



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>

Malo e Lelei Invasive Battlers

YOUR PILN SOUNDBITES for July has been compiled from the Kingdom of Tonga – Malo e lelei. The continued interception of invasive species at ports, such as the Giant African Snails in shipping containers in Fiji, highlighted good biosecurity measures undertaken by many agencies and personnel throughout the Pacific. With increased shipping and travel throughout the Pacific, the task of biosecurity agencies will no doubt be even more challenging than at present. It is precisely this that all hands-on-board are needed to protect our vulnerable islands. Let's give our islands a helping hand by keeping invasive species at bay! Wishing you all a great September month.



9th PACIFIC ISLAND
CONFERENCE ON
NATURE CONSERVATION
AND PROTECTED AREAS

2-6 December 2013

PILN TEAMS AND COUNTRY UPDATES

Fiji – Giant snails intercepted



The Biosecurity Authority of Fiji is concerned about the repeated interception of giant African snails and other exotic pests on containers and vessels bound for Fiji.

This after biosecurity officers found two giant African snails on a vessel from Wallis and Futuna at the Suva wharf on Sunday evening.

Twelve snails of a species that has not been identified were discovered on a container from Vanuatu early on Monday morning. As a result all containers on the vessel had to be fumigated.

Expressing concern over the findings, BAF acting CEO Matai Matakītoga said the snails were found on vessels and containers despite certifications from originating countries that the containers were free from pests.

“This is a serious issue because it undermines our confidence in the certificates issued in these countries,” Mr Matakītoga said.

“The giant African snail is one of the most damaging snails in the world. It can devastate Fiji’s agricultural industry worth almost \$550 to \$600 million annually and our rich and diverse native forests which is also an integral part of the country's economy,” he said.

The snails are known to eat about 500 species of plants including papaya, most varieties of beans, peas, cucumbers and melons. They also reproduce quickly producing about 1200 eggs in a single year, he said.

According to Mr Matakītoga, these snails are difficult to eradicate. He said shipping containers were transport mediums for exotic pests, diseases or other containments adding that insects could hitchhike attached to the surfaces of containers or located in many nooks and crevices available on a shipping container. Following the interception, BAF has stepped up its precautionary measures. Mr Matakītoga said they would be placing snail baits around the container terminals at the Suva Wharf and also increase inspections. [Source: Fiji Time]

Hawaii Invasive Species Council

The Hawaii Department of Land and Natural Resources, Division of Forestry and Wildlife, has hired Patrick Chee as a Small Mammal Control Planner to work on rodenticide compliance documentation and other projects relating to small mammal control. In particular, Pat will be working on a Programmatic EIS for rodenticide use in Hawaii, in collaboration with the US Fish and Wildlife Service. If you'd like to get more information, you can reach Pat at Patrick.C.Chee@hawaii.gov.

Hawaii – Native sea urchins are newest weapon to protect coral reefs from invasive seaweeds.



More than 100,000 hatchery urchins released into Kaneohe Bay since 2011

Sea urchins native to Hawaii are proving successful in defending Windward Oahu coral reefs against invasive alien seaweeds. Since 2011, the state Department of Land and Natural Resources (DLNR) Division of Aquatic Resources (DAR) Aquatic Invasive Species program has released more than 100,000 juvenile sea urchins onto various patch reefs in Kaneohe Bay as part of the joint effort with the community.

“Protecting our natural resources from the threats of alien and invasive species is an increasingly important and necessary responsibility of the state, with the help of its research partners and the community,” said William J. Aila, Jr., DLNR chairperson.

“Not long ago, the patch reefs in Kaneohe Bay were being smothered by fast-growing seaweeds. At the same time native sea urchin populations had been depleted,” he explained. “But now, the development of an innovative two-tiered system to combat invasive seaweeds in Kaneohe Bay is helping to restore the native ecosystem balance and further technology advances.”

The first part of the system is the Super Sucker – an ocean-going vacuum pump mounted on a barge used to remove seaweed from affected coral reefs.

The second part of the system is to introduce native Hawaiian collector urchins, (*Tripneustes gratilla*), which are spawned and raised in captivity at the Anuenue Fisheries Research Center in Honolulu. The urchins are being propagated as a tool to consume, and control, rapid-growing invasive alien seaweeds in Hawaii that can smother and kill coral.

According to David Cohen, DAR Sea Urchin Hatchery manager, “Maintaining healthy populations of native sea urchins is vital to minimize the re-growth of invasive seaweed and restore the health of the reef. Keeping invasive seaweed levels low allows the coral to grow and provides habitat for juvenile reef fish and other aquatic creatures like squid or octopus.

“The first juvenile sea urchins were released into Kaneohe Bay during January of 2011. Since then, our team has been releasing urchins on a regular basis. We especially want to thank our staff, partners and community volunteers -- including the Kaneohe Canoe club, groups from UH, The Nature Conservancy, NOAA and other non-profit groups -- for their enthusiasm, support, generosity, and hard work over the last few years.”

Cohen added, “The DAR Anuenue Sea Urchin Hatchery is one of the few hatcheries in the world to successfully raise native collector sea urchins in captivity. The team is the first to raise sea urchins in captivity for ecosystem-based management and environmental mitigation work. Others in Hawaii have raised urchins in lab-scale propagation, but none have been successful on a large scale.” [source: Jonathan Blodgett]

Hawaii – CGAPS meeting

The Coordinating Group on Alien Pest Species held their meeting on 21 August, 2013 at the GSA Conference room. Topics of discussion include – updated from the various agencies including – Hawaii Department Of Agriculture Plant Industry Division; US Customs & Border Protection; DLNR Division of Aquatic Resources, Invasive Species Committees of Hawaii (OISC, KISC, MISC, MMISC & BISC); DLNR Division of Forestry & Wildlife; HISC, US Fish & Wildlife Service. For further information contact Christy Martin – www.cgaps.org.

i-STOP (invasive Species Taskforce of Pohnpei)



From July 9-10th and on August 1st, 2013, participating members of Invasive Species Taskforce Of Pohnpei, (iSTOP) convened to update their 2011-13 Strategic Action Plan (SAP) to guide invasive species management work from August 2013-July 2017. iSTOP reviewed the progress over that last 3 years and identified invasive species to eradicate and manage/control in future efforts. Outreach, training, capacity building and research efforts were also reviewed and updated.

The iSTOP SAP establishes two priority goals, objectives, activities, partners, timeframes, estimated costs and possible funding sources for the different objectives and activities.

Funding for some activities has been secured through grants and matching funds, but future funds are yet to be secured for key activities, including the Invasives Coordinator position. In-kind contributions have been and will continue to be an essential part of project success. Support is provided by all participating member agencies through their services and personnel.

Work plans have been developed at several of these partner organizations to address terrestrial, marine, and avian species and the iSTOP SAP serves as a linkage between the various organizations

Although during the last plan only one out of the five targeted species (Octopus Tree) was eradicated, the success of iSTOP was rated very high because 80-95% of the other species have been managed; some are close to eradication.

The new SAP divides target species into two groups, one for eradication (False Sakau, Ivy Gourd, Chain of Love, Bengal Trumpet Vine, Honolulu Rose and Feral Pigeon) and the other for control and management (Mile-a-Minute, Koster's Curse, African Tulip, Tree Sparrow, Crown of Thorns, Eel Catfish, Milk Fish and Tilapia).

Many thanks and appreciation to all iSTOP members, partners and supporters who have been part of the team work. Special thank you to TNC for supporting the catering costs and USDA NRCS for meeting venue and facilitation.

Next meeting is scheduled for September 4th, 2013 to finalize the new iSTOP SAP.

Samoa – New Invasive Species Coordinator appointed



So'oalo Albert Peters is the newly appointed Invasive Species Coordinator for Samoa under the GEF-PAS funded Invasive Species Project. Mr Peters is no stranger to invasives species having worked in agriculture research over the last 30 years. He worked for the Ministry of Agriculture, specifically on biocontrol research. He later joined the Secretariat of the Pacific Community before returning to Samoa where he became a consultant. Mr Peters will be facilitating activities under the GEF-PAS Invasive Species Projects, which include restoration of the Mt Vaea Reserve and raising the awareness of the public on invasive species impacts.

Samoa – Integrated pest management training



A training held from 10 April to 19 June, 2013 at Nu'u Research Station gave participants practical knowledge on how to conduct agro-ecosystem analysis on crop production. The training was supported by FAO, ACIAR, SPC and the Ministry of Agriculture and Fisheries. Participants learned about particular pests and their host plants, as well as observing the various life-stages of the pests through 'insect zoo'. Three pests in particular (diamond back moth, webworm and the large cabbage moth) were under close scrutiny in the insect zoo. The Giant African Snail was also found to be a serious pest devouring the cabbage leaves.

Tonga forms a Technical Invasive Species Team



Government agencies and civil society organisations met recently in Tonga and agreed to form an invasive species technical team. The technical team will be comprised of personnel from three main ministries (Ministry of Environment, Ministry of Infrastructure and Ministry of Agriculture), as well as the civil society organisations. One of the key functions of the team is to assist with the implementation of the recently developed Tonga National Invasive Species Strategic & Action Plan (NISSAP). For further information please contact Viliami

Hakaumotu (viliamihakau@gmail.com).

Tonga finalises its Invasive Species Strategic & Action Plan



Government agencies and members of the civil society attended a meeting at the Department of Environment to finalise the Tonga's National Invasive Species Strategic and Action Plan (NISSAP). Mr Bill Nagle of the Pacific Invasives Initiative facilitated the NISSAP where priority invasive species issues have been agreed to and a list of actions identified. The Tongan NISSAP follows the format of the Guidelines for invasive species management in the Pacific, and it is

hoped that it will provide a template for invasive species strategies and action plans for the rest of the Pacific. For further information on the Tongan NISSAP, please contact Viliami Hakaumotu.

PACIFIC INVASIVES PARTNERSHIP (PIP) – NEWS

Biocontrol in the Pacific – by David Moverley



Biological control (biocontrol), involves utilising natural enemies to help keep populations of invasive species under control. Often, particularly plants are relocated outside their home or native range and their natural enemies are not taken with them. Finding natural enemies in a weeds native range and bringing them to where it is causing impacts, is one way to lessen the impact caused by the weed to the environment.

This is a long and technically difficult process but one which is more and more finding its way into the suite of control methods for practitioners. Before any natural enemies are released they need to be thoroughly tested to ensure that they are not going to affect native plants or those species valuable to the country in question such as food and livelihood crops.

One of the cheapest ways to benefit from biocontrol is to move existing natural enemies between islands. This requires testing plants that have not been tested previously to see whether they will be adversely affected. In the Pacific, the Pacific Biological Control Strategy Workshop held in 2010 determined that this is where the best and cheapest opportunities were for using natural enemies.

The current GEF-PAS Invasive Species Project is enabling this to happen in Palau, the Federated States of Micronesia, Vanuatu and the Cook Islands. In Palau natural enemies for *Mikania micrantha* are being tested for their effect on several native plants from the same family before they are released. Most of the expensive and technical work was done while being introduced to other countries such as Papua New Guinea and Vanuatu. Under the GEF-PAS project the

FSM is also researching into natural enemies for *Clidemia hirta*, while Vanuatu is searching for answers to African tulip and several other plants.

There is a positive outlook for many widespread weeds as biocontrol becomes more mainstream and becomes more achievable. In New Zealand there are many success stories and the focus is much more centered on environmental weeds than it has in the past. A fantastic website to visit and learn more about biocontrol is the Landcare New Zealand website <http://www.landcareresearch.co.nz/science/plants-animals-fungi/plants/weeds/biocontrol>. LandCare New Zealand also publishes a Biocontrol magazine on Weeds and you can subscribe to the magazine for free by contact Lynley Hayes.

PIP to brief CROP Heads on invasives and climate change

The Pacific Invasives Partnership had submitted briefs to the Director Generals of SPREP and SPC as they prepare to attend the 45th Pacific Islands Forum Leaders meeting to be held in Majuro next week. Climate change and the environment appear to be important issues on the Leaders agenda and so the opportunity to plug invasive species as a key issue for the Pacific was too good to be missed. Invasive species and climate change have been dubbed the ‘deadly duo’ with possible devastating consequences to small island states. For further information about these briefs please contact the PIP Chair (Josh Wainiqolo – JosuaW@spc.int).

GLISPA



In preparation for the 2014 International Year of Small Island Developing States (SIDS) and the Third International Conference for SIDS, the Global Island Partnership (GLISPA) would like to call for recommendations of island bright spots that:

- Demonstrated measurable success / impact in advancing conservation of island biodiversity and sustainable livelihoods
- Potential to be scaled and replicated
- Be a community, national, regional or global island initiative

Bright Spots: Island success is built upon initiatives that work; this is referred to as ‘bright spots’.

Bright spots can be activities, projects, programs, policies or initiatives at any level that are making a difference in advancing conservation of island biodiversity and sustainable livelihoods and have the potential to be scaled and replicated. It offers a solution to help overcome global conservation challenges.

Why Island Bright Spots: Islands are taking action and making progress in the face of major geographic, economic and social challenges however further commitment is needed to continue to build on what is working and maintain resilient ecosystems, strong island economies and sustainable livelihoods.

To continue to advance we need to build on what is working. We need to invest in those bright spots which have the potential to be scaled and replicated. GLISPA is committed to the identification, review and sharing of bright spots as a mechanism to achieve its mission to promote action for island conservation and sustainable livelihoods. Island Bright Spot will help to:

- Inspire leadership by celebrating what is working in islands and those leaders that are committed to success
- Catalyze commitments by encouraging investment in bright spots
- Facilitate collaboration by exchanging solutions for islands to reduce the rate of biodiversity loss.

Based on the success of the [Island Bright Spots event at CBD COP-11](#), GLISPA will identify opportunities to enable sharing of bright spots as well as to promote investment in the scale and replication of bright spots. Please do share or recommend Bright Spots now by sending concise recommendations on:

What is the **bright spot**? (Give title of the “bright spot”, something “inspirational and catchy”)

What are the **key results or impacts**? (Not more than 150 words)

What are the **essential elements** that made it successful i.e. if someone else wanted to replicate your success what would they absolutely need to have? (3 – 5 bullet points; see above link for examples)

Include in your response:

1. A **quote/statement** from a high level person/community member
2. 2 to 5 **photos** of the bright spot and
3. **Contact** details of focal point

VACANCY AND OTHER OPPORTUNITIES

Opportunity for the Nature Conservation Conference

Do you work on ecosystem management in Pacific islands or work with Pacific Island managers? We invite you to share your knowledge of best practice for island ecosystem management by completing this short survey at <http://www.islandecosystemmanagement.com>.

Tell us about your project(s) and how they have benefitted the natural environment and your community. Not only will you be contributing valuable information to better ecosystem management in the region, we will also be awarding the Grand Prize to the best project based on impact and success. The Grand Prize will include travel, registration and accommodation to the 9th Pacific Conference on Nature Conservation and Protected Area (www.sprep.org/pacificnatureconference), to be held in Suva, Fiji, from December 2-6, 2013. As well as the Grand Prize, all entrants will go into the draw to win one of 20 t-shirts which will show everyone that you are playing an important role in ecosystem management in the Pacific.

This project was commissioned by the United Nations Environment Programme (UNEP) and the Secretariat of the Pacific Regional Environment Programme (SPREP) and is implemented in partnership with the Wildlife Conservation Society, Alluvium Consulting, Sustainable Island Innovations, Edith Cowan University, and Hodge Environmental. The project aims to develop effective guidance and communication materials on island ecosystem management, based on marine and terrestrial case studies of ecosystem based adaptation (EBA) and ecosystem based management (EBM) within Pacific islands. Information gathered will be developed into best practice management case studies and guidelines.

Contact Dr Stacy Jupiter (www.wcsfiji.org) for further information

Critical Ecosystem Partnership Fund (CEPF)



The Critical Ecosystem Partnership Fund (CEPF) announces call for proposals in the East Melanesia Island Hotspot. The CEPF East Melanesian Islands Regional Implementation Team is pleased to announce a call for proposals for biodiversity conservation projects by non-governmental organizations, community groups,

private companies and other civil society organizations working in the Solomon Islands and Vanuatu. Letters of Intent for small grant projects (up to US\$20,000) should be submitted by email to cepfeastmelanesia@iucn.org by 17:30 (Washington DC time), on Monday 14th October 2013. LoIs for large grant projects (over US\$20,000) should be submitted by email to cepfgiants@conservation.org by the same deadline. Late applications will not be considered.

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 whenever they are submitted.

Biocontrol Workshops opportunity

A number of biocontrol workshops are planned for 2013/2014. If you are interested in attending please contact Lynley Hayes (hayesl@landcareresearch.co.nz) **no later than the end of September 2013**. An indication of interest is all that is needed at this stage, not a definite commitment. Dates and venues for all workshops will be finalised once expressions of interest have been received.

Basic Training in Biological Control of Weeds, Lincoln, December 2013

A 2-day introductory workshop on biocontrol covers as many aspects of the underlying philosophy and current projects, and augment indoor sessions with practical activities in the field. If your organisation contributes to or supports our research in some way then there is no charge for this course, and it is ideal for new staff. If not you may still be able to attend, if there are places available.

Advanced Training in Biological Control of Weeds, Lincoln or Auckland, March/April 2014

A 2-day workshop builds on the introductory one, and aims to bring people up to speed with new developments since they undertook basic training, and it covers some topics in more depth. In conjunction with the basic course, the aim of this training is to give people the skills and confidence to manage their own biocontrol programmes. This course is ideal for people who have undertaken a basic training course 2 or more years ago or for people who have had considerable experience working with biological control in the field. If your organisation contributes to or supports our research in some way then there is no charge for this course. If not you may still be able to attend, if there are places available.

Assessing the Impact of Biocontrol

If there is sufficient interest we could again hold our 2-day workshop on assessing the impact of biocontrol. It is likely that we will need to charge \$500-\$1000 per participant (excluding travel, accommodation and meals) to cover the costs of running this workshop.

Plant Identification, Lincoln, December 2013

This 1-day workshop aims to give people the confidence and skills to identify plants, especially weedy ones. Participants are taught how to identify any plant they come across using basic botany skills and plant identification keys (including the interactive keys for grasses, the recently-developed key for weeds, and an unreleased key to New Zealand flowering plant genera). All levels of experience with identifying plants can be catered for, and participants are encouraged to bring any material they would especially like to work on. The cost of this course is likely to be about \$500 per person (excluding travel, accommodation and meals). This course will be run back to back with the Basic Biological Control of Weeds course.

Biosecurity Bonanza, May 2014

We will continue to offer our highly popular Biosecurity Bonanza next May. The venue is still to be decided but likely to be Auckland. Again we will have concurrent sessions covering the latest in our weed, insect and mammalian pest research, and there will be no cost for attendance.

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/>

Current: - Climate Change Technical Officer. Applications close Friday 20th September, 2013

INVASIVE NEWS GLOBAL

Stowaway insects spreading around the world



The problem of invasive ants may be far worse than previously thought. Spanish team of scientists has found that larger than expected numbers of the insects are being unwittingly shipped around the world. The researchers warn that many of these species are establishing colonies in their new habitats that could pose a threat to the environment, infrastructure and human health. [Source: BBC World Service]

Economic impact of invasives in Southeast Asia

A recent study published online (PLoS ONE) estimated the economic cost to agriculture, human health and the environment in Southeast Asia is estimated to be around US\$33.5 billion. 90 per cent of the cost is to the agricultural sector, while USD\$2.1 billion is associated with the environment and USD\$1.85 billion to human health. The researchers acknowledged that the economic and environmental impacts of invasive species in low and middle-income regions can be considerable and that measures such as regional risk assessments to inform decisions on prevention and control of invasive species in Southeast Asia could be beneficial. [see Publications section for further information]

Papaya Ringspot Virus on the attack



The Papaya Ringspot Virus (PRSV) continues to attack Uycayali's papaya plantations, in central Peru. It is currently present in 300 of the 1,000 hectares of the region. This was reported by the promoter of the Productive Chain for sugar and papaya of Uycayali's Regional Sectorial Directorate for Agriculture, Paolo Roberto Gálvez Castillo, who explained that, in order to reverse the situation, the National Agricultural Health Service (Senasa) and the National Institute for Agricultural Innovation (INIA) have prepared a test plantation using seeds of the hybrid 'Known-you N°1', produced in Taiwan. The variety is being tested to ascertain if it can withstand the PRSV. Source: Agraria.pe. Publication date: 8/23/2013 (shared on PestNet)

Plan seeks 'chaperones' for threatened species

The notion of intentionally relocating plant species when climate change threatens their ability to survive in their natural habitats is steeped in controversy. Critics claim that such 'assisted migration' could transform struggling species into destructive invaders, or inadvertently transmit disease, or that hybridization between species could occur that would lower the planet's overall genetic diversity. But without some form of assistance, many plants will face certain extinction as the planet warms. [source: Nature News – www.nature.com/news]

Kill a rat, save an ecosystem



later.

South Georgia is a 170km-long remote mountainous island in the southern Atlantic Ocean was first discovered by Captain James Cook who reported on the abundance of wildlife. The island was soon descended upon by thousands of whalers to pillage the seals and they brought with them rats and mice. The rodents impact on the island was profound resulting in reduced bird populations, changed plant flora and poor soil conditions. To control the rats, the South Georgia Heritage Trust turned to techniques pioneered in New Zealand, where helicopters have been used to spread toxic-laced bait pellets. A trial operation was undertaken on a small 128sq. km in 2011 with no signs of rats two years

Australian authorities intercept citrus pest



Two Australian inspection officers have prevented a potential incursion of citrus greening disease after seizing prohibited curry leaves at Melbourne airport.

The officers from the Department of Agriculture, Fisheries and Forestry (DAFF) discovered passengers travelling from India were carrying leaves and roots from the curry tree *Murraya koenigii*, infested with eggs and nymphs of the Asian citrus psyllid.

Cat solution

A recent study found that by treating cats through trap-vasectomy-hysterectomy-release (TVHR) method may be more effective in reducing feral cat population than the traditional neutered/spayed method. The study relies on the social order within the cat world where sexually active males that have been treated continue to guard off other tom-cats. The study used computer modelling to show that the TVHR method could cut a population of feral cats in half with an annual capture rate of just 35 percent, and could completely eliminate the colony within 11 years at the same rate. Conversely, the trap-neuter-release (TNR method) required capturing about 82 percent of the cats in order to eradicate the colony in 11 years. <http://www.redorbit.com/news/science/1112925253/vasectomy-for-more-effective-feral-cat-control-081613/>

INVASIVE SPECIES PUBLICATIONS

- SPAN (South Pacific Agricultural News – Institute for Research, Extension & Training in Agriculture) is now out: Vol. 38, No. 7 July 2013 ISSN 1015-950. Contents: Samoans urged to have green leaves in their diet | Agro-ecosystem analysis | Savaii Agricultural Show | Samoan's Coconut Oil | What's on Campus | New entomologist at SAFT | Agriculture students' practical training.
- Nghiem LTP, Soliman T, Yeo DCJ, Tan HTW, Evans TA, et al. (2013) Economic and Environmental Impacts of Harmful Non-Indigenous Species in Southeast Asia. PLoS ONE 8(8): e71255. doi: 10.1371/journal.pone.0071255
- SPREP's 2012 Annual Report (both in French and English) is now available for downloading. Please click on the links: Link as follows: English version: http://www.sprep.org/attachments/Publications/Corporate_Documents/AnnRep2012.pdf and French version: http://www.sprep.org/attachments/Publications/Corporate_Documents/AnnRep2012_FRE.pdf
- The Kauai Invasive Species Council 2013 Newsletter – Kia i Moku is now available for viewing: <http://www.hawaiiinvasivespecies.org/iscs/kisc/pdfs/KiaiMokuVolume6Issue1.pdf>. Articles include: Little Fire Ants on Kaua'i | Small Hive Beetle found on Kauai | Coqui Update | A day in the Forest | Kauai Partnership Shine | and more.
- Biological Control of Weeds. Issue 65, Aug. 2013. Topics include: Scottish 'Laddies' flown in for genetic rescue | Finding a perfect match | Ginger biocontrol edges closer to fruition | Manchurian wild rice, coming to a wetland near you | Value of silver leaf fungus explored | Mite we have the answer for old man's beard.

UPCOMING EVENTS

2013	Event	Participating Partner
September		
2-6 Sept	44 th Pacific Islands Forum. Majuro, Marshall Islands.	
15-19 Sept	SAWMA Symposium 2013: Biodiversity within and beyond Protected Areas, Kruger national Park	
16-20 Sept	SPREP 23 rd Meeting . Apia, Samoa	
21 Sept	International Coastal Cleanup Day (Ocean Conservancy)	
22-26 Sept.	12 th International Conference – Ecology and management of alien plant invasions. Pirenopolis, Brazil.	Pirenopolis, Brazil http://www.emapi2013.org/index.php/br/en/
22-27 Sept	9 th European Vertebrate Pest Management Conference. Turku, Finland.	www.evpmc.org
23-27 Sept	World Maritime Day (IMO). 2013 Theme: Sustainable Development: IMO's contribution beyond Rio+20	
24-27 Sept	Island Biosecurity Training, Apia, Samoa	PILN/SPREP
25 Sept	Invasive Species Working Group – GLISPA teleconference call	
26 Sept	Fiji Invasive Species Taskforce Meet	
27 Sept	World Tourism Day (UNWTO)	
October		
7 October	World Habitat Day (United Nations)	
16 October	World Food Day (United Nations – FAO)	
17 Oct.	International Day for the Eradication of Poverty (United Nations)	
23-27 Oct.	2 nd International Congress on Biological Invasions. Qingdao, China.	www.icbi2013.org
November		
14-17 Nov.	Asia-Park Congress. Japan	SPREP
20-22 Nov.	AWMS Annual Conference. Massey University, Palmerston North, NZ.	
25-29	Pacific World Heritage Workshop. Suva, Fiji	UNESCO
December		
2-6 Dec	9 th Pacific Island Conference on Nature Conservation and Protected Areas. Suva, Fiji	
9-13 Dec	Wrap-up meeting of 9 th Pacific Island Conference on Nature Conservation & PAs.	
	20 th Biennial Conference on the Biology of Marine Mammals. University of Otago, NZ	
13 Dec	Fiji Invasive Species Taskforce	FIST

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