacific News. April 2014 is now out. Contents include: New datasheets prioritized by workshop participants - *Anredera cordifolia* (Madeira vine), *Opuntia monacantha* (common prickly pear), *Xanthium spinosum* (Bathurst burr). Feature review - *Rattus rattus* | EU-ISC Project progress worldwide; and more.

Barrett J, Bamford H and Jackson P (2014). Management of alien fishes in the Murray-Darling Basin. *Ecological Management & Restoration*. 15: 51–56. doi: 10.1111/emr.12095

Parkes J, Fisher P, Robinson S and Aguirre-Muñoz A (2014). Eradication of feral cats from large islands: an assessment of the effort required for success. *New Zealand Journal of Ecology* 38(2): online early.

Eason CT, Miller A, MacMorran DB and Murphy EC (2014). Toxicology and ecotoxicology of para-aminopropiophenone (PAPP) – a new predator control tool for stoats and feral cats in New Zealand. *New Zealand Journal of Ecology* 38(2): online early.

Jenkins DJ, Urwin NAR, Williams TM, Mitchell KL, Lievaart JJ, Armua-Fernandez MT (2014). Red foxes (*Vulpes vulpes*) and wild dogs (dingoes (*Canis lupus dingo*) and dingo/domestic dog hybrids), as sylvatic hosts for Australian *Taenia hydatigena* and *Taenia ovis*. *International Journal for Parasitology: Parasites and Wildlife* 3(2): 75-80 doi: 10.1016/j.ijppaw.2014.03.001

UPCOMING EVENTS

2014	Event	Participating Partner
June		
2-3 Jun.	Micronesia Regional Invasive Species Council meeting	PILN
4-5 Jun.	Micronesia Chief Executives Summit	PILN
5 Jun.	World Environment Day	SPREP
8 Jun.	World Oceans Day	SPREP
23-28 Jun.	CBD SBSTTA 18, Montreal, Canada	SPREP
25 Jun.	Day of the Seafarer	SPC
July		
28 Jul - 1 Aug	Pacific Islands Forum Leaders Meeting, Palau	RISC, SPREP, NISC, PII, PILN
August		
11-15 Aug.	Joint Preparatory meeting for CBD, Ramsar and CMS, Nadi, Fiji	SPREP, IUCN-ISSG, PILN
12 Aug.	International Youth Day	SPREP
25-29 Aug.	3rd SIDS Meeting preparatory meetings	
September		
1-4 Sep.	UN 3rd SIDS Conference, Apia, Samoa	SPREP, SPC, GLISPA
1-6 Sep.	World Water Week	SPC
20 Sep.	International Coastal Cleanup Day	
23-27 Sep.	World Maritime Day: IMO Conventions: Effective implementation	SPREP, IMO
25 Sep.	Noumea Convention Conference of Parties, Majuro, Marshall Islds	SPREP
26 Sep.	Waigani Convention Conference of Parties, Majuro, Marshall Islds	SPREP

29 Sep.	Pacific Environment Forum, Majuro, Marshall Islands	SPREP
29 Sep - 3 Oct	7th COP for the Cartagena Protocol on Biosafety (Pyeongchang, Korea)	SPREP
30 Sep - 2 Oct	SPREP Meeting, Majuro, Marshall Islands	SPREP
October		
2 Oct.	Environment Ministerial Meeting, Majuro, Marshall Islands	SPREP
6-17 Oct.	12th CBD COP (Pyeongchnag, Korea)	SPREP
20-21 Oct.	BirdLife International - Pacific Programme - TAG Meeting, Noumea, New Caledonia	BirdLife Pacific
27-31 Oct.	16th International Conference on Harmful Algae (Wellington, NZ)	
November		
3-8 Nov.	NEOBIOTA 2014. Biological invasions: from understanding to action. (Antalya-Turkey)	http://neobiota2014.org/
12-19 Nov.	World Parks Congress (Sydney, Australia)	

Disclaimer: Articles contained within this or other PILN Soundbites do not necessarily reflect the views of PILN teams, SPREP or the Pacific Invasives Partnership. Contact the PILN Coordinator for further information (posas@sprep.org).