



Pacific Invasives Learning Network.

Secretariat of the Pacific Regional Environment Programme

PO Box 240, Apia, Samoa

+685 21929

Fax: +685 20231

www.sprep.org

PILN Teams:

- American Samoa
- Commonwealth of Northern Mariana Islands
- Fiji
- French Polynesia
- Guam
- Hawaii
- Kiribati
- Kosrae
- Marshall Islands
- New Caledonia
- Niue
- Palau
- Pohnpei
- Samoa
- Yap

PACIFIC INVASIVES LEARNING NETWORK

SOUNDBITES

NOVEMBER 2011

Network News

PILN SOUNDBITES is the monthly newsletter of the Pacific Invasives Learning Network: a participant-driven island network, reporting on news of PILN Teams and the Pacific Invasives Partnership. Past issues are available online: <http://www.sprep.org/piln>

Date Claim: PILN Network Meeting – March 21-28th 2012

@ Kiritimati Atoll, Kiribati

PILN Teams and Country Updates

Fiji

Fiji Invasive Species Taskforce to finalise its NEC submission

The Fiji Invasive Species Taskforce met on the 18th November at the IUCN-Oceania conference room to finalise its submission to the National Environment Council (NEC). This will allow FIST to be recognized as one of the working groups in support of the implementation of Fiji's National Biodiversity Strategy and Action Plan (NBSAP). FIST is currently chaired by Biosecurity Authority Fiji (Ilaisa Dakaica) and co-chaired by the Agriculture Department. Secretarial support to FIST is provided by the Environment Department. Members of FIST include government agencies, private sector, non-governmental organizations and CROP agencies. Invasive species in Fiji have featured prominently in the media in recent years such as the outbreak of the Asian termites and the current efforts to contain and control the spread of the American Iguana. Interceptions of various species such as the Giant African Snail, tree-frogs and others, continue to be made by Biosecurity Authority of Fiji and the public. Please contact the Biosecurity Authority Fiji for further information, or visit their website: www.biosecurityfiji.com/.

Update on the American Iguana invasion in Fiji

An American businessman, Ken Honig was earlier taken in for questioning by the Fiji Police and the Biosecurity Authority alleged to be the source of introduction of the American Iguanas that are now causing serious problems on some islands.

Biosecurity Authority Fiji's Chief Executive Officer, Elvis Silvestrini said he cannot comment on the details of an ongoing investigation but Honig has been assisting Biosecurity Authority Fiji with their enquiries into the illegal importation of the invasive American Iguana.

Guam

South American Little Fire Ant invades Guam



© Plegadis (Wikimedia Commons).
Little Fire Ant biting a human

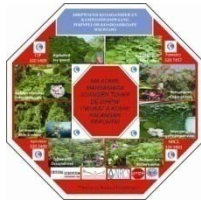
There is a new invasive species in Guam and while it may be no larger than the head of a pin, entomologists are saying the South American Little Fire Ant (*Wasmannia auropunctata*) could create an ecological disaster as bad as the one caused by the brown tree snake.

The tiny yellow-brown ant was discovered by the Coconut Rhinoceros Beetle Eradication team in the Primo hard fill site up in Yigo.

The Little Fire Ant has caused impacts in Hawaii, New Caledonia, French Polynesia and Australia. The Australian government has spent over \$12 million dollars in attempts to eradicate it. The ant may be small in size but its sting packs a powerful punch. Agricultural officials are trying to determine how widespread the little fire ant is. They are encouraging the public to report any ant stings or sightings. For those living in Guam, if you come across an ant that you suspect is the Little Fire Ant call 475-PEST.

Pohnpei

Invasive-Species Taskforce of Pohnpei (i-STOP) met



i-STOP members met on the 28 October, 2011 and discussed a range of invasive species issues. They noted the upcoming meeting of the Micronesia Chief Executive Summit (MCES) that will take place in Kosrae, from the 7-8 December. A possible meeting by the Micronesia Regional Invasive Species Council (RISC) is likely to precede the MCES meeting.

New sites covering several acres of the mile-a-minute weed were found in Nanmadab (Palikir). Community involvement is critical as man-power is what is needed especially with the physical work. Funding sources were identified including possible complimentary funding with other projects to assist with community engagement. A plan for work activities in Nanmdab will be developed.

The Invasive Species Control Plan is also nearing completion. Some editing and amendments will be made before it is submitted to the Office of the Attorney General, Pohnpei State. The Pohnpei Invasive Plant Species booklet and posters have been printed and are available for distribution. Other matters discussed included the white fly biocontrol project, which will see collaboration between the Pohnpei State and the University of Guam. An import permit for the white-fly biocontrol was needed to allow for its introduction to Pohnpei. The GEF-PAS Invasive Species Inception Workshop will be held in December with Dr Alan Tye. Some of the funding under the GEF-PAS Invasive Species project is being allocated for biocontrol of mile-a-minute and Koster's curse, as well as for attendance to RISC meetings.

Samoa

Crazy ants on Nu'utele Island

Yellow crazy ant (*Anoplolepis gracilipes*) research is currently being undertaken by Ben Hoffmann from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) of Australia, Saronna Auina from the University of Auckland and the staff from the Ministry of Natural Resources and Environment at Nu'u'utele Island, Samoa.

A yellow crazy ant survey was made in 2003 and subsequent surveys in October 2010 and May 2011, found three populations, covering approximately five hectares. Two small populations detected in the October survey were unable to be found again in the May survey. The crazy ant populations on Nu'utele do not appear to be establishing well, and it remains unclear if any population on Nu'utele will be self-sustaining for more than a few

years. Funding for this work was provided by the Critical Ecosystem Partnership Fund as part of a grant to the Secretariat of the Pacific Regional Environment Programme for a larger restoration programme on the Aleipata islands. A report of this will be published in the upcoming Pacific Invasives Initiative Newsletter. For further information, please contact Dr Ben Hoffmann (Ben.Hoffmann@csiro.au).

Pacific Invasives Partnership News:

Honey-eater learning exchange with rats in-mind



A learning exchange to assist with increasing the New Caledonians capacity to survey honeyeaters (*Gymnomyza*) and plan conservation initiatives, with a view of controlling rats, the biggest threats to these birds has just been completed.

Rebecca Stirnemann, a PhD student at Massey University and currently residing in Samoa for her field research on the endemic and IUCN Red-Listed Samoan Forest Honeyeater (*Gymnomyza samoensis*) assisted the staff of SCO Park in training them on new techniques on Song recording and playback. In the spirit of the learning exchange initiative the staff of SCO Park trained Rebecca on key elements in developing rat control programme.

Rebecca gave two presentations and visited three sites in the course of her 10 day visit. The team undertook recording of new bird calls and discussed collaboration on further invasive species research. Key learning exchange lessons included: i) determining how to identify spatial changes in rat abundance; ii) identifying new survey protocols; iii) identifying funding opportunities to continue further research; iv) identifying future directions for the project. The New Caledonian team will continue surveying for the honeyeater using new calls and equipment that was provided during the exchange. Plans are already underway for joint collaboration in the future. The team identified further exchanges including a revisit to Mt Panie and for New Caledonian staff to visit Samoa and learn about the Samoan Forest Honeyeater.

PILN provides LEARNING EXCHANGE opportunities for its teams. Please contact posas@sprep.org for further information.

IUCN Invasive Species Specialist Group and CBD agree to work together

The Invasive Species Specialist Group and IUCN Invasive Species Initiative have agreed to work together with the Secretariat of the CBD to promote the achievement of Aichi Target 9 and support initiatives concerning invasive species. An agreement for the implementation of the Strategic Plan for Biodiversity 2011-2020 regarding invasive species was signed by Jane Smart, Global Director, Biodiversity Conservation Group, of the International Union for Conservation of Nature (IUCN) and Ahmed Djoghlaif, CBD Executive Secretary on November 7th at the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) 15 in Montreal. "Invasive alien species are a global issue; however, existing capacity at the local level is not adequate enough to stop it," says Ahmed Djoghlaif, CBD Executive Secretary. "Both IUCN and the CBD are strongly committed to assist Parties in gaining the tools and training to halt biological invasions."

CBD – Subsidiary Body for Scientific Technical and Technological Advice 15

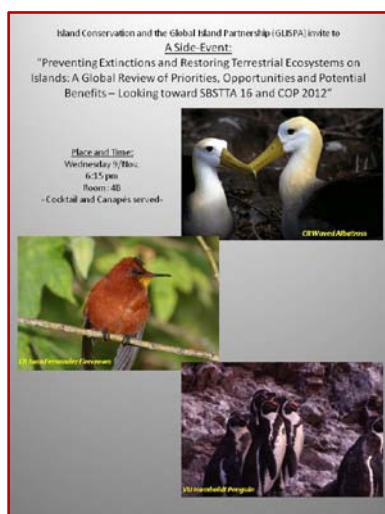
Invasive Alien Species @ SBSTTA 15

Scientists and parties to the Convention on Biological Diversity met from 7-11th November in Montreal, Canada to discuss invasive alien species amongst other things. The focus of the invasive alien species agenda was to address gaps at the international level of introducing invasive alien species through trades in pets, aquarium and terrarium species and through live bait and live food. The meeting recognized the multi-sectoral nature of invasive alien species and it encouraged effective collaboration at the national level of focal points that deal with CBD, the International Plant Protection Convention (IPPC), the World Organisation for Animal Health (OIE),

the Codex Alimentarius Commission, the World Trade Organisation Agreement on the Application of Sanitary and Phytosanitary Measures (WTO-SPS Agreement), the Convention on International Trade in Endangered Species of Wildlife Fauna and Flora (CITES) and the UN Food and Agriculture Organisation (FAO).

The internet trade was seen as one of the increasing pathways of invasive alien species introduction and the CBD Executive Secretary was requested to compile and share methods and instruments use by law enforcement, customs and inspection agencies to monitor and control this trade, as well as best practices to raise public awareness and disseminate guidance to internet traders. Commercial zoos, safari parks and breeding and trade centers were seen as potential risks of introduction and spread of invasive species. Further details and outcome of the CBD meeting can be obtained from the CBD website (www.cbd.int).

Island Conservation and GLISPA held an island biodiversity Side-event at SBSTTA 15



Island Conservation/GLISPA flyer for the Side-event at SBSTTA 15, Montreal

Island Conservation teamed up with the Global island Partnership to host a side-event at the CBD's Subsidiary Body for Scientific, Technical and Technological Advice meeting held in Montreal 7-11 November, 2011.

Dr Bill Waldman, Executive Director of Island Conservation provided the opening remarks for the side-event which focused on preventing extinctions and restoring terrestrial ecosystems on islands.

The event focused on the vulnerability of islands throughout the world and the Pacific Island Countries and Territories received a special mention. The event highlighted that of all the known global extinctions, the majority have taken place on islands. A high proportion (between half-to $\frac{3}{4}$) is directly attributed to invasive species. Birds were identified as one of the most vulnerable groups. The side-event highlighted the need to bring back the focus in addressing invasive species as the primary factor for extinction on islands. A global concerted effort is needed that requires the various sectors to work together as well as mobilising the necessary resources to accelerate actions on the ground. Although many islands in the Pacific support small populations of endemic and native species,

every-one of those species deserve to be saved. For further information please contact Dr Hugo Arnal (hugo.arnal@islandconservation.org).

Vacancies, Scholarships & Consultancies:

AusAID & EU Post-graduate scholarships in climate change

In 2012, USP through the Pacific Centre for Environment & Sustainable Development (PACE-SD) will offer scholarships in Climate Change through its European Union funded Project and Future Climate Leaders Project. These scholarships are available to citizens of Pacific Island Countries (PICs) for full-time studies, based at USP's Laucala Campus, for Post-graduate Diploma, MSc and PhD Programmes in Climate Change. Application forms for all programmes (PG Dip, MSc, PhD in Climate Change) can be obtained from your local USP Centre or downloaded from www.usp.ac.fj/student. Completed forms and accompanying documents/transcripts etc should be sent to Ms Vijaya Naiker at Pacific Centre for Environment and Sustainable Development, USP Campus at Suva (naiker_v@usp.ac.fj; Ph: +679-3231982). **Completed applications are due by 12 December 2011.**

IDDR (France) – Research Fellow (post doctorate 18 months)

IDDR (France) is looking for a Research Fellow (post doctorate, 18 months) within the framework of a project (CapAdapt) on the assessment of adaptive capacity to climate change in low-lying coastal areas. Based in Paris, the post doc will be in charge of both theoretical aspects and fieldwork in Bangladesh (Indian Ocean) and Kiribati (Pacific Ocean). **The position will be open until filled, ideally in early 2012** and no later than

September 1st, 2012. Interested candidates should send their CV, cover letter and at least one reference at their earliest convenience. Interviews will be conducted as applications arrive, and only short-listed candidates will receive a feedback on their application. Applications should be sent by email to: alexandre.magnan@iddri.org

SPREP Vacancies

- Internship: Clean Pacific Campaign Coordinator (CPCC)
- Management Accountant (MA)
- Financial Accountant (FA)
- Database Developer & Administrator (DDA)
- Information Technology Manager (ITM) – RE-ADVERTISEMENT

The due date for the above positions is 2nd December 2011. Please contact the HR Officer – luanac@sprep.org or telephone +685 21929 ext. 230 for further information.

3 Postdoctoral fellowships in marine invasion research

Smithsonian Environmental Research Centre seek three postdoctoral researchers.

- Marine Zooplankton Ecology
- Marine Soft-sediment Invertebrate Ecology
- Commercial shipping traffic and marine invasions

Positions are for one-year with prospect of renewal. Applications must be submitted by 15 December, 2011 (Commercial shipping traffic and marine invasions and marine zooplankton ecology) and 15 January, 2012 (marine soft-sediment invertebrate ecology). For more information contact Monaca Noble (noblem@si.edu).

Upcoming meeting, conference and training announcements:

These announcements are for activities taking place in December. More events can be found on our webpage:

<http://www.sprep.org/PILN/Calendar.htm>

December calendar

6-8	Brown Tree Snake Technical Committee Meeting (Honolulu, Hawaii)
7-8	Micronesia Chief Executive Council Meeting (Kosrae, FSM)
5-9	25 th International Congress for Conservation (Auckland, NZ)
14-15	PIP Teleconference

Invasive Species management courses at the University of Canberra

The University of Canberra's Faculty of Applied Science (UC) has a number of courses to provide the skills and understanding to develop Best Practice plans to manage invasive species (plants and animals) strategically and effectively based on latest knowledge, as set out in the Australian Pest Animal Strategy. Courses include Graduate Certificate in Wildlife Management, Graduate Diploma in Natural Resource Management, and a Vocational Education and Training Diploma among others. UC can also offer tailored short courses specifically designed for agencies responsible for pest plant and animal management. Further information on these courses and other services are available online: www.feral.org.au. Please contact Mike Braysher, Professor in Natural Resource Management on (02) 6206 3847 5728 or by email at: Mike.Braysher@canberra.edu.au, Dr Tony Buckmaster, Lecturer at the Faculty of Applied Science on (02) 6201 5008 or by email at: Anthony.Buckmaster@canberra.edu.au or Mr David Walter, on (02) 6201 5728 or by email at: David.Walter@canberra.edu.au.

Weeds News Digest

The Weed's Network needs your help to post more than 250 weed risk assessments on their website (<http://invasivespecies.org.au/>). To date 80 weed risk assessments have been entered, but Weeds Network need your help to continue the work. Subscribers can 'adopt a weed risk assessment' of a species of their choice for A\$100 (first in, first served). The Weed's News and the Weed's Network website are an open-access resource. In order to continue on this basis, they need our support. Please use the link below to access The Weed's News email digest for November 19, 2011 through to November 25, 2011. The Weed's News can also be read on-line at any time by visiting <http://invasivespecies.org.au>

Funding opportunities:

Sound Approach Bird Fund

The Sound Approach Bird Fund offers funding up to \$10,000 to bird conservation projects around the world. Projects must have a significant conservation benefit, making a real impact on the survival of threatened species. Research projects that aim to identify threats to bird populations; projects which aim to eradicate or minimise identified threats; practical projects to protect and assist endangered birds, such as safeguarding sites, habitat restoration, etc.; surveys and other investigative work to assess the status of threatened species and identify new species. The Sound Approach Bird Fund is looking for small, grassroots groups and projects which are difficult to raise funds for. There are no deadlines; applications are reviewed on a rolling basis. We aim to get a decision to you within 2 months of your application. For an application form please email birdfund@soundapproach.co.uk. If your project does not meet the criteria listed above, but you feel that it may be an exceptional case (e.g. you plan to study a newly described and probably threatened species), we suggest you send a summary of your project first.

SeaWorld Busch Gardens Conservation Fund

SeaWorld Busch Gardens Conservation Fund. The Fund supports research in one of four areas: 1) Species research, 2) Animal rescue and rehabilitation, 3) Habitat protection, 4) Conservation education. It has no set minimum or maximum grant amount but in the past it has supported projects ranging from \$5,000 to \$25,000 for a one-year term. See: <http://www.swbg-conservationfund.org/grantInfo.htm> No deadline - SeaWorld & Busch Gardens Conservation Fund Animal Crisis Grants. For more information see: <http://www.swbg-conservationfund.org/animalCrisisGrants.htm>.

UNESCO: Pacific Youth Visioning for Island Living 2010 Small Grants

Youth Visioning for Island Living is a capacity building initiative that aims to empower young people in small islands to make a difference. The UNESCO Office for the Pacific states encourages young people and or youth organizations from member countries to submit applications to support a wide range of projects. If you are a young person or a youth organisation and would like to take part in this opportunity, feel free to contact Natalia Pereira (n.pereira@unesco.org)

Rapid Response Facility

The Rapid Response Facility (RRF) is an emergency small grants programme that provides emergency funding of up to USD\$30,00 to address severe and time sensitive threats to endangered biodiversity, primarily within UNESCO natural World Heritage sites. The grants are jointly operated by Fauna & Flora International (FFI), UNESCO World Heritage Centre, and the United Nations Foundation. With a target processing time for grant applications of just 8 working days, the RRF provides rapid support to enable conservation practitioners to tackle emergencies in some of the World's most important sites for biodiversity. Those interested in approaching

the RRF for emergency funding should see www.rapid-response.org, which provides details on application procedures, funding criteria, and case studies of past RRF grants.

Invasive news and interesting links and websites

Introduced species play bees



©Muhammad Mahdi Karim -
Wikimedia Commons

The loss of native pollinators in New Zealand and elsewhere has led to increasing concerns, especially for food security. Invasive alien species are largely responsible for the demise of native pollinators and new innovative ways are being explored to compensate for this loss. A recently published research found invasive rats are compensating for the loss of native pollinators in New Zealand. The rats were found to be attracted to the flowers for their nectar.

Researchers David Wilcove and David Pattemore set out to study the red-flowered *Metrosideros* and *Knightia*, and the purple-flowered *Veronica*. What the duo didn't expect to see was that on the mainland, where the plants were no longer visited by traditional pollinating species, rats, and a recently colonising bird, were doing the job instead. And for two of the three plant species, the invasive species were doing a comparable job to the native pollinators. Wilcove explains that, in general, this type of compensation is more likely to happen for flowering plants that are pollinated by many different animals. But for plants that rely on a very specialist pollinator, the loss of its sole pollinating animal still spells doom for the species. *For further information of this research please see the 'New Publications' section of your Soundbites.*

Island characters help determine the level of vulnerability to exotic species



© Jill Key

A recently published research by Walsh and colleagues looked at what makes some islands more susceptible than others to exotic species. The team studied 65 islands and archipelagos from around the world, ranging from latitude 65°N to 54°S. Ten island characteristics were identified. The relative importance of each characteristic in predicting the impact of exotic species using multi-variate modeling and hierarchical partitioning was determined.

The impact of exotic species was defined based on the number of bird, amphibian and mammal (BAM) species listed by IUCN as threatened by exotics, relative to the total number of BAM species on that island. The results found the impact is severe on islands with more exotic species and a greater proportion of native species that are endemic. The level of anthropogenic disturbance was found not to be an influencing factor to an island's susceptibility to the impacts of exotic species. *For further information of this research please see the 'New Publications' section of your Soundbites.*

Preventing marine invasion in the sub-Antarctic



© Jennifer Lee. South African
resupply vessel S.A. Agulhas

As the climate warms and visitor numbers to the Antarctic and sub-Antarctic increase, so does the threat of an invasion by marine species carried to the region on resupply vessels and tourist ships. Speaking at the recent Third International Forum on the Sub-Antarctic held in Hobart in August, Dr Jennifer Lee – a postdoctoral fellow at the Centre for Invasion Biology, Stellenbosch University, South Africa – said preventative action was essential.

“It's difficult, expensive and sometimes impossible to eradicate species in a

terrestrial habitat and there's never been a successful eradication in a marine habitat. There is no cure; prevention really is the only way," says Dr Lee.

Killer frog fungus 'spread by trade'

The fungus killing frogs around the world comes in several forms, and has almost certainly been distributed by trade in amphibians, research shows. Scientists from Imperial College London found three distinct lineages of the chytrid fungus in various nations. The most widespread and lethal form was probably created by a crossing of two prior forms. Chytrid is now found on every continent and has wiped out a number of species. It was identified just over a decade ago; it kills amphibians by blocking the transfer of vital substances through their skins, eventually causing cardiac arrest. Its origins are believed to lie in southern Africa.

"Before this study, no-one knew there were any different lineages," said Rhys Farrer, the project leader from Imperial. "This work comes from using the new whole-genome sequencing technique, combining data from all over the world. And it's obviously important, as chytrid is one of the most devastating wildlife diseases with the largest host range of any, and responsible for dozens of species extinctions and many more extirpations of local populations."

Action plan for information on invasive alien species

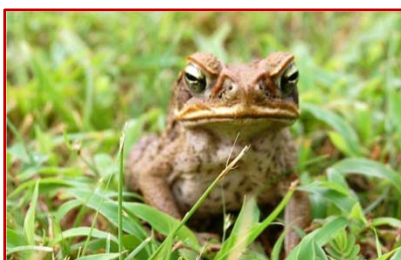
Copenhagen, Denmark – Government experts meeting under the Convention on Biological Diversity (CBD) have endorsed a wide-ranging programme to strengthen information available to decision-makers on the spread of invasive alien species (IAS).

The plan, presented to the CBD's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) in Montreal, arose from a workshop held at the GBIF Secretariat in Copenhagen in September, where experts agreed on an unprecedented level of collaboration on the means to share global IAS data.

The Joint Work Programme (JWP) unites eight information service providers behind nearly 50 action points aimed at combining and harmonizing data on IAS from a wide range of different databases and networks.

The aim is to contribute towards Target 9 of the Aichi Biodiversity Targets agreed in Japan last year, which commits parties to the CBD to eradicate priority invasive alien species by 2020, and control pathways to prevent their introduction and establishment. Further information can be obtained from Tim Hirsch (thirsch@gbif.org)

Officials scramble to eliminate venomous toads on Okinawa base



© Jill Key. An invasive cane toad

CAMP FOSTER, Okinawa – Hundreds of venomous toads have been found at Camp Kinser in what environmental officials say is the first infestation of a notorious pest on Okinawa's main island.

About 570 cane toads have been captured at the Marine Corps base since August, signaling a population boom since the invasive amphibian was first spotted on the U.S. Army's Torii Station about a year ago, according to the Marine Corps and the Japan Ministry of Environment.

The large brown toads decimate indigenous animals and insects and have proven extremely difficult to eradicate in other areas where it has been introduced, including Australia and Hawaii. The appearance on Camp Kinser has Marine Corps Installations Pacific and Japanese environmental teams scrambling to eliminate the current generation of toads before they mature and begin breeding next spring. So far, the spread of the cane toad on the base remains a mystery, according to the Marine Corps consolidated public affairs office on Camp Foster.

Plant pests – the biggest threats to food security?

The threat posed to crop production by plant pests and diseases is one of the key factors that could lead to "a perfect storm" that threatens to destabilise global food security. Already, the biological threat accounts for about a 40% loss in global production and the problem is forecast to get worse, scientists warn. BBC News has asked Dr Matthew Cock, chief scientist for Cabi, a UK-based agri-environment research organisation, to compile a list of the worst plant pests threatening crops around the world.

Western Australia passes new cat laws

WA's 200,000 cat owners will be required to sterilise, microchip and register their pets, under new laws which passed State Parliament overnight. Local government's powers to deal with cats which are not owned and irresponsible cat owners, including hoarders, will be boosted under the legislation. Local Government minister John Castrilli said the legislation would give WA a "consistent and comprehensive" approach to cat control. "In essence, the legislation will make way for better management of the unwanted impacts of cats on the community and the natural environment, causing nuisance and damage to property. It also provides for the reunion of cats with their owners," he said in a statement. The Cat Bill 2011 requires owners to ensure their cats are desexed by six months of age and implanted with a microchip although sterilisation exemptions will be granted for breeders and owners who can prove the procedure will affect their pet's health. Mr Castrilli said to ensure the Bill did not cause hardship, cat owners and local governments would have until November 1, 2013 to prepare themselves and their cats.

New Publications:

Scientific Articles

- Homans, F.R., & Smith, D.J. Evaluating management options for aquatic invasive species: concepts and methods. *Biological Invasions* Online First™ 19 November 2011.
- Raymond, B., McInnes, J., Dambacher, J.M., Way, S., & Bergstrom D.M. 2011. Qualitative modeling of invasive species eradication on subantarctic Macquarie Island. *Journal of Applied Ecology* 48: 181-191.
- Pattenmore, D.E. & Wilcove, D.S. 2011. Invasive rats and recent colonist birds partially compensate for the loss of endemic New Zealand pollinators. *Proc. R. Soc. B* doi: 10.1098/rspb.2011.2036 published online 16 November 2011
- Walsh, J. C., Venter, O., Watson, J. E. M., Fuller, R. A., Blackburn, T. M. and Possingham, H. P. 2011. Exotic species richness and native species endemism increase the impact of exotic species on islands. *Global Ecology and Biogeography*. doi: 10.1111/j.1466-8238.2011.00724.x
- Webber, B.L. & Scott, J.K. 2011. Rapid global change: implications for defining natives and aliens. *Global Ecology and Biogeography*. doi: 10.1111/j.1466-8238.2011.00684.x
- Hulme, P.E. 2011. Weed risk assessment: a way forward or a waste of time? *Journal of Applied Ecology*. doi: 10.1111/j.1365-2664.2011.02069.x
- Henderson, W.A., Bomford, M.A., & Cassey, P.B.C. Managing the risk of exotic vertebrate incursions in Australia. *Wildlife Research* 38(6) 501-508 <http://dx.doi.org/10.1071/WR11089>
- Farrer, R.A., Weinert, L.A., Bielby, J., Garner, T.W.J., Balloux, F., Clare, F., Bosch, J., Cunningham, A.A., Weldon, C., du Preez, L.H., Anderson, L., Kosakovsky Pond, S.L., Shahar-Golan, R., Henk, D.A., & Fisher, M.C. 2011. Multiple emergences of genetically diverse amphibian-infecting chytrids include a globalized hypervirulent recombinant lineage. *PNAS* 2011 ; published ahead of print November 2011, doi:10.1073/pnas.1111915108

Books & Newsletters

- Froglog 99 – Regional Focus on Maritime Southeast Asia and Oceania – <http://www.amphibians.org/wp-content/uploads/2011/11/FrogLog99.pdf>
- Aliens: The Invasive Species Bulletin - <http://www.issg.org/publications.htm>
- SAPIA – Southern African Plant Invaders Atlas - Another great issue of SAPIA News including how to identify the different *Opuntia* species. This special issue of SAPIA News has been prompted by a SAPIA survey of invasive alien plants in the Eastern Cape during October. The region surveyed stretched from Venterstad in the north to Cradock, Somerset East, Fort Beaufort, Hogsback, Grahamstown, Port Alfred, Kenton on Sea and Alexandria. The diversity of the indigenous vegetation, which includes the Grassland, Nama-Karoo, Savanna, Thicket and Fynbos biomes, is matched by the vast array of alien plant species that have become invasive or naturalised. This SAPIA News will focus mainly on the emerging invaders, which without intervention are likely to expand and could become major invaders

Contact for PILN SOUNDBITES:

Dr. Posa A. Skelton, PILN Coordinator, SPREP, PO Box 240, Apia, SAMOA. Tel. +685 21929 ext. 276,
Fax. +685 20231, posas@sprep.org; www.sprep.org/piln

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