



Queen's Birthday honour for Doug

IRONICALLY, Senior Wildlife Officer Doug Coughran's family lineage includes whalers and ship captains, but, with a career that has spanned 31 years, he has created his own legacy, which now includes an Order of Australia.

Doug was named in this year's Queen's Birthday honours list for his conservation and environment work, particularly with whales; an honour that came as a surprise to Doug, who still doesn't know who nominated him.

"I was very humbled and felt a sincere sense of personal pride to be named in the Queen's Birthday list," he said.

"I hope that this will focus more attention to the work I've been doing with training and building relationships with the fishing industry, and will add weight to the comments and advice I'm asked to give.

"While it's nice to be recognised for my work, it simply couldn't have been done without the input from many people, especially those who have been in it for the long haul."

Doug said he was lucky to be doing something that still made him look forward to getting up and going to work every day, even though it hadn't always been easy.

"We've certainly come a long way from when I first started doing this 28 years ago," he said.

"It sends a chill up my spine to think how we used to do things, even though we always did things as safely as possible. But, assuming you survive, making mistakes is all a very important part of the learning process.

"Each incident presents an opportunity to develop and improve the techniques we use and I'm always analysing situations to learn more about possible techniques, why

whales end up in trouble and the behavior of whales themselves.

"And I'm in a position where I can pass this information onto others, both within DEC and in other states and countries."

Doug has been instrumental in establishing a nationally accredited training course in whale disentanglements, which he has taught in WA, all the other Australian states and New Zealand.

"As a registered training organisation, DEC is the course coordinator and we're playing a vital role in improving risk management of disentanglements on a state and national level. This is so important because it's crucial we make operations safer for staff involved and so the public don't take matters into their own hands and put themselves at risk. We manage a very high risk incident as safely as humanly possible."

Doug said while disentanglement techniques had improved, a lot of work had also been done with the fishing industry to reduce the amount of debris in the water.

"We've come a long way with these partnerships and will continue to build on them," he said.

"Thirty years ago we didn't have the problems we do today because we didn't have the numbers of whales. But, as whale numbers increase, the risk that they will become tangled and the incidence of beaching will also increase. These are evolving challenges we need to keep pace with."

Doug will be presented with his Order of Australia in a ceremony in September.



Senior Wildlife Officer Doug Coughran.



A glimpse into the future for DEC's light fleet

DEC Atrium and Crawley staff recently had the opportunity to test drive Australia's first commercially produced plug-in fully-electric vehicle, the Mitsubishi iMiEV.

DEC Senior Project Coordinator James Milne explained that the car was very simple to drive and could easily fit into the regular DEC fleet.

"It looks and drives just like a normal compact car, so there was no special training required before staff took it out," he said.

About 12 staff drove the vehicle while it was on loan to DEC over the two-day trial and all reported favourable experiences.

Media Relations Officer Tania Durlik drove the iMiEV from the Atrium to the Boatshed in Crawley.

"It was difficult to know if the engine was on because when I started it using the 'fake' engine key it didn't make a sound, but when the dashboard lit up I knew I was right to go," she said.

"As I gradually became accustomed to the quiet engine, its compact size and interesting battery indicator that resembled a fuel gauge, it was actually a pleasure to drive."

With a range of approximately 160 kilometres when fully charged, the iMiEV is ideal for metropolitan driving and even commuting to and from work.

It takes eight hours to charge from fully flat, but can be kept 'topped-up' with regular short charging sessions.

The department expects to receive one of 10 converted fully electric Ford Focus vehicles around September this year, in a two to three-year assessment of its suitability for meeting the specific operational requirements of the department.

The trial will also be a public demonstration of the operating characteristics and environmental benefits of electric vehicles.

For more information contact James Milne on 6467 5454.

Prescribed burning target reached

DEC has reached its annual 200,000 hectare prescribed burning target in the three south-west forest regions the first time in five years.

Fire Management Services Branch Manager Murray Carter said reaching the target was a great achievement after such a long period.

"This season we had more favourable weather conditions, particularly in the Swan and South West regions but the summer burning season in Warren was curtailed with the onset of rain," he said.

"We only had one major smoke impact in the metropolitan area during the autumn burning program, although there were several instances in areas such as Collie, Bunbury and Busselton where smoke lingered for a few days.

"Managing smoke is becoming perhaps the most challenging aspect of the burning program, particularly with the expansion in the number of vineyards in areas such as Pemberton and Manjimup."

Environment Minister Donna Faragher was on hand at a prescribed burn in Korung National Park near Lesmurdie. The previous week she took the opportunity to catch up with Kimberley Region staff involved in fire management.

Mrs Faragher said prescribed burning was critical in mitigating the impact of summer bushfires.

"The events in Victoria in 2009 illustrated the destructive power of bushfires and their ability to cause loss of life and significant property and infrastructure damage," she said.

Evidence by independent fire scientists presented to the Royal Commission inquiring into the Victorian fires overwhelmingly promoted fuel management through controlled fires as the most effective way to reduce the threat bushfires posed to towns and communities.

It also recognised Western Australia's prescribed burning program as a model for fire management on public lands.

Mrs Faragher said there had been almost 300 bushfires in 2009-10 on south-west lands managed by DEC.

The vast majority of those fires (more than 90 per cent) were contained to just a few hectares. Only one exceeded 10,000 hectares and it was contained within the forest estate and had not threatened private property.

"Many of these fires were contained because of rapid response as well as low fuel buffers created by prescribed burning," she said.

The Minister said smoke management, particularly over

Perth and near vineyards in the south-west, had become an increasingly important part of the prescribed burning operations.

"In reaching this target, we acknowledge that there has been a level of community tolerance to occasional smoke impacts," she said.

"Managing smoke impacts, especially after several days of burning, is a challenge and, while every effort is made to reduce the impact of smoke, at times some impact is unavoidable."

Mrs Faragher said all Western Australians still needed to be vigilant and take the necessary precautions to reduce the risk of bushfires.

Prescribed burns were also carried out across 4,000 hectares between Denmark and Esperance and 760,000 hectares in the Mid-West, Kimberley, Pilbara and Goldfields regions.



(Left to right) Perth Hills District Manager Stephan de Haan, Environment Minister Donna Faragher, Fire Management Services Branch Manager Murry Carter and Perth Hills District Fire Coordinator Kevin Pollock.





DEC Swan Region Industry Regulation officers Lauren Trott and Maxine Birkin take samples of the leachate in the creek.

Landfill spill under investigation

DEC officers are investigating the cause, extent and impact of a landfill leachate spill from a landfill site in South Cardup.

DEC Environmental Hazard Branch Manager Ken Raine said DEC was notified of the spill from the landfill's leachate collection system and responded immediately.

"Officers from DEC's Pollution Response Unit and Swan Region Industry Regulation Unit were sent to the scene to ensure the spill was quickly and effectively contained, the source of the spill stopped and that the clean-up was undertaken thoroughly," he said.

"The spill entered a dry creek bed where

most of it was dammed but some leachate did run on to other properties—the extent of the spill from source to the furthest point was more than one kilometre.

"The priority was then to ensure that the landfill operators took immediate action to clean-up the spill.

"Two trucks were brought in to suck up and remove the liquids from the creek bed, working until all the contaminated liquid had been removed.

"DEC officers have issued an environmental field notice and a clean-up scope of works on the landfill operator to ensure rapid and effective clean-up is carried out.

"Work is currently under way to

determine the extent of soil that may have been affected and a suitable remediation strategy to protect the environment and nearby land use."

The Shire of Serpentine-Jarrahdale is notifying nearby landholders of the incident. The departments of Water and Health have also been notified.

Ken said samples of the leachate had been analysed to determine its composition, enabling remediation efforts to be properly targeted. Landfill leachate typically contains ammonium and other chemicals.

A full investigation into the incident has commenced under DEC's Enforcement Policy.

Fire introduced into biology curriculum

SENIOR high school biology students throughout WA will be educated on the important ideas relating to fire, following a recent decision to include the subject into an environmental issues and impact section of the WA Biology syllabus.

EcoEducation Senior Project Officer Elaine Horne said that having the topic of fire incorporated in the senior school curriculum would mean that it is taught as a required concept, rather than an optional idea.

"Fire is a critical issue in our fire-prone environment and hopefully the syllabus will hopefully help students learn about wildfire as a threat and also the intelligent use of fire to prevent wildfire and as a tool for conservation of biodiversity," she said.

"Geography teachers have already discovered the concept of fire as a valuable tool in teaching the 2A course, taking advantage of *EcoEducation* courses to

achieve the syllabus," she said.

"Biology classes can now successfully complete the fire requirement in their level 3A syllabus via the *EcoEducation* course 'Fire—a force of life' which is aimed at late adolescents from Years 10 to 12.

"Teachers have the choice of how they complete their requirements and *EcoEducation* can assist in addressing the syllabus, for example, through excursions and field studies."

Elaine said that DEC's strong grounding of teachers, students and parents in science, environment and societal educational programs during the past 17 years meant good support for moves toward relevant curriculum change.

"Fire, biodiversity and conservation are central to understanding the biology of Australian ecosystems and are the basis of *EcoEducation* programs. People have

started to sit up and take notice of the importance of having these topics explored properly in our high schools," she said.

"Fire is central to biodiversity issues in Australia and could also lead to other learning pathways such as adaptation and evolution, discussion of threatened species and threatening processes, relationships in ecosystems, water catchments and other abiotic effects, or the health and safety of humans for example.

"*EcoEducation* also addresses fire as a part of the Indigenous way of life. This can complement aspects of sustainability and the way we use the environment."

Elaine said that the exploration of fire in the classroom would have a positive impact on people's understanding of the many uses and impacts of fire and on better understanding our environment.

For more information on the inclusion

of fire in the high school curriculum, or to discover *EcoEducation* programs, contact Elaine Horne on 9334 0387 or by email elaine.horne@dec.wa.gov.au.

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Barrow Island bird translocation

SEVENTY birds from two locally extinct bird species have been translocated to the Montebello Islands, 130 kilometres off the Pilbara coast, in an effort to re-establish populations of the birds.

During three weeks in May and June, 31 black and white fairy-wrens (*Malurus leucopterus edouardi*) and 38 spinifexbirds (*Eremiornis carteri*) were caught on Barrow Island and released on Hermite Island in the Montebello Islands group.

DEC Technical Officer Neil Hamilton said the birds were captured by a team of experienced bird handlers using mist nets, then given a health check before being transferred to Hermite Island by helicopter.

"Specially marked bands were placed on the legs of each bird before they were released, to assist with their ongoing monitoring," he said.

"The birds are adapting well to their new environment where they will be routinely monitored for health, parasites and other diseases."

Spinifexbirds also occur on the mainland but Barrow Island black and white fairy-wrens are a locally endemic subspecies of a more common mainland species. They are listed as threatened because of their limited distribution which makes them vulnerable to introduced predators and other disturbances.

"Both species formerly occurred on the Montebello Islands but are now extinct there largely due to introduced predators," he said.

"DEC carried out intensive baiting across the Montebello Islands in the 1990s resulting in the eradication of both cats and rats, and ongoing monitoring is continuing."

Neil said the reintroduction of the birds to Hermite Island was made possible because of the healthy populations of about 20,000 spinifexbirds and 8,000 black and white fairy-wrens on Barrow Island.

"We are confident that Hermite Island is in a suitable condition to receive the birds and to become the basis for creating another stronghold for these species," he said.

The bird translocation is part of a Gorgon Project environmental offset program managed by DEC, and funded by the Gorgon Project Joint Venture. It follows the successful reintroduction of threatened golden bandicoots and spectacled hare wallabies, from Barrow Island to the Montebello Islands earlier this year.



(From left) Lee Mould from Chevron with DEC officers Andy Smith, Sarah Comer, Neil Hamilton, Wes Caton and Karen Rusten during the translocation.

FloraBase continues to grow

DEC's comprehensive botanical information portal *FloraBase* – the *Western Australian Flora* has released its yearly floristic analysis in time for the annual reporting season.

The resource holds authoritative information on all species of plant throughout the state including distribution maps, photographs, short descriptions and nomenclatural information. *FloraBase* can interactively produce lists of species for any taxonomic group or individual region of WA as well as electronic identification keys to families and genera.

Data sourced on 1 June has highlighted significant growth in basic flora statistics when compared to 2009 findings.

Highlights include the addition of 386 names to the *Census of Western Australian Plants* database, with an additional 168 taxa now recognised as occurring in WA (158 native and 10 naturalised taxa), including 87 published species.

For the first time in *FloraBase*, additional figures have been calculated to split the number of current species into native and alien components. Of the 12,224 current species of vascular plants in WA, there are 1,190 naturalised and 11,034 native species.

For the non-vascular 'plants' (the fungi and lichens, algae and bryophytes), a brief comparison of the 2010 with the 2009 data shows an additional 103 cryptogam names entered into the *Census of Western Australian Plants* database.

Other core statistics derived from *FloraBase* often required for citation in various works, state that the number of specimens now held in the WA Herbarium Specimen Database is 722,671 and images held in the WA Herbarium Image Collection sits at 37,885.

For more information on current statistics surrounding the native and naturalised Western Australian flora, visit <http://florabase.dec.wa.gov.au/statistics/> or contact Alex Chapman on 9334 0513.

