



ENVIRONMENT AND CONSERVATION

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Environment Minister Donna Faragher lends a hand to volunteers and DEC staff. Photo - Emma de Burgh

Whale strandings

MORE than 60 DEC staff and hundreds of volunteers threw their hearts and souls into helping with a mass stranding of long-finned pilot whales and dolphins in March.

Ninety-two marine mammals were found stranded over six kilometres of beach at Hamelin Bay but most had already died by the time they were discovered. DEC Senior Wildlife Officer Doug Coughran said a massive rescue effort ensued for the surviving whales.

DEC regional staff, the Incident Management Team and a whole host of volunteers banded together in an attempt to keep the whales alive.

"After assessing the situation, we initiated a strategy to consolidate the whales at Hamelin Bay boat ramp to conserve resources through the night," he said.

"Then we started at first light to transport the surviving whales to deeper and safer waters.

"We used cranes and trucks to lift, load and transport them 15 kilometres south to Flinders Bay in Augusta, hold them and release them to the open sea in one group.

"Although the release went well,

a flight the next day found six of the animals re-stranded on the beach east of Augusta.

"It looks like, of all the whales, three made it safely to the open ocean.

"It was a massive challenge but without the hundreds of people willing to brave the cold, wet conditions through both day and night, none of whales would have survived."

Doug said many DEC staff involved for the first time in a mass stranding had learnt a lot from the incident.

He paid tribute to the work of Westwhales and volunteers who responded quickly in the early hours of the stranding before DEC arrived to manage the incident, as well as the Shire of Augusta-Margaret River, the Forest Products Commission, the Department of Fisheries, local Sea Search and Rescue, local vets and staff from the Hamelin Bay Caravan Park.

The Dolphin Discovery Centre, Murdoch University dolphin researchers and Perth Zoo contributed greatly to the rescue effort by assisting DEC staff with DNA sampling and autopsies.

WA hosts Greenhouse 2009

MORE than 500 people from around the world came to Perth in March to attend the Greenhouse 2009 conference.

CSIRO organised the conference with platinum sponsorship from the Western Australian Government, through the Department of Environment and Conservation's (DEC's) Office of Climate Change. The four-day event was the latest in the greenhouse series, following the highly successful events in 2007 in Sydney and 2005 in Melbourne.

Office of Climate Change Acting Director Anne Mathews said the conference was attended by researchers, representatives from all levels of government, industry leaders, environment officers, students and the public.

"The conference drew together national and international climate experts to discuss climate impacts, reducing greenhouse gas emissions and the actions industry, government and households could take to adapt to the impact of climate change," she said.

"Climate change is the most pressing sustainability challenge we face today. Scientific understanding is advancing at a remarkable rate, with new information emerging rapidly about the likely impacts of climate change.

"It is critical that we have the best information and tools to enable us to respond appropriately, reduce our greenhouse gas emissions and adapt to the unavoidable impacts of climate change."

The conference covered themes including agriculture, biodiversity, climate change impacts and adaptation, climate modelling, communicating climate change, energy efficiency, geosequestration, government initiatives, human health, national and international case studies, measurements and observations, mitigating emissions, renewables and water resources.

Anne said the State Government's display focused on four themes relevant to WA - biodiversity, agriculture,

human settlement and water.

"Greenhouse 2009 provided an excellent opportunity for the State Government to highlight how it was responding to the challenge of climate change through innovation and collaboration," she said.

"WA is one of the most vulnerable regions to climate change in the developed world and is already experiencing climate change impacts and further substantial impacts are inevitable."

Staff from DEC's Office of Climate Change attended the conference and Principal Research Scientist Colin Yates presented a paper on day four entitled *Climate Change and Biodiversity: complexity and uncertainty*.

Day two of the conference was attended by the Premier Colin Barnett, Environment Minister Donna Faragher and DEC Director General Keiran McNamara.



Premier Colin Barnett and Environment Minister Donna Faragher at Greenhouse 2009.

Environment and Conservation News goes online

ENVIRONMENT and Conservation News is moving to cyberspace with plans to produce an electronic version of the publication 26 times a year from June.

This edition will be the last print edition.

DEC Strategic Development and Corporate Affairs Director Affairs Ron Kawalilak said the move to an electronic version would ensure *Environment and Conservation News* would continue to be an important part of the department's communication program.

"*Environment and Conservation News* is an effective way to communicate with staff, volunteers, alumni and others interested in the work of DEC," he said.

"Publishing every two weeks will be a great advantage as the content of *Environment and Conservation News* will be more timely and therefore more relevant to readers.

"The new format will contain the same interesting mix of stories about the department's staff and volunteers,

and the work they undertake, but will be presented with a fresh new look that will take advantage of the possibilities provided by the electronic world.

"By taking the newsletter online, we also reduce costs for printing and distribution and we minimise the impact production of the newsletter has on the environment.

"It will be hosted on DEC's website at www.dec.wa.gov.au, which will enable users to easily refer to back issues." DEC staff will automatically receive the electronic version of *Environment and Conservation News*.

If you are a DEC volunteer or someone else who would like to receive this online, you can subscribe by going to www.dec.wa.gov.au/ecn and filling in your name and email address. Alternatively, you can send an email with the subject line 'subscribe' to ecn@dec.wa.gov.au and provide, in the email body, your name and the email address you want to use.

Inaugural workshop for DEC Aboriginal employees



Koodah Cornwall presents Aboriginal Training Officer Karim Khan with a certificate of recognition. Photo - Catherine Jack

A 30-YEAR-OLD vision came to fruition as DEC employees from around the State came together for an inaugural Aboriginal staff workshop in March.

The three-day workshop was a step in the continued acknowledgment and motivation of Aboriginal staff in DEC, focusing on Indigenous career journeys, career development, joint land management, policy and human resource issues.

Western Australia's first Aboriginal ranger, and former DEC employee, Noel Nannup, had a vision of an Aboriginal land management conference nearly 30 years ago, and was invited to talk at the workshop about his career journey. Noel congratulated the department on organising the event and continuing the tradition of Aboriginal

people looking after the land.

Cultural Community Programs Officer Koodah Cornwall encouraged Aboriginal staff to use the workshop as an opportunity to create partnerships and fine tune the messages they want to communicate to the department and broader community.

Deputy Director General Parks and Conservation Jim Sharp welcomed staff to the conference.

"I would like to take this opportunity to acknowledge and thank both Indigenous and non-Indigenous staff in DEC who paved the way for Indigenous training and employment, creating easier and more open pathways, and representation of Indigenous interests in the department," Jim said.

"This inaugural conference is a result of

their pioneering efforts."

Together, Jim and Koodah presented certificates of appreciation to Indigenous DEC staff acknowledging the time they have invested in the department.

Members of the DEC Corporate Executive also gave their support of the conference, including Director of Parks and Visitor Services Peter Sharp, who spoke passionately about embracing the concept of joint management and the likelihood of an Aboriginal Director on Corporate Executive.

"The intrinsic Indigenous connection to country means Aboriginal people are the best people to continue looking after the country," he said.

"Change comes from within, and we are all part of this organisation."

Looking to the past for future conservation strategies

A REVIEW into the way Australian plants and animals have dealt with climate change throughout history may shape future plans for conservation.

DEC Senior Principal Research Scientist Margaret Byrne recently prepared the review, which covers the historic survival of Australian plants and animals through periods of climate change. It also examines how, by looking at the past, we can prepare and conserve areas to help ensure the continued survival of many species.

While in other parts of the world plant and animal species have been known to migrate to more favorable refuge areas during periods of climate change, it was found that many southern Australian plants and animals

responded with persistence and resilience, rather than migration.

"These findings highlight the importance of maintaining a mosaic of habitats for species to persist through changing environmental conditions," Margaret said.

"By identifying the types of habitats that can sustain populations through major climate fluctuations, we can identify priority areas for conservation.

"Understanding these ancestral patterns of diversity is also a key to predicting how species respond to future climate change."

Margaret's review was based on phylogeography, the study of the historical processes responsible for the

contemporary geographic distributions of living things.

"By looking at the current spatial distribution of genetic lineages, we can work out how historical processes, such as climate change, have influenced the evolution of species," Margaret said.

"A thorough understanding of phylogeographic structure will enable more informed choices in prioritising areas for conservation."

Margaret's review, called *Evidence for multiple refugia at different time scales during Pleistocene climatic oscillations in southern Australia inferred from phylogeography*, was published in the international journal *Quaternary Science Reviews* in December 2008.

Ancient organic structures at Lake Thetis

DEC Operations Officer Brad Rushforth, together with staff from Jurien Bay, Geraldton, Dwellingup and the Recreation and Landscape work centres, has finished an extensive three-year rehabilitation of Lake Thetis, home to an ancient community of stromatolites.

Lake Thetis and the surrounding area was included in Nambung National Park in 2007 and, since then, a massive works program has been undertaken.

The lake is home to a threatened ecological community of stromatolites – rock-like living fossils that are examples of the first forms of life on Earth.

"The Lake Thetis stromatolites are considered to be some of the best examples of their kind in the world and, as such, the lake attracts many local and international tourists, along with geologists and other academics," Brad said.

Brad manages the Coastal Assessment and Restoration Project, a collaboration between DEC, the Northern Agricultural Catchments Council and the Commonwealth Government that covers 400 kilometres of coastline stretching from Kalbarri to Guilderton.

"Lake Thetis is the biggest coastal restoration project I have coordinated, with a budget of \$600,000 to restore the highly degraded area," he said.

Lake Thetis is a saline lake with water almost one-and-a-half times saltier than sea water and is one of only a few places in the world with living marine stromatolites. These rocky-looking structures are created by a species of cyanobacteria and are dated as being about 3,370 years old.

"The plan for the area had two stages, firstly the installation of recreation facilities, which involved creating leisure areas for people and, secondly, the rehabilitation stage, which focused on the 11 hectares of highly degraded environment immediately north of the lake shore," Brad said.

"Previously, vehicles were able to drive right up to the lake's edge degrading the shoreline, which was also affected by weeds and had no suitable signage.

"We have undertaken a lot of work during the past three years including moving the car park further away from the lake's edge, widening and relocating the entry way, creating an interpretative walk trail leading to a new lookout and constructing seated areas and a low boardwalk that enables visitors to get up close to the stromatolites without disturbing their environment."

The interpretative boardwalk trail guides visitors around the lake, through the various vegetation types and towards some of the best examples of stromatolites, with a lookout over the lake and surrounding coastal environment.

"Basically, we had a highly degraded area that was still getting visitation by tourists wanting to see the stromatolites, and with the help of DEC's recreational planners, interpretation specialists, landscape architects and skilled Conservation Employees, I believe we have a great result," Brad said.



Honorary CALM Officers at a training session in Kensington.

New Honorary CALM Officers for DEC

DEC recently recruited 17 new Honorary Conservation and Land Management (CALM) Officers to assist in managing land and reporting offences.

Honorary CALM Officers – so called as they are provided for under the *Conservation and Land Management Act 1984* – are voluntary enforcement officers, specifically selected by DEC's Community Involvement Unit.

Honorary CALM Officers play an important role in assisting DEC with land management activities, particularly in remote areas where staff cannot visit on a regular basis. The officers provide advice to visitors, monitor visitor activities and are empowered under the Act to deal with any illegal activities in DEC-managed lands and waters.

Community Involvement Coordinator Marg Buckland said the Honorary CALM Officers were active members of the community, recommended by the

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heads of various volunteer organisations such as the Bibbulmun Track Foundation, DEC's Campground Host program and four-wheel drive clubs.

"Honorary CALM Officers are positions of considerable responsibility and privilege for volunteers of exceptional commitment," she said.

The new officers recently took part in a comprehensive two-day training course that covered law enforcement training, managing the land for biodiversity, dieback management and communicating with the public. The new Honorary CALM Officers were joined on the course by 16 experienced officers updating their knowledge and training.

On completion of their training, Honorary CALM Officers are provided with DEC volunteer uniforms and

continue to carry out regular volunteer work, empowered with the knowledge that they can actively assist DEC in dealing with offences.

"The program helps to recognise the work of many active conservationists in WA," Marg said.

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New collaborative compliance strategy for WA



Clint Burdett and Goldfields Regional Leader Industry Regulation Wayne Astill.

DEC's Inspection and Compliance Branch will release a new State-wide compliance strategy this year.

The Inspection and Compliance Branch was created in 2007 to work collaboratively with regional staff and improve the compliance capabilities of the Environmental Regulation Division.

Proposal Implementation Monitoring Section Manager Ewan Gunn said the branch adopted a consultative approach to developing the compliance strategy, including meeting with regional leaders and undertaking a series of joint inspections with regional staff.

Premises and Transport Inspection Section Manager Clint Burdett and Ewan organised a series of meetings with regional leaders from the South West, South Coast, Goldfields, Pilbara, Swan and Midwest regions to identify regional priorities and

gather feedback on the initial proposals.

Clint and Ewan, together with regional leaders, then revised and refined the compliance strategy.

"A common goal among regional leaders was to achieve consistency in the approach to compliance throughout the State and ensure the strategy was aligned with regional goals," Ewan said.

"The new compliance strategy will build on existing compliance tools and strengthen DEC's compliance capabilities by focusing on policy and process issues."

Ewan said the proposals were now being finalised for endorsement and, once approved, Inspection and Compliance Branch would begin the program with regional staff.

"The effectiveness of the compliance strategy will be reviewed after six months by regional leaders and staff from the Inspection and Compliance Branch," Ewan said.

Robert begins new chapter after 34 years



Robert Powell surrounded by friends and colleagues at a function to celebrate his retirement.

AFTER 34 years with DEC and its predecessors, Senior Conservation Estate Officer Robert Powell has taken his interest in nature into his own hands after retiring in March.

Robert was given a farewell at DEC's Kensington office, where he has worked since 1985 and is well known for creating and tending to two gardens for local plants and insects, including the butterfly garden.

In her speech at the function, Land Services Coordinator Sharon Colliss said that Robert's previous experience as a teacher helped to make him a patient

and encouraging person to work with.

"Over the years Robert's many new recruits to the Land Unit have benefited and learnt from his patient, logical tutelage and knowledge of the technical aspects of language," she said.

"Offering guidance in his gentle way, he often buoyed us along when we came up against problems and frustrations in our endeavours to create or amend conservation reserves.

"During his years with the department, Robert has been involved with the creation of hundreds of conservation reserves – what a fabulous legacy."

Director of Parks and Visitor Services Peter Sharp presented Robert with a letter, lifetime national park pass and a certificate of service. Assistant Director Visitor Services Tracy Shea presented him with a gift and card.

Robert reminisced about his early working life and working as the only person in the State's land unit.

"There were no regional parks or conservation parks in those days (1970s), just national parks and nature reserves. I've worked in the land area ever since – and thank goodness there's a team of us now!"

Beating bulb invasion

COMMUNITY groups and DEC have joined forces to tackle populations of a highly invasive South African bulb that has infested Perth bushland.

Known as yellow soldier, *Lachenalia reflexa* is thought to have originally escaped from gardens, spreading to bushland throughout the Perth metropolitan area and threatening conservation values in the region.

The weed is currently on the Federal Government's National Environmental Alert List as a Weed of National Significance and is a concern because it can displace native plant understorey.

A three-year project funded by DEC's Biodiversity Conservation Initiative has made major inroads into understanding where yellow soldier occurs, how best to manage the problem and tackle infestations in priority areas.

DEC ecologist Karen Bettink said the project aimed to strategically control yellow soldier, by first targeting high conservation value sites on the Swan Coastal Plain.

"Sites targeted included Mount Henry Peninsula bushland, Woodvale Nature Reserve and Lake Cooloongup, while other sites were treated in the cities of Melville, Joondalup, Cockburn and Fremantle," Karen said.

"In 2008, we recorded a 90 per cent control rate at Mount Henry Peninsula bushland, which has resulted in the yellow soldier populations being reduced to a manageable level.

"At Mount Henry, where the local conservation group has worked hard to control yellow soldier for a number of years, the project funding meant the group could use contractors to curb the spread of the weed in the reserve."

The project included mapping and monitoring of populations, and a management plan for the species was prepared with support from the Perth Region Natural Resource Management and the Federal Government's Natural Heritage Trust.

Training DEC's regulatory officers

NINETEEN DEC staff successfully completed the 12th Regulatory Officer Training Course held recently at the Joondalup WA Police Academy.

Staff from various locations across the State were joined by three people from the City of Belmont, Edith Cowan University and the Department of Water to undertake DEC's intensive two-week training course.

Regulatory officers took part in comprehensive lectures covering a range of topics including investigative interviewing, gathering and managing evidence, interviewing witnesses and suspects and incident scene photography.

DEC Regulatory Training Coordinator Julie Dean said the training was aimed at providing officers with the tools needed to undertake their regulatory role and typically followed an interactive seminar approach of formal lecture input, workshop discussion and case studies.

"The participants had a wide range of experiences through their formal study and work history and the open structure of the course enabled them to share these experiences and learn from each other," she said.

"DEC staff were also able to establish valuable networks and contacts throughout the agency and externally."

DEC has a strong working relationship with staff from the WA Police Academy where the Regulatory Officer Training Course was held.

"A memorandum of understanding was signed in 2005, enabling DEC and the WA Police Academy to work collaboratively in delivering training to the department's regulatory officers and this relationship has been invaluable for our regulatory training program," Julie said.

Deputy Director General Environment Robert Atkins presented the officers with certificates of completion and legislative authorisations under the *Environmental Protection Act 1986* on the final day.

After completing their post course work, these officers will be eligible to apply for credits towards the nationally recognised Certificate IV in Government (Investigation) qualification.

More than 200 officers have now successfully completed the Regulatory Officers Training Course.

Strategy to fight cane toads

DEC has prepared a draft Cane Toad Strategy for Western Australia 2009-19 to guide the management of the invasive species.

The strategy, which is now open for public comment, aims to provide an integrated response to reduce the impact of cane toads on biodiversity, social and economic values and replaces the operational strategy that government agencies have been working to since 2005.

The first cane toad was discovered just inside the WA border near Kununurra in February.

Launching the strategy, Environment Minister Donna Faragher said DEC would continue its targeted biological surveys to identify fauna that could be threatened by the poisonous pest.

She said the department was also developing more management strategies to best protect these natural assets.

"As we learn more about the weaknesses of this invasive pest, we will be able to update the strategy, with a major review after the first five years of its implementation to determine whether the objectives and key actions remain valid for the following five years," she said.

The draft Cane Toad Strategy for Western Australia 2009-19 can be viewed at www.dec.wa.gov.au/canetoads.

Submissions can be emailed to corrin.everitt@dec.wa.gov.au or sent to the DEC Kununurra office. The public comment period closes 5pm, Thursday 25 June 2009.

Rats turn the tables on cane toads

DEC research scientists working on the cane toad front have discovered Western Australian native fauna may be more resilient to cane toads than originally anticipated.

Of 10 mammal species identified as likely to be at risk from cane toads, none has so far died as a result of encounters with the toads in laboratory experiments at a research centre at Fogg Dam in the Northern Territory.

Senior Research Scientist David Pearson said the project, a collaboration between the University of Sydney, DEC, the Australian

Reptile Park and the Federal Department of the Environment, Water, Heritage and the Arts, had produced some unexpected results.

"We have observed a variety of responses," he said.

"Rock rats, for example, avoid cane toads altogether. So the cane toad may not be a significant threat to that species.

"One species of marsupial carnivore, when offered a cane toad, bit the cane toad on the snout, presumably tasted the bufotoxins, and spat the toad out.

"It learnt very quickly and,

subsequently, if offered a cane toad it would rush out, investigate, and reject it. But when it was offered a native frog, it ate it. This was a most encouraging finding.

"At the other extreme, one native rodent grabbed the cane toad, flipped it over and ate the stomach, avoiding the poison glands. It was able to eat the less toxic parts and survive."

David said studies by the University of Sydney had also found that although some snakes ate the toads and died, others of the same species showed no interest in the toads.

Kimberley Biological Treasures

A MAJOR survey is revealing the biological treasures of remote Kimberley islands.

DEC biologists are surveying selected islands off the north Kimberley coast, focusing on fauna that is likely to be affected by cane toads and other mainland threats.

The survey team has completed two dry season and wet season surveys on 13 islands from Sir Graham Moore Island in the north to Augustus Island in the south, with another survey of nine islands planned for this dry season.

DEC Senior Research Scientist Lesley Gibson said the survey has so far revealed the presence of additional island populations of many animals, particularly

snakes and frogs, and has more than doubled the species lists for most of the islands visited.

Lesley said while the mainland had been impacted by various threatening processes, the islands were largely protected.

"Biodiversity on the mainland Kimberley is under threat from extensive dry season wildfires, feral animals, weeds, soil erosion and the imminent invasion of the cane toad," she said.

"The islands support populations of plant and animal communities that are in relatively good condition and hence have high conservation value, but little was known before this survey about what plant and animal species occur on the islands.

"The survey is being conducted in

the hope that intact ecosystems can be conserved and that in the future the islands could provide a safe haven for threatened species from the mainland.

"The survey is also contributing to the State Government's \$9 million Kimberley Science and Conservation Strategy by providing fundamental biodiversity information on the islands off the Kimberley coast."

The survey has attracted \$2.7 million in Federal Government funding through the Natural Heritage Trust, while the State Government has contributed \$4.3 million.

Support has been provided by the Kimberley Land Council and Aboriginal groups, the Western Australian Museum and the Australian Museum.



Biologist Greg Keighery collecting plants.

Online environmental monitoring system picks up national award

DEC's use of internet-based technology to monitor pollution incidents has won the department a major national award for the use of broadband in emergency situations.

The 2009 Australian Telecommunications Users Group (ATUG) Awards recently presented DEC with the National Broadband Award for the use of this technology for environmental monitoring and emergency response - a first in Australia.

DEC and Perth company ETCorp have developed a customised General Purpose Automation Controller (GPAC) system to deliver live video footage and data on chemical emissions to computers and mobile devices used by pollution response officers throughout the State.

The GPAC system is now being considered for similar use by the United States Environmental Protection Agency.

DEC Pollution Response Manager Jimmy Seow said the breakthrough was the result of

five years of research and development into how the internet could be used to enhance the department's chemical monitoring capability.

"The GPAC system integrates real time video footage of an incident with data from chemical sensors enabling us to monitor things such as air toxicity in the event of a chemical fire," he said.

"The system can be controlled and accessed remotely, which enables DEC to gather and share images and information from an incident with other organisations, resulting in better and faster management decisions during an emergency or pollution investigation.

"The GPAC system is now fully integrated into two DEC vehicles and can be used with our Osiris dust monitors, which were recently deployed to Esperance to monitor the lead removal project."

Jimmy said the system also is attached

to specially designed DEC safety helmets for officers to use in the event of an emergency response or pollution investigation, in order to share images of the incident scene.

"The GPAC system also allows for various applications to be integrated into it, such as sensor alarms, where DEC staff will be alerted by email or SMS to any hazardous emissions," he said.

ATUG Managing Director Rosemary Sinclair said the collaboration between DEC and ETCorp was an example of

how industry and government could use broadband technology to improve the way they managed complex incidents.

"DEC's work in using broadband to deliver immediate access to critical information from many sources in one screen enables faster, better responses in emergency situations. This award recognises the effectiveness of the department's innovative solution - getting the right information to the right person at the right time," Ms Sinclair said.



Jimmy Seow with the award.

Overseas recruits a success

TWENTY-ONE overseas applicants have been successfully recruited into the department during the past two years to fill roles that were not able to be filled locally.

In order to fill critical skills gaps in the department, an international recruitment campaign was implemented to encourage people to register with the Western Australian Government jobs board and the specially developed overseas recruitment register.

The campaign focused on South Africa, Canada, New Zealand and the United Kingdom with DEC staff travelling to South Africa to meet with prospective employees.

South Coast Regional Manager Bruce Bone, Environmental Impact Assessment Director Colin Murray and South African recruit and Wheatbelt Regional Manager Wayne Elliott visited South Africa in 2007 to meet with interested people and discuss what it was like to live and work in Western Australia.

"About 120 people attended the information sessions, representing a wide cross section of conservation and environment professionals," Bruce said. "It was a massive undertaking but ultimately a successful and rewarding one."

For overseas applicants, making the decision to uproot their family and move their life to another country is not easy. One recent international addition to the department is South African Sue Eber.

Although Sue was unable to make it to the DEC recruitment sessions held in Johannesburg, 650 kilometres away from her home town in Phalaborwa, a friend of hers went and passed on the details of the overseas recruitment register.

"The success of the recruitment register is evident. You can watch the word of mouth spread across South Africa as people from towns further and further away sign up and apply for positions," she said.

Sue registered with the overseas recruitment program and won her current position of Regional Planning Officer in Albany.

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As a single mother with two children it was not an easy decision to pack up and move her family to Australia, but Sue took on the challenge and accepted the Albany position.

"It was surreal at first and feels a bit like being on holiday," she said.

"Albany is a very pretty place, the beach, pool and nice playground provide kid-friendly areas - which may seem like a small thing, but it is often taken for granted."

From finding day-care, to learning about the different high school, government and banking systems, overseas applicants face many hurdles and challenges when moving to Australia.

Overseas applicants are only eligible for positions where there is no suitable Australian resident and the hiring of an international recruit requires plenty of behind the scenes work, an aspect which is looked after by People Services Branch.

Recruitment Officer Sue Oakman liaises with successful applicants, makes sure the correct visas are organised and approved and looks into all the finer details of the appointment so it is legal by Federal law.

"The visa process can take up to eight weeks, and during this time we provide assistance and answer questions from the new employee, which generally takes the form of discussing and providing information on relevant social, educational and available facilities," she said.

"Upon arrival, new international employees are introduced to other successful overseas applicants as part of a mentoring program, as they have been through the same process and provide a ready and understanding contact to answer questions."

Mike Shephard from South Africa and Laurent Marsol from France have also recently joined the department. Mike has taken on the role of Albany District Manager and Laurent is the new Esperance District Fire Coordinator.

Pythons uncovered during smuggling attempt

DEC wildlife officers are working with WA Police to investigate the alleged smuggling of 12 pythons out of Western Australia.

The reptiles were discovered inside cloth bags in a vehicle that was stopped by police on the Eyre Highway in Eucla on Wednesday 4 March 2009.

The driver of the vehicle, a 27-year-old man from New South Wales, faces charges relating to the export of fauna without a licence and the unlawful possession of protected fauna.

DEC Senior Investigator Rick Dawson said wildlife smuggling was an ongoing problem, with some pythons fetching up to \$1,500 each on the black market.

"We take the unlawful possession of protected reptiles and reptile trafficking very seriously and will investigate and prosecute the capture and

trafficking of wildlife in WA in a bid to end this cruel practice," Rick said.

"Unfortunately it is unlikely that these pythons can be released back into the wild due to the risk of introducing disease to wild populations but we will ensure they are well looked after."

Rick said the outcome demonstrated the value of the networks that DEC had established with WA Police and many other sectors of the community including other government agencies and members of the public who are on the lookout for suspicious activity involving our State's valuable wildlife.

The seizure included six children's pythons, four Stimson's pythons, an olive python and a black-headed python.

The pythons were transferred to Perth to undergo health checks.

DECcreasing organic waste to landfill at DEC workplaces

AS part of DEC's DECREASE project's goal to improve waste management and recycling services for all staff, two DEC workplaces have started collecting and recycling their organic waste.

Organic waste is extremely valuable, especially for improving Western Australia's nutrient-deficient soils. It accounts for approximately three per cent of Australia's national greenhouse gas emissions, mainly in the form of methane, when it decomposes in landfill.

Wanting to make a difference, staff from DEC's Donnelly District Pemberton office have set up a worm farm and a large compost bin to deal with food waste, excess grass clippings, sawdust and shredded paper. Staff at DEC's Booragoon office are collecting their organic office and kitchen waste to participate in the building's commercial-size worm farming project, run by Alcoa.

As a member of the DECREASE Committee, Anne Lillie has been

By James Milne

instrumental in establishing a Donnelly District DECREASE sub-committee to implement sustainability initiatives in the district. The latest idea to invite a representative from the local shire to attend the group's meeting proved very fruitful with the Manjimup Council's Waste Management Officer, Klaus Mueller attending.

"Klaus was great. He donated a worm farm, complete with worms, to our workplace on behalf of the shire, and we have had a lot of support for it from all our staff," Anne said.

Not content with just recycling food scraps, Assistant Ranger and fellow member of the sub-committee Sid Sepkus constructed a compost bin out of an old tank that had holes in it and was no longer used. Now staff at the Pemberton Office

can recycle all their organic waste.

At DEC's Booragoon office, another DECREASE Committee member from the Air Quality Management Branch, Rob Hughes, has been leading the charge in installing dedicated organic waste bins at his workplace.

After identifying an opportunity to take part in a worm farming project run by fellow building occupant Alcoa, Rob arranged for bins to be placed in the workplace kitchen and the adjacent DEC Swan Region office, with signage to help staff.

"It's really great that staff in these offices can now recycle just about all their food scraps, tea bags, coffee grounds - which we seem to have a lot of - and even paper towels, rather than seeing these things just go to landfill," Rob said.

Staff interested in setting up worm farms or compost bins at their workplace should contact DECREASE Senior Project Coordinator James Milne on 6467 5454.



Donnelly District Assistant Ranger Sid Sepkus 'feeds' the compost bin he made with organic waste.

Extraordinary partnership uncovers the biodiversity of the Great Victoria Desert

A MAJOR survey of Western Australia's fifth largest terrestrial reserve has been completed through an extraordinary partnership between DEC, the mining industry, ecological consultants, LANDSCOPE Expeditions, traditional owners and scientists from universities, museums and CSIRO.

More than 75 people came together last year with a common goal – to organise two field trips to survey the fauna and flora of the 723,073-hectare Neale Junction Nature Reserve.

DEC Regional Ecologist Karl Brennan said many desert reserves had not been surveyed since their creation in the mid 1970s and before this survey there was only a limited understanding of the animals and plants inhabiting the reserve.

"Without detailed knowledge of their biota we simply don't know all the values of our desert conservation reserves and what management is needed," he said.

Groups taking part in the survey included staff from DEC's Goldfields and South Coast regions, the Tropicana Joint Venture (AngloGold Ashanti Australia and

Independence Group NL), consultants from Ecologia and Botanica, Pila Nguru (Spinifex People) traditional owners, and scientists from La Trobe and the Australian National University, Western Australian and Victorian museums and CSIRO.

"It was fantastic to see people from organisations that are sometimes at odds over conservation and resource development proposals, working hard to achieve a common goal," Karl said.

"It's not everyday that you see DEC staff, mine workers, conservation volunteers, scientists, ecological consultants and traditional owners all working so hard together and given the remoteness of Neale Junction, everyone knew that a large-scale survey would not occur again for many years or decades."

The logistics of the survey were a major challenge, with the nearest supplies of fuel and water more than four hours away. DEC's Goldfields Regional Leader Nature Conservation Neville Hague said that without the support of AngloGold Ashanti they could not have undertaken such a large survey.

"Not only did they provide many vehicles,

but they made sure there was a constant stream of trucks bringing out water, diesel and fresh food from the Tropicana exploration camp," Neville said.

"This was no small undertaking as the camp is seven hours' drive from Neale Junction and, by providing an exploration kitchen caravan with a cook, it meant we could really focus on the survey."

The survey generated a wealth of information on the animals and plants inhabiting the reserve.

"Analysis of hair from dog and cat scats collected during the survey has revealed the presence of marsupial moles," Karl said.

"Other remarkable discoveries included two new species of dragon lizard and a false antechinus of which the identity remains uncertain. The survey also collected the incredibly rare Margaret's blind snake of which, prior to the survey, only a single specimen was known to science."

Botanist and DEC Threatened Flora Officer Sarah Barrett said several new populations of priority two and one priority three flora were located.

"More than 160 herbarium specimens were

collected and the survey has almost doubled the number of plant species known in the reserve," she said.

"Seed was also collected for the Threatened Flora Seed Centre with a duplicate collection for the Millennium Seed Bank Project."



DEC Reserves Officer Gary Hearle with a thorny devil.

Locals collect the seeds of success

DEC staff joined local volunteers in March to help rehabilitate an area of the Spectacles wetlands in Beeliar Regional Park burnt by wildfire in December 2007.

The wildfire burnt through about three quarters of the park, affecting many plants and animals. A DEC rehabilitation project has focused on collecting and propagating native seeds to revegetate the area.

Fifteen members of the Friends of the Spectacles volunteer group were joined by DEC Senior Project Officer Renee Evans, Operations Officer Tim Fisher and Healthy Parks, Healthy People Program Coordinator Cathy Gazey, to collect seeds from native plants including banksias, grass trees and bush food plants for propagation.

Cathy said collecting the seeds was an important step in the rehabilitation process because it ensures the plants are adapted to local conditions. DEC staff Renee and Tim were on hand to provide advice on collecting the right seeds and propagating the native seedlings.

"The seeds will be propagated by the Friends of the Spectacles volunteer group along with a local nursery and then replanted in winter 2010," Cathy said.

Friends of the Spectacles group member Mandy Grubb said she was thrilled to share her passion for this important area with other volunteers.

"We're involved in the whole process from start to finish, from ground preparation to planting, weeding and maintenance and we're always looking for new people to take part," she said.

"Working with DEC we are confident that in three years' time the wetlands will be a lot healthier. The

area is a significant natural asset to our town and is a part of the ancient Aboriginal trade route connecting the Swan and Murray rivers."

Cathy said the contribution of volunteers was an essential part of DEC's conservation work.

"In Western Australia we have a world-class parks system that covers millions of hectares and without the work of volunteers we wouldn't be able to achieve as much as we do," Cathy said.

"The volunteers receive many health rewards from being in nature and giving back to our environment and the whole community can also enjoy the benefits of their generous efforts."



Friends of the Spectacles member Mandy Grubb and DEC Ranger Tim Fisher collect seeds.

Volunteer and get involved

DEC's operations are as varied in their nature as they are in their location – from scientific research to community education and field work, from recovering endangered native species to observing the planets that surround us. So why not get involved?

This year, a diverse range of projects is available for volunteers to work on, many of which include training opportunities.

Lovers of our majestic marine life can help conserve the long-term survival of turtle populations in the Pilbara and the Ningaloo reef. Take part in tagging, measuring and recording information on nesting marine turtles or help with locating seasonal turtle tracks, nesting attempts, identification of species and GPS coordinates.

Prospective botanists can volunteer at the Yanchep National Park Herbarium and take part in collecting, pressing, labelling and mounting native plant and weed samples for identification.

A caring attitude and an interest in wildlife is all that's needed to assist with DEC's Wildlife Helpline, which takes calls from the public on sick, injured or orphaned wildlife and puts callers in contact with a DEC wildlife rehabilitator.

Volunteers can also help threatened wildlife such as the Gilbert's potoroo, when help is needed in monitoring, trapping, recording animal data, radio tracking and maintaining breeding colonies.

Or why not surround yourself with the stars at the Perth Observatory? Help observatory staff conduct star viewing nights or assist in a variety of activities ranging from volunteer program support, library work, staffing displays, observing and much more.

Community Information Coordinator Marg Buckland helps coordinate DEC's volunteers.

"We currently have about 9,000 volunteers, who, at the end of last financial year, provided DEC with 424,000 hours volunteer work – an outstanding contribution," she said.

Volunteers over 16 years old are registered, insured against personal accident and given guidance and training.

If you would like to get involved in any of these volunteer opportunities visit www.dec.wa.gov.au/community-and-education/volunteer-programs/volunteer-projects.html for more information.

Spanish Isabel here to learn

SPANISH forest engineer Isabel Plaza has joined DEC as a seasonal firefighter for five months this year, to learn about Western Australian fire management and prescribed burning.

Isabel is from Guadalajara in the middle of Spain, an hour out of Madrid. With six years' experience as a firefighter, three years in a helicopter crew and a degree in Forest Engineering, she was a welcome recruit to the seasonal firefighter crew in Wanneroo.

Isabel is a close friend of Javier Moreno, who spent 12 months with the department learning all about Western Australian fire management. On his return to Spain, Javier spread the word about DEC's practices and encouraged Isabel to come and see for herself and experience the culture of prescribed burning in WA.

DEC's fire management expertise is internationally respected with heads of overseas government and private organisations regularly visiting to look into our culture of prescribed burning.

Sustainable Forest Management Coordinator Owen Donovan said the best way to learn about controlled burning was to work with DEC.

Owen plays a large supporting role in Isabel's experience with DEC, assisting with her working visa arrangements and coordinating her time to provide her with the best possible experience with DEC's fire experts.

"The similar southern European climate means Isabel's firefighting experience is very relevant here," he said.

Isabel explained that while Spain had excellent systems of fire detection and suppression, the country was yet to make any large strides in fire prevention.

While prescribed burning is being implemented in some parts of Spain, it is still not an accepted practice, something that Javier and Isabel are hoping to change.

Isabel has worked on many fire suppression operations so far, including the large fire at Two Rocks during January where she witnessed first-hand how prescribed burning practices can slow down a wildfire.

Her experience with DEC will also include working in the Perth Hills District office to undertake prescribed burning and then working with fire behavior specialist Lachie McCaw.

When asked what she was most looking forward to out of the course of work she said, "everything, I want to know everything".

"I love fire," she said.

As the first female seasonal firefighter to work in Wanneroo for about 15 years, Isabel had only one gripe about her experiences so far.

"You need more women firefighters in Australia. The guys are great but their needs to be more girls," she said.

"In my fire crew in Spain it is much more equal with two women and four men, and more women joining all the time."

After taking a few long weekends to see WA's south-west, the karri and tingle trees proved to be a favourite of the young forester.

"The big karris in Pemberton were the best," Isabel said.

Isabel is now looking forward to spending some time up north in Kalbarri and Exmouth and, with some friends arriving in May, she hopes to see a lot more of WA.

"The Spanish love to travel," she said.



Isabel Plaza.

Looking to the sky for DEC's corella count

THE 2009 'Corella Count' has been heralded a huge success with 12,947 Muir's corellas counted over 38 sites in the Warren Region.

The Corella Count was held in April and involved about 60 volunteers, including DEC staff from Donnelly and Frankland districts, external volunteers and landholders.

Fauna Conservation Officer and Graduate Recruit Lawrence Currian said the survey was carried out in the Manjimup, Boyup Brook, Kojonup, Plantagenet and Cranbrook shires, focusing on the Tonebridge/ Unicup area.

"The number of birds increased from last year's count of 11,200, which is partly explained by a slight increase in the number of sites surveyed," he said.

"Additional properties were included this year due to an increase in the number of private landholders taking part. Their involvement was gratefully appreciated and helps to increase the

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participation rate and credibility of the annual count within the community."

Muir's corella (*Cacatua pastinator pastinator*) is endemic to south-western Australia. When large areas of the south-west were cleared for agriculture, Muir's corella numbers were reduced to the extent that the birds are now endangered and protected by law.

Once found throughout the south-west, they are now only found in one population near Lake Muir, Boyup Brook, Perup River, Frankland and Rocky Gully.

A post-count barbecue was held for volunteers at the Tonebridge Country Club, which enabled DEC staff to provide

the group with more detailed information about Muir's corella.

"There was an interactive and informative question and answer session between DEC staff and local landholders, allowing many important issues to be discussed," Lawrence said.

Lawrence said the annual survey was necessary to provide accurate estimates of the current population size and collect information on behaviour patterns and habitat preferences in order to manage the threatened species throughout its range.

"This information is used to assist with management decisions regarding these birds," he said.

Muir's corellas use regular flight paths, flock and feed together and regularly return to good feeding sites. Landholders who regularly see large flocks of corellas on their properties may like to include their property as a future survey site. For more information contact Lawrence Currian on 9771 7988.

Building bridges at Woody Lake

TOURISTS and avid walkers along the interpretative Kerpwari wetland trail in Esperance are now using a newly installed floating bridge to cross Little Woody Lake.

In 2007, a tropical cyclone caused a flood in Little Woody Lake, breaking the old wooden boardwalk that provided a crossing from either side.

DEC Senior National Park Ranger Peter Masters was given the task of rebuilding the bridge to restore the Kerpwari trail and, in light of the previous flood, decided to look into the use of floating bridges.

Peter began researching the project and, working collaboratively with DEC's Recreation, Planning and Interpretation Section, he was able to create a design that took into account the environment around the bridge.

"The reserve is a popular birdwatching spot and when creating the bridge design we looked into

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everything from the possible disturbance of bird and fish species, through to the colours of the natural environment in the area – ensuring the structure would blend into the surrounding environment," he said.

"The pontoon bridge floats on the water and is able to raise and lower itself up to one-and-a-half metres with during heavy rain events or drought, it is sturdy but flexible structure and is quite large, with two metres width."

Peter said the previous boardwalk led the Kerpwari Trail through a small portion of private property and in redesigning the bridge, they were able to fix this oversight.

"We surveyed the land and were able to place the bridge in a way that

re-directed the trail so it only falls within the Esperance Lakes Nature Reserve," Peter said.

The bridge was easily put together with the whole installation process taking only four hours to complete.

"This area is very popular, especially for wedding photos, and overall it has been a very successful project," he said.

"There is a lot of potential for this style of bridge in other DEC-managed wetlands."

The Esperance Lakes Nature Reserves cover 3,384 hectares and include the Warden, Woody, Wheatfield, Windabout, Mullet, the western portion of Pink and Sharklakes, and provide opportunities for a range of recreational activities such as sightseeing, bushwalking, picnicking, canoeing and birdwatching close to the Esperance townsite.

Return of the chuditch

DEC has confirmed reports of a sighting of a rare carnivorous marsupial, the chuditch, in the southern Perth suburb of Wandii – the first chuditch sighting on the Swan Coastal Plain in almost 20 years.

A resident reported several sightings of a chuditch, leading DEC to visit the location and confirm the presence of the animal.

Also known as the western quoll, chuditch were once common throughout much of Australia but are now confined to the southern areas of Western Australia.

The stronghold of this threatened species is the jarrah forests and woodlands of the south-west.

DEC Nature Protection Branch wildlife officer Rick Dawson said historical records indicated populations of chuditch once existed in Perth and throughout the Swan Coastal Plain.

"Records dating from the 1920s and 1930s near Kings Park in Perth show that the chuditch used to be more widely distributed on the coastal plain areas," Rick said.

Rick said it was unfortunate that the male chuditch had been badly injured by a rabbit trap, and after being captured and assessed by vets at Perth Zoo, the animal had to be euthanased.

"It was very disappointing to have to euthanase the chuditch, but we are hopeful that the presence of one chuditch indicates there may be a population in the area," he said.

"We believe the animal made its way down from the scarp over a period of time, largely due to sustained fox baiting in jarrah forests under DEC's *Western Shield* program.

"With the reduced threat of predation by foxes, the chuditch has bounced back in the forests and we hope to see an increase in sightings of this species on the Swan Coastal Plain."

New database takes weed management online

A NEW database with information on managing and controlling problematic weeds in the Swan Region has been created to provide easily accessible information on weeds posing a threat to the natural biodiversity of the region.

DEC ecologists Kate Brown and Karen Bettink undertook research on some of the priority weeds in the area to inform the database.

"Information is delivered via the WA Herbarium FloraBase website, where it supplements the existing descriptions, images and distribution information with details of a weed's origin, biology, suggested methods of management and control and a management calendar," Karen said.

The database, called Swan Weeds, was developed over two years in a collaborative effort involving the WA Herbarium, DEC's Urban Nature Program and the 2006-2008 Invasive Species Project administered by the Perth Region Natural Resource Management and funded through the Commonwealth Government's Natural Heritage Trust program.

Karen said the database had information on 58 geophyte (bulbous, cormous and tuberous) species and provided an up-to-date community resource for information on the biology and management of problematic weeds.

"It is designed to help individuals, land managers and

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community groups understand and manage their most threatening bushland weeds and has a particular emphasis on species occurring on the Swan Coastal Plain, Darling Scarp and Plateau," Karen said.

Information has been collated from a large number of sources and agencies, principally the 2002 publication *Bushland Weeds; A practical guide to their management*, by Brown and Brooks, Environmental Weeds Action Network, Perth and *Western weeds*, a guide to the weeds of *Western Australia Second Edition* (2007), by Hussey et al.

DEC staff working on the Swan Weeds project included Ecologist Kate Brown, Data Administrator/Data Analyst Brett Glossop, Senior Technical Officer Ben Richardson and Ecologist Karen Bettink.

Example pages, a list of species currently in Swan Weeds and more information on the project are available at <http://florabase.dec.wa.gov.au/weeds/swanweeds/>.

Individual species' information is also available by searching FloraBase for individual weed taxa.



New management plan released for Wellington and Westralia

DEC has created a new 10-year management plan for Wellington National Park, Westralia Conservation Park and Wellington Discovery Forest.

The plan covers more than 20,000 hectares of land on the edge of the Darling Scarp and includes some of the Wellington District's most scenic areas where mature jarrah forest and granite outcrops meet the majestic Collie River valley that supports protected flora and fauna species.

Environment Minister Donna Faragher approved the plan saying the picturesque area provided a diverse array of nature-based

recreation opportunities including picnicking, camping cycling, bushwalking, canoeing, abseiling and fishing.

"The Collie River is particularly significant for Nyoongar people for its connection to Ngargunguddij, the water snake, and the plan provides for participation of Aboriginal people in the promotion of cultural heritage and management of the area," she said.

"Involvement of the community in management and stewardship of this beautiful area is incredibly important and I would like to thank community members for the time and effort they put into helping develop this

management plan."

Staff from various DEC branches helped to create the management plan in consultation with various government, private and community groups.

Planning Coordinator Paul McCluskey said one of the major factors influencing the creation of the management plan was the recreational use of the Wellington Reservoir, which is marked as a potential public source of drinking water.

"In preparing the management plan, DEC consulted extensively with the Department of Water and Water Corporation, and the

management plan allows for recreation while making provision for changes should the reservoir be required for drinking water purposes in the future," he said.

"The management plan also aims to provide community education on the natural assets of the area and the complexities of managing the jarrah forest through the continued support of the Wellington Discovery Forest centre."

"The centre will be comprised of an ecology zone, a research zone and a management zone – which will actively demonstrate the effects of tree harvesting on jarrah forest."