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



PACIFIC INVASIVES LEARNING NETWORK

## SOUNDBITES | JULY-AUGUST 2014

Pacific Invasives Learning Network  
Secretariat of the Pacific Regional Environment Programme.  
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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>

### WELCOME TO YOUR JULY PILN SOUNDBITES

Kia orana Invasive Battlers and Friends,

Now that the dust has settled following the 45th Pacific Islands Forum Leaders Meeting and the 3rd UN Conference for Small Island Developing States, it is time to refocus on the serious business at hand - protecting our islands, our health and economy from the scourge of invasive species. Thank you to everyone who have contributed to making these events for the month of July and August a great success.

### PILN TEAMS & COUNTRY UPDATES

**American Samoa:** Invasive battlers in Pagopago are gearing up to continue the fight against the terrible *Tamaligi* or Albizia. A grant from the Department of Interior will allow the National Park Service of American Samoa to continue their effort to eradicate this tree. The tamaligi tree grows fast - towering over the canopy but the shallow roots make them vulnerable to cyclones - often causing soil erosion and a hazard to people and their properties downstream. Congratulations to Tavita Togia and his team for this milestone.

**Cook Islands:** The NZ government has provided funding to NZ Landcare Research to undertake a number of invasive species projects to protect the islands. Some of the weeds being targeted include *Merremia peltata*, *Mikania micrantha* and *Spathodea campanulata*.

**French Polynesia.** Jean-Yves Meyer, our invasive battler from French Polynesia will soon wear a different hat and will be the Head of the French Polynesian Department of Research. This will allow Jean-Yves to focus on coordination and planning of research activities within the country, as well as regional and international collaboration on research and scientific issue. We wish Jean-Yves all the best in his new role.

**Guam.** Heartfelt condolences to Diane and family for the loss of husband, father and a wonderful friend - Dan Vice. The Vice family is synonymous with invasive species management in Guam - dedicating their life and passion in safeguarding Guam's biodiversity. Dan will be missed by many of us that knew him. Rest in peace Dan.

A Guam Marine Biosecurity Action Plan is under development by the marine invasive species coordinator (MISC) position which was filled in February 2014. The MISC aims to develop this action plan to address the threat of marine invasive species as this topic has had little attention up until now. With the upcoming move of U.S. marines from Okinawa to Guam, marine invasive species movements to Guam are a main concern. If you have any questions regarding this plan, or would like more information, please contact the MISC at [guammarineinvasives@gmail.com](mailto:guammarineinvasives@gmail.com).

**Hawaii.** Invasive battlers in Hawaii continue to manage the coconut rhinoceros beetle. In a recent survey 86 adult beetles and six larvae were detected.

**Marshall Islands.** The Ministry of Resources and Development has been handed the authority to oversee the implementation of the GEF-PAS invasive species project for the country.

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**Micronesia.** Our thoughts remain with our good friend John Wichep during his recovery. Biosecurity remains a strong focus of the national government and we look forward to supporting the good work undertaken by John and his team.

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**Nauru.** The BIORAP (biological rapid assessment) report for Nauru is near completion after the surveys were carried out the middle of last year. Invasive species (both terrestrial and marine) were surveyed. Some of the findings include the presence of yellow crazy ants at the Port Area, secondary forests dominated by invasive red-bead tree (*Adenantha pavonina*), presence of invasive herpetofauna (gecko and blind snake) and the fire-worm (*Hermodice carunculata*). For further information please contact Amanda Wheatley (amandaw@sprep.org) who is coordinating the report.

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**New Caledonia.** Ever wonder how to prepare traps for those feral pigs? Well Patrick Barriere (Invasive Species Coordinator) and his team in New Caledonia, have prepared easy to follow guidelines on pig trap and snare. Follow the link to our PILN Publications on our website to download a copy. Please note that they are 1MB per file.

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**Niue.** Niue continues to work on its GEF-PAS invasive species project dealing with weeds and feral pigs.

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**Palau.** Palau President Remengesau commits USD1.4 million to fight invasive species in Palau and the region. He hosted an invasive species side-event at the 45th Pacific Islands Forum Leaders Meeting held in Palau. He also championed invasive species with language reflected in the outcome of the Leaders meeting - calling for a Pacific Commitment to combat the impacts of invasive species.

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**Papua New Guinea.** Anastasia Kawi formerly of the National Agricultural Research Institute has recently joined the National Agriculture Quarantine Inspection Authority (NAQIA) as the Regional Plant Protection Officer. Anna worked on the biocontrol of *Mikania micrantha* and assisting with improving the technical capacity of PNG in weed management.

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**Samoa.** Invasive battlers from Samoa were out in force to control the rattan palm (*Calamus* sp.) that was introduced for making rattan furniture. The rattan raid began in 2006 and eight years later - the work is still continuing. Nine battlers were out looking for the rattan yielding over 2200 plants, including 6 that were over a meter long in 2 an half hours.

The Samoa National Invasive Species Task-Team held their meeting on July 25th. The members met the new SNITT Chair - Mr Suluimalo Amataga Penaia - who replaced the late Taule'ale'ausumai La'avasa Malua. Updates of projects (GEF-PAS invasive species and the Mt Vaea Restoration) were discussed noting good progress being made.



A new invasive species coordinator has been appointed to oversee the GEF-PAS Invasive Species Project. Mr Maturo Panini is the new coordinator after the resignation of Sooalo Albert Peters earlier this year. We wish Maturo all the best with his new appointment.

Feeding frenzy by the crown of thorns is threatening many of the reefs in Samoa. A recent survey by the Marine team from the Ministry of Natural Resources and Environment of the island of Manono found high number of crown-of-thorns feeding on mostly *Acropora* corals. The white corals are quickly taken over by seaweeds (filamentous algae), eventually causing the coral colony to collapse. MNRE are hoping to inject the invasive seastar with a chemical that will hopefully reduce their devastating impact. The Marine team also surveyed for invasive species, specifically the two introduced seaweeds - *Spatoglossum macrodontum* and *Codium aerincola* that were found in the Apia Harbour. While *Codium aerincola* is yet to make it to Manono island, the *Spatoglossum macrodontum* (brown seaweed) has been found at this remote island.

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**Solomon Islands.** Fred Pattison is a recent recruit for the SPREP team working on the ecosystem based-adaptation project for the Choiseul province. Fred will also be working with the recently established Choiseul Invasive Battlers based in Taro - that is coordinating actions against invasive species.

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**Tonga.** The Toloa Forest Reserve was visited by James Atherton and David Moverley as part of its reforestation plan supported through the GEF-PAS Invasive Species Project. The implementation of the plan is being undertaken by a nearby school.

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**Vanuatu.** The dreaded little fire ant continues to spread in the Torres Group in Vanuatu. According to reports from Vanuatu, the original outbreak was on Toga island (on the northern shore of the island). The outbreak has spread initially from the villages to plantation. Neighbouring island of Hiu is also infected but with a small population.

## PACIFIC INVASIVES PARTNERSHIP & REGIONAL BITES

**PIP produces Invasive Report.** The Pacific Invasives Partnership has produced a report, titled "On the verge of a biological crisis: the state of invasive species in the Pacific". The report was prepared for the 45th Pacific Islands Forum Leaders meeting in Palau through a request made by the Micronesia Chief Executives. An electronic copy of the report can be made available on request.

**PIP holds invasive species side-event.** The Pacific Invasives Partnership organized an invasive species side-event at the 45th Pacific Island Forum leaders meeting in Palau. President Remengesau opened the side-event, which was also attended by the Prime Minister of Tonga, the Director General of SPC and Deputy Director General of SPREP. The side-event launched the state of invasive species report prepared by PIP (see above), as well as providing an opportunity for leaders and partners to make commitments toward a Pacific initiative to combat invasive species.

**45th Forum Leaders Meeting.** The Pacific Island Forum Leaders met in Palau and made strong statements in their communiqué relating to invasive species.

- Leaders recalled their decisions from the 2013 Forum in Majuro, acknowledging the importance of effectively dealing with invasive species through integrated action and effective partnerships to reduce the threats to Pacific economies, communities and environments, and to enhance climate change adaptation and sustainable development efforts.
- Leaders acknowledged the progress made by SPREP and SPC in formalising the establishment of the Invasive Species Advisory Group, under the auspices of the Heads of CROP agencies. Leaders further acknowledged and welcomed the contribution of the Pacific Invasive Partnership through preparation of a report on the state of invasive species management in the Forum region.
- Leaders welcomed the Pacific Commitment to combat invasive species noting announcements by some of the Forum members toward this commitment and called upon development partners and donor community to support the Pacific Commitment to strengthen efforts to prevent, control and eradicate invasive species in Forum Countries.

**3rd SIDS Meeting.** Over 3000 participants from around the world attended the 3rd United Nations Small Island Developing States conference held in Apia, Samoa. Invasive species were featured in a number of side-events including the Pacific Invasives Partnership and the Pacific Invasives Learning Network, as contributions to the overall theme of 'durable and meaningful partnership'. The outcome document - SAMOA Pathway contains a standalone section on invasive species recognizing the cross-sector impact of invasives. Invasive species are also captured in other areas including Oceans and Seas.

- Noting that invasive alien species pose a threat to sustainable development and undermine SIDS efforts to protect biodiversity and livelihoods, preserve and maintain ocean resources and ecosystem resiliency, enhance food security and adapt to climate change, we call for support for SIDS efforts to:
  - Enhance multi-sector collaboration at national, regional, and international levels including through expanded support to existing structures to effectively address invasive alien species.
  - Improve invasive alien species eradication and control efforts, including through the provision of support for research and development of new technologies by expanding collaboration and supporting existing regional and international structures.
  - Develop and strengthen capacity to address invasive alien species issues, as well as increased public awareness in SIDS about this issue.
  - Develop and strengthen capacity to address invasive alien species issues, including their prevention as well as increased public awareness in SIDS about this issue.

**UNEP in the Pacific.** UNEP recently set up a sub-regional office in the Pacific based at SPREP. Prior to this UNEP presence in the region was largely through its biodiversity and conservation manager - Dr Greg Sherley, also an invasive species battler. For more information contact Greg (greg.sherley@undp.org).

**Ramsar on invasives.** Globally wetlands are vulnerable ecosystems from human pressure. On islands, wetlands are in dire straits from not only human pressure but climate change and invasive species. Coral reefs are an important part of our island wetlands, which are under enormous pressure from increased sea surface temperature, ocean acidification and extreme weather conditions attributed to changing climate conditions.

Invasive species undermine the integrity and ecological services provided by island wetlands and can contribute to the loss of species. The global framework for wetlands - the Ramsar Convention will have its conference of parties in 2015 where a paper being prepared by the Secretariat focuses on providing guidance to its members on how to safeguard wetlands from the harmful impacts of invasive species. For more information contact - SPREP's Ramsar Officer - Vainuupo Jungblut (vainuupoj@sprep.org).

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### Professor Randy Thaman (USP) on invasives and the International Panel on Biodiversity & Ecosystem Services

*"If we don't fast track or semi-fast track IAS, like pollinators, it may be too late!!!"*

Invasive alien species (IAS), including of diseases, are the creeping, insidious, destructive and the largely silent face of biodiversity, a hidden threat that invades and destroys biodiversity and associated ecosystem resilience and food, health and productive security. It is a threat that policy makers need to be scientifically informed of so they can act before it is too late.

IAS, to those who don't understand what it means, is often thought to be an acronym for a secret service or undercover agency. In a sense this may not be too far from the truth – from a biodiversity conservation perspective, inclusive of agro-biodiversity.

It is an evolutionary fact that those living things that reproduce most rapidly will evolve, mutate and adapt most rapidly to a new environment. This is a Darwinian fact and, unless prevented from spreading, managed or, where possible, eradicated, IAS will, both directly and indirectly, ultimately overrun our natural and cultural biodiversity inheritances and undermine food, health and livelihood security.

If we fail to understand the true diversity and magnitude of impacts of IAS, their pathways of introduction and spread, and proven means of prevention, eradication and management, and don't act now, it may be too late. We must act now before IAS infest new lands and waters and, before IAS evolve an even more devastating arsenal and invasive capacity.

It is, especially critical for islands, where IAS are the major cause of extinction and loss of biodiversity, a major cause of land, fresh water and marine ecosystem degradation, and probably the most serious threat to food, health and livelihood security. IAS constitute a rapidly spreading and growing "living pollution " that, unlike oil spills, solid waste and other threats, and like climate change, cannot, in most cases, be eradicated and won't go away!

In the Satoyama-Satoumi Japan assessment, one of the most innovative and comprehensive assessments ever undertaken of "sustainable use of biodiversity" and what underpins and threatens it, IAS were one of the main drivers of the breakdown in these time-tested community-based systems.

In short, whether undertaken as a fast-track or slower track thematic assessment, it is critical to the short- and long-term objectives and deliverable of IPBES and responds directly to Aichi Biodiversity Target 9: "By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment." It will also contribute to the achievement of Aichi targets 5, 11, 12 and 17.

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**USP - South Pacific Agricultural News - Vol. 39. No.6 out.** The monthly newsletter for the Institute for Research, Extension and Training in Agriculture offers some interesting reading including the need to invest in ecological farming. The Japan International Cooperation Agency (JICA) teamed up with the Samoa Ministry of Natural Resources and Environment to rehabilitate forest areas that have been degraded by logging and invasive species. SPC treaty funded a project to support the Pacific breeder's network. The Pacific breeder's network focuses on identifying crops that can offer some resistance to climate variability, pests and diseases. A destructive pest (berry borer beetle) is only a few kilometers from PNG's doorstep - threatening PNG's coffee crop. A team from the American Samoa Community College led by Mary Taufetee visited the USP IRETA Farm.

### Hot on the internet-wire!

#### Would you like fries with your invasive fish?

You may have read or heard some of the catchy headlines, such as if you "Can't Beat 'Em, Eat 'em!", "Eradication by Mastication", as a solutions to dealing with some of these pesky invasive species. While many people are advocating utilising invasive species (such as the Indo-Pacific lionfish, giant African snail, *Merremia peltata*) for food security, biofuel and so forth, the reality is often quite opposite from what the proponents are hoping for. Adverse incentives, such as paying people to hunt for an invasive species, are also proving to be unsustainable and ineffective.

#### Hands up those for genetically modified fruit flies and those against?

Two organisations are trading blows over a recent decision to allow genetically modified male fruit-flies to be released into the wild, to mate. Oxitec, the proponent of this project will release male flies to mate with females, and all the resulting babies will be males (the female babies will die). GeneWatch opposes Oxitec's fruit flies stating that it is impossible to predict the long-term outcomes of releasing these genetically modified fruit flies.

**It's time to stop thinkng that all non-native species are evil.** Hot on the Aliens-List is a discussion where a critique by Emma Marris for the

National Geographic painted a picture of invasive battlers as steadfast anti-non-native species - keyed on removing anything that is not considered native. While the article ([National Geographic](#)) has many good points, simplifying some of the key issues, as well as broad generalisations have contributed to the response from invasive battlers. Most invasive battlers are not anti-non-native. It is only when non-native (and native) species become a problem causing harmful impacts to other species, to the environment, to human health and economic and sustainable development, is when actions are needed.

**The role of researchers in species introductions.** Jacob Westhoff (Postdoc Fellow) asked for case-studies where researchers and scientists unknowingly or accidentally introduce alien species. And there were many including the chytrid fungus (affecting frogs), bighead and silver carp (fish), gypsy moth, and more. We are sure that there are plenty of examples in the Pacific.

## INVASIVE OPPORTUNITIES

### 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](http://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](mailto:verena.gill@gmail.com)) and Craig Harrison ([charrison@hunton.com](mailto: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.

### Pesticides training

Aloha all. Charlie Nagamine is organizing a pesticide risk reduction education short course on Maui from Oct. 21-22, 2014. For more information contact Charlie: <http://pestworld.stjohn.hawaii.edu/pat/schedule.html>

### SPREP (Secretariat of the Pacific Regional Environment Programme)

SPREP has a number of vacancies and tender opportunities available. Currently, SPREP is looking for a BIOPAMA project officer (close - 17 Oct. 2014). 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](http://www.spc.int/job.html) - or contact Christine Croombes ([recruit@spc.int](mailto:recruit@spc.int)).

## GLOBAL INVASIVE BITES

### Double Trouble - Invasives and Climate Change



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 westslope cutthroat 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.

<http://www.usgs.gov/newsroom/article.asp?ID=3903#.U4dNYyi4On4> [photo: Johnny Armstrong -USGS]

## When eradicating invasive species threatens endangered species recovery



Efforts to eradicate invasive species increasingly occur side by side with programs focused on recovery of endangered ones. But what should resource managers do when the eradication of an invasive species threatens an endangered species? In a new study, scientists examine that conundrum now taking place in the San Francisco Bay. Researchers at the University of California, Davis examine the California Clapper Rail -- a bird found only in the Bay -- has come to depend on an invasive salt marsh cordgrass, hybrid *Spartina*, for nesting habitat. Its native habitat has slowly vanished over the decades, largely due to urban development and invasion by *Spartina*.

Their results showed that, rather than moving as fast as possible with eradication and restoration, the best approach is to slow down the eradication of the invasive species until restoration or natural recovery of the system provides appropriate habitat for the endangered species. *For more information see the University of California website or the publication in the PILN publication section. Image by Admrboltz Wikipedia.*

## Deadly fungus spreads, killing trees

A fungus carried by an invasive beetle from southeast Asia is felling trees across the Everglades, and experts have not found a way to stop the blight from spreading. The fungus is spread by the tiny redbay amrosia beetle, which likely arrived in the country in a shipment of wood packing material. [Read more \(the New York times\)](#)

## INVASIVE SPECIES PUBLICATION

Quinn, LD., Endres, AB, & Voight, TB. 2014. Why not harvest existing invaders for bioethanol. *Biological Invasion*. vol. 16 (8)

Ng, HH., Low, BW., Kwik, JTB., & Yeo, DCJ. 2014. The tables are turned: an invasive species under potential threat. *Biological Invasion*. vol. 16 (8)

Haythorpe, KM., Burke, D., Sulikowski, D. 2014. The native versus alien dichotomy: relative impact of native noisy miners and introduced common mynas. *Biological Invasion* vol. 16 (8).

A. Lampert, A. Hastings, E. D. Grosholz, S. L. Jardine, J. N. Sanchirico. 2014. Optimal approaches for balancing invasive species eradication and endangered species management. *Science*, 2014; 344 (6187): 1028 DOI:10.1126/science.1250763

Allen, BL., Allen, LR., Leung, LK-P. Interactions between two naturalized invasive predators in Australia: are feral cats suppressed by dingoes? *Biological Invasions*

Heikkila, J., & Kettunen, M. 2014. Guidance for evaluating the costs of invasive species and their control. *Poster paper prepared for presentation at the EAAE 2014 Congress 'Agri-Food and Rural Innovations for Healthier Societies*. Aug. 26-29, Ljubljana, Slovenia.

## UPCOMING EVENTS

2014	Event	Participating Partner
<b>September</b>		
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 Catagena Protocol on Biosafety (Pyeongchang, Korea)	SPREP
30 Sep - 2 Oct	SPREP Meeting, Majuro, Marshall Islands	SPREP
<b>October</b>		
2 Oct.	Environment Ministerial Meeting, Majuro, Marshall Islands	SPREP
6-17 Oct.	12th CBD COP (Pyeongchang, Korea)	SPREP
14-17 Oct.	Weeds Across Borders (Ottawa, Canada)	<a href="mailto:gwallin@bcinvasives.ca">gwallin@bcinvasives.ca</a>
15-17 Oct.	BirdLife Regional Partnership Meeting (New Caledonia)	BirdLife Pacific
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)	
<b>November</b>		

3-8 Nov.	NEOBIOTA 2014. Biological invasions: from understanding to action. (Antalya-Turkey)	<a href="http://neobiota2014.org/">http://neobiota2014.org/</a>
12-19 Nov.	IUCN World Parks Congress (Sydney, Australia)	<a href="http://worldparkscongress.org/">http://worldparkscongress.org/</a>
17-21 Nov.	Society for Ecological Restoration Australasia Conference (New Caledonia)	<a href="http://www.seraustralasia.com/pages/conference.html">http://www.seraustralasia.com/pages/conference.html</a>
24-27 Nov.	World Biodiversity Congress (Colombo, Sri Lanka)	<a href="http://www.wbc2014.in">http://www.wbc2014.in</a>
<b>December</b>		
2-4 Dec.	Australasian Wildlife Management Conference (Brisbane, Australia)	<a href="http://www.awms.org.au/conference">http://www.awms.org.au/conference</a>

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