

SAVE THE TASMANIAN DEVIL.

FREE NEWSLETTER

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Devils living wild on mainland Australia

For the first time in hundreds of years, Tasmanian devils are living in 'wild' conditions on mainland Australia.

Last January the Save the Tasmanian Devil Program sent 15 Insurance Population animals to Devil Ark, a large-scale breeding facility at Barrington Tops, in NSW. An additional 20 captive-bred devils were moved from the Australian Reptile Park, in Gosford, NSW, to help kick-start Devil Ark—a project that sets out to establish and maintain a genetically representative population of devils in 'Tasmania-like' bush conditions.

David Schaap, senior keeper with the Save the Tasmanian Devil Program, said there have been intensively-managed Insurance Populations on the mainland for several years (typically animals kept in zoo-like pens). But Devil Ark is the first Free Range Enclosure (FRE). The enclosures are smaller than, but similar to, the large-scale enclosures that are operating in Tasmania.

"It's fantastic to have devils released into a more natural area like this," David said.



Photo courtesy Iain D. Williams, Anaspides Photography

"Giving the devils space to run further than they've ever run before—well, it's heart-warming to see. The animals get to use the seemingly-endless bush landscape: they explore their territory, they dig burrows, and they'll eventually compete for mates.

"This natural lifestyle is ideal for the long-term goal of being able to release devils back into the wild in Tasmania, should that become a viable option for the species."

Devil Ark founder and Australian Reptile Park Director, John Weigel, said he's encouraged by the response of the devils to their new home.

"Our immediate aim is to find the right mix of enclosure size and stocking density for the Barrington Tops FRE model to ensure the cost effectiveness required to

hold large numbers of wild-type devils for a period of time—a period that could extend for decades."

John and his team will be looking to see if Barrington Tops's smaller FREs will be as effective as the larger model FREs being used in Tasmania.

Meanwhile, it seems the animals have hit the ground running. "Camera traps are already recording a range of natural behaviours, including very exciting vision of mating and nest building," John said.

Devils once occurred on mainland Australia, with fossils having been found widely. But it's believed the species became extinct on the mainland some 400 years ago—probably due to increasing aridity and the spread of the dingo.

Devil Ark has taken a very cautious approach to the design of the pens (and surrounding perimeter fence) to ensure that there will be no escapes. Heavy gauge chainmesh fencing is buried deeply into the ground and burrow-proof chainmesh 'aprons', running flat on the ground and tied to the fence, provide added security against the escape of devils (and also ensure that wild animals, such as wombats, are unable to burrow into the compound). Other security features include an unclimbable 400mm wide strip of sheet metal suspended internally from the tops of pen fences (a total of 6km of this material was required!), and electric wires.

www.devilark.com.au 

FROM THE MANAGER'S DESK

THE STORY SO FAR...

Since 2004 we've been running a disease suppression project on the Forestier Peninsula, in south-eastern Tasmania. Wildlife biologists have trapped and removed diseased devils from the geographically-isolated peninsula in an attempt to contain the impact of the Devil Facial Tumour Disease (DFTD) in that area.

An analysis of the project from 2004 to July 2008 indicated that disease suppression wasn't resulting in a significant difference. At the time however, there was a sense that population decline had slowed and that devil numbers could potentially be maintained at a level that allowed the local population to retain an ecological function on the Peninsula. In an attempt to achieve this, we modified our trapping frequency and strategies. Unfortunately the population continued to decline.

In November 2010 the Program completed a detailed review and analysis of disease suppression. The aim of the review was to evaluate how much the disease suppression project had helped us in achieving our long term objective of retaining an ecologically functioning population of Tasmanian devils in the State as a whole.

The analysis showed us that disease suppression does make a difference; however it is difficult to quantify the overall conservation benefit of this action for the species as a whole in Tasmania. The Forestier Peninsula population is still declining in spite of our efforts, albeit at a slower rate than unmanaged populations.

Given that we have limited time and a limited budget to establish cost effective conservation programs for the Tasmanian devil, the Program's Steering Committee recommended that the disease

suppression activity on the Forestier Peninsula be brought to an end and that we look to developing alternative projects to deliver positive conservation outcomes for the devil.

I want to acknowledge the professionalism and commitment shown by the team over the past six years. They are all exceptional! Special thanks goes to Dr Menna Jones and to wildlife biologist Stewart Huxtable, who took on the challenge of refining the disease suppression project over the past year or so, as well as to landowners the Dunbabin family, who've selflessly given years of unstinting support to the Program.



Ulcerated secondary tumour infection.

A final report on disease suppression is currently being prepared for publication. But, in short, it all boils down to this: we want to focus on projects that give the best outcomes for all devils.

With that in mind I want to make special mention of our new Project Grants, which are being funded by the donations you've made to help save the Tasmanian devil. These

grants are for the community groups and private bodies that contribute to our management priorities, such as the ongoing growth of our Insurance Population. You can read more about the Project Grants on the 'Appeal' page of this Newsletter.

There's no 'quick fix' when it comes to the challenges facing the Tasmanian devil. We're in a great place in terms of building the Insurance Population, but this conservation work will require a long-term commitment. It must be said that we have been heartened by your support every step of the way. 🐾

ANDREW SHARMAN
Manager
Save the Tasmanian Devil Program

The Devil Facial Tumour Disease (DFTD) was first observed in 1996. Since then, devil numbers have declined by around 80% (in 1998 the population was estimated at 120,000 devils, compared to today's best estimate of somewhere between 17,000–42,000).

DFTD is a new, contagious cancer that kills all infected devils, usually within six months of the first tumour becoming visible. The disease produces small lumps in and around the mouth, which develop into large tumours on the face and neck.

The disease front has moved in a south-westerly direction across more than 60% of Tasmania, although there's no evidence that it has yet reached the far north-west.

It is believed that DFTD is transmitted from animal to animal through biting. The foreign cells of the tumour aren't recognised or rejected by the individual animal, in part because of the general lack of genetic variation within the population.

The Tasmanian devil is listed as 'Endangered' under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*, and the Tasmanian Government's *Threatened Species Protection Act 1995*.

The Save the Tasmanian Devil Program is the official joint strategy of the Australian and Tasmanian Governments. It features captive and free-ranging Insurance Populations, and collaborative laboratory-based investigations of DFTD.

WHO WE ARE

The Save the Tasmanian Devil Program is the official response to the threat of DFTD to the survival of the Tasmanian devil. The Program is a joint initiative of the Australian and Tasmanian Governments.



Australian Government



Tasmania
Explore the possibilities

Insurance devils settle into Freycinet FRE

A 22ha Free Range Enclosure (FRE) on the Freycinet Peninsula, in eastern Tasmania, has recently been completed by the Save the Tasmanian Devil Program in partnership with the Devil Island Project Inc.

This is the third FRE to be operating within the State: the 12ha Devil Island was opened at Bicheno in 2008 by Bruce and Maureen Englefield (East Coast Natureworld), and last year a 22ha FRE was built by the Program at Bridport. The Freycinet FRE now contains 18 Insurance Population devils—just in time for the breeding season.

The idea behind these large-scale enclosures, said Dr Judy Clarke, a wildlife biologist with the Program, is to allow devils to retain their wild behaviours. This is particularly important given the Program's 50-year plan to maintain a disease-free population that could, if ever needed in the future, be released into the wild.

But the minimal management approach of the FREs needs to be balanced with the welfare of the animals. So, to a greater extent than ever before, cameras are being used



Dr Judy Clarke sets up cameras at the Freycinet FRE.

by the Program as part of the FREs' management process.

"We need to minimise the amount of trapping and handling so they maintain wild behaviours, but we can't see the devils from day to day in these big enclosures," Judy said. "Instead we are using an array of remote motion and heat sensing cameras to monitor the behaviour and wellbeing of the animals.

"Cameras are focussed on key locations within the FREs, such as feeding stations and latrines, so we can get some idea how the individuals are interacting and ensure they are still healthy."

For the first time the FREs will be home to devils of a variety of ages, similar to what you'd find in wild populations. But the true advantage of managing several FREs is that it allows the Program to determine the effectiveness of different management approaches, such as:

- placing more females than males in the Freycinet enclosure, compared to having equal numbers of males and females at Bridport; and
- installing nest boxes into the Freycinet FRE to see whether the devils utilise them for breeding. The Freycinet site has limited natural denning capacity, while the Bridport FRE has plenty of natural den material.

Judy said that nearly all of the devils living in the FREs have been bred in captivity within the Program's Insurance Population, with the exception of several older animals (which were taken as wild founders several years ago—see the story below). "One of the interesting differences between the animals born in captivity and devils in the wild is that the captive animals are more active during daylight hours.

"The current thinking is that through adaptive management of the FRE populations they will revert to nocturnal behaviour patterns and we will have well adjusted animals ready for life back in the wild whenever this is needed" Judy said. 🦊

Welcome back

Six devils from mainland zoos returned to Tasmania last summer after successfully contributing their genes to the intensively managed captive Insurance Population.

Mark Holdsworth, the section head of Captive Management and Translocation, said the transfers were part of the annual breeding recommendations under the Save the Tasmanian Devil Program in conjunction with the Zoo and Aquarium Association.

"The Insurance Population is a



central plank in our efforts to save the Tasmanian devil. We're starting to see the benefits of a coordinated and cooperative approach to the captive-breeding program."

Two of the six devils that recently returned to Tasmania were captured as juveniles in 2006 as founders to build the Insurance Population. Like the

other devils that recently came home, "Michelle" from Milkshake Hills and "Tilley" from Temma are now living in a Free Range Enclosure (FRE) in the north of the State.

"It's really exciting to see these girls return home after successfully contributing to the Insurance Population," Mark said.

"Their DNA is already captured in their young, and now we have a wonderful opportunity to see how they adjust to a semi-wild situation in the FREs. If they adjust well, we're hopeful they'll produce even more young—this time with some new boyfriends." 🦊

DEVILISH FOLK

The diversity of expertise among members of the Save the Tasmanian Devil Program plays an important role in furthering our knowledge. Our quarterly newsletter gives us the opportunity to introduce members of the team.

Scientific research into the Devil Facial Tumour Disease (DFTD) is being carried out across the globe, exploring topics such as behavioural ecology, genetic diversity, the epidemiology of the disease, cancer treatments, and chromosomes. Yes—it's enough to make your head spin! That's why Dr Chris Boland, the Science Manager of the Save the Tasmanian Devil Program, is such a welcome addition to the team.

"Scientists are often publishing articles that only other scientists get to read," Chris said. "People in the field are sometimes so committed to their work that they simply don't have time to learn about these great scientific breakthroughs."

"My role is to cherry-pick, from all that research, the work that is relevant to what the Program needs to achieve and facilitate its use in the field."

Chris's experience ranges from conservation work with snub-nosed monkeys in the jungles of northern Vietnam, to studying the evolutionary ecology of rainbow bee-eaters around



Fraser Island (for which he obtained his PhD). More recently he's worked on a million-acre cattle property in the Kimberleys (helping to recover Gouldian finches and other grassland species), before moving to the Cocos Islands and Christmas Island as manager of the Invasive Species team (where he and his team eliminated more than 99.5% of introduced yellow crazy ants that had been devastating the island's ecosystem for more than 15 years).

This experience has given Chris a taste of the various broad areas that are being researched for Tasmanian devils.

"The great leaps forward in science often come from the synergy of divergent groups of people coming together," he said.

"We've got incredible scientists working in many different fields, and what they have in common is that they're all focussing on the Tassie devil. If we can get a cross-pollination of ideas, it could lead to some really great breakthroughs for the species."

Prior to joining the team late last year, Chris was in the United States. Nearly everyone he met had heard of the Tasmanian devil (probably because of the Warner Bros cartoon), and at least half of those people were aware of DFTD. It helped Chris realise that devils are significant not just to Australians, but to many around the world.

"I feel privileged to be part of the efforts to save such an important animal. And I think I might have some skills that can help." 🦋

Saving devils, in plain English

Jon English, the Program's favourite rocker, and one of our community ambassadors, was back in Tassie over summer for his national The Rock Show tour.

As part of his ongoing support for devils, Jon donated \$1 per ticket sold to his Tasmanian shows (and that totalled several thousand bucks!).

"When I heard that devils could become extinct, my first thought was that we just can't let this happen," Jon said.

While he was in the State recently, Jon got up close and personal with Mollette,



Rocker and community ambassador Jon English met Mollette, from Androo Kelly's Trowunna Wildlife Park, during his summer tour to Tasmania. Photo courtesy of Androo Kelly.

from Trowunna Wildlife Park. Mollette is one of the 'homozygous AC5' animals that's been bred by Trowunna owner, Androo Kelly. These slight differences

"The Tassie devil is an indigenous, unique and iconic animal that need not become extinct." Jon English

in Mollette's chromosomes might help to unravel the mystery of why the species is so susceptible to the Devil Facial Tumour Disease.

"The fact that the devil seems to have a genetic disposition to tumours, and that they don't recognise the cancer cells as foreign, and that the disease keeps mutating in the wild—well, I think that once you cure DFTD, it will lead to a whole bunch of possibilities," said Jon.

"We're not just saving the devil. We might be saving ourselves here as well."

www.therockshow.com.au 🦋

THE DEVIL INSIDE

Lying in bed one night in her north-west Tasmanian home, Cindy Quarrell thought she heard a possum in her kitchen. When she got up to have a look, Cindy noticed her dog Madge standing in front of a cupboard – barking and barking.

“It’s just a possum,” Cindy told the dog as she shone a torch on some dark-coloured fur. But just as she said this, the furry animal turned towards Cindy. It released a devilish shriek that sent the dog bolting through the kitchen, knocking Cindy flat on her back.

“I knew the poor devil was more frightened than me, so we left it alone,” Cindy said. “But I peeked in on it a couple of hours later and the dear thing was hiding under some cushions. I could just see its little nose poking out.



Cindy said it was an ‘absolute privilege’ to meet her surprise visitor.
Photo courtesy of Cindy Quarrell.

“How lucky am I that this little man came to visit—an absolute privilege!”

This young devil did well to choose Cindy’s kitchen for the visit—Cindy has rescued animals all of her life. But Cindy’s story is a timely reminder that March is the beginning of the mating season for Tasmanian devils, and that occasionally they will take up residence and breed under farmhouses.

Nearby stock are rarely harmed as most predators seem reluctant to hunt near their ‘home’. But while devil imps can be amusing, the noise and mess may, for those of us who aren’t as tolerant as Cindy, be a bit hard to handle.



Cindy Quarrell, pictured with her dog Madge, got the surprise of her life when she heard a wild animal in her kitchen cupboard.
Photo courtesy of Katie McDougall, The Advocate.

Occasionally landholders are tempted to trap and relocate devils. It is illegal to do so, and could further spread the Devil Facial Tumour Disease.

If you have any concerns, or if you want advice about how to seal entrances under your home without putting devils at risk, contact the Save the Tasmanian Devil Program on **6233 2006**.

Visit the ‘Devil tales’ page of our website for more face-to-face stories

www.tassiedevil.com.au 🐾

CRIQUEY! It’s a veterinary vehicle

Australia Zoo Wildlife Warriors has provided funding of around \$10,000 towards a purpose-fitted veterinary vehicle for the Save the Tasmanian Devil Program’s veterinary team.

The vehicle accommodates all the veterinary equipment needed for the various tasks performed by the veterinary team. This means they can respond quickly to emergencies, whether they arise in captive or wild populations.

Murray Munro, appeals manager for the Australia Zoo Wildlife Warriors, said they decided to provide funding to this project as it supports both the Program’s Insurance Population, as well as wild devils affected by the fatal Devil Facial Tumour Disease (DFTD).

“Funds were raised through Black and White Week at Australia Zoo, with

merchandise sales, donations and raffles helping to raise much-needed funds,” he said.

“The week involved keeper talks about Tasmanian devils so the general public could be educated about these amazing animals and the issues facing them—most importantly, how to save them.”

Sarah Peck, a veterinary officer with the Save the Tasmanian Devil Program, said the dedicated veterinary vehicle is a welcome addition to the team

“Captive breeding populations are held at several sites across the State,” she said, “so it’s extremely useful to have everything needed on board. It means we can respond as soon as we get an emergency call.

“The vehicle’s also very helpful for field work, where samples are collected

from wild devils. It provides mobile storage for equipment, as well as shelter for team members when they’re undertaking procedures in bad weather.”

“It’s a gift, in more ways than one,” said Sarah.

Wildlife Warriors Worldwide was established in 2002 by ‘The Crocodile Hunters’ Steve and Terry Irwin. Its aim is to involve caring people in the protection of injured, threatened or endangered wildlife.

Australia Zoo Wildlife Warriors will once again support the Save the Tasmanian Devil Program with their fundraising initiatives in 2011, including Black and White Day celebrations at Australia Zoo.

www.wildlifewarriors.org.au 🐾

SAVE THE TASMANIAN DEVIL APPEAL

Donations fuel new projects

Tasmanian and mainland wildlife parks have received support for their efforts to help save the Tassie devil with the creation of new Project Grants, funded by your contributions to the Save the Tasmanian Devil Appeal.

Tasmanian sanctuaries *East Coast Natureworld* and *devils@cradle*, along with South Australia's *Monarto Zoo*, have been awarded the newly-created Project Grants. These grants provide up to \$30,000 in support for non-research work that meets the priorities of the Save the Tasmanian Devil Program.

Wade Anthony, from *devils@cradle*, received \$30,000 to help upgrade the husbandry infrastructure within the central-Tasmanian sanctuary. Also receiving \$30,000 was Mick Post, from *Monarto Zoo*. This grant will help increase Tasmanian devil facilities within the Murraylands zoo. Meanwhile Andrew Pottage, from *East Coast Natureworld*, received \$15,000 to support the management of the Bicheno Free Range Enclosure (FRE) by *Natureworld* staff.



These grants were part of nearly \$190,000 in funding that was allocated by the Appeal in December 2010. This total also included six Dr Eric Guiler Tasmanian Devil Research Grants:

- Greg Woods, Menzies Research Institute (MRI): \$29,600—production of monoclonal antibodies to identify important immune populations of the Tasmanian devil;
- Cesar Tovar, MRI: \$26,500—

characterisation of DFTD tumour proteins eliciting immune responses in Tasmanian devils;

- Beata Ujvari, University of Sydney: \$25,000—characterise the role of telomeres and telomerase in the evolution and progression of DFTD;
- Menna Jones, University of Tasmania (UTAS): \$15,000—genetic basis for heterogenous susceptibility of Tasmanian devils to a novel infectious cancer;
- Tracey Hollings, UTAS: \$7,400—ecosystem impacts of Tasmanian devil decline; and
- David Pemberton, Department of Primary Industries, Parks, Water and the Environment: \$2,050—mitigation of human induced impacts on four Tasmanian devil populations.

The Dr Eric Guiler Grants are named in honour of the late 'Doc' Guiler—the great academic, zoologist, conservationist and Tasmanian devil expert. 🦊

Tassie Devil Tea

Local tea producer *The Art of Tea* is donating 50 cents from the sale of each 50 gram box of their Tassie Devil Tea to help save the Tassie devil.

The Art of Tea is a family-run business passionate about improving health, wellbeing and the environment.



Tassie Devil Tea was launched in 2010

after Samantha Brown, the manager of *The Art of Tea*, visited a Tasmanian devil park with her daughter, Hannah-Jane. Not only did they see devils up close, but Samantha heard tourists saying that they wanted to help.

Tassie Devil Tea is a blend of mostly Australian-grown black tea.

www.artoftea.com.au 🦊

Boot scoot

Iconic Tasmanian footwear producer *Blundstone* has launched its new advertising campaign on *You Tube*, with an offer to donate \$1 to the Save the Tasmanian Devil Appeal for every time the ad is forwarded on (up to \$10,000).

Your challenge? To see who can do the most forwarding.

www.blundstone.com.au 🦊