



**SAVE THE  
TASMANIAN  
DEVIL  
PROGRAM**

# SAVE THE TASMANIAN DEVIL.

## FREE NEWSLETTER

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Hello  
... or  
goodbye

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Meet  
Brent  
Anstis

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Thousands  
of samples

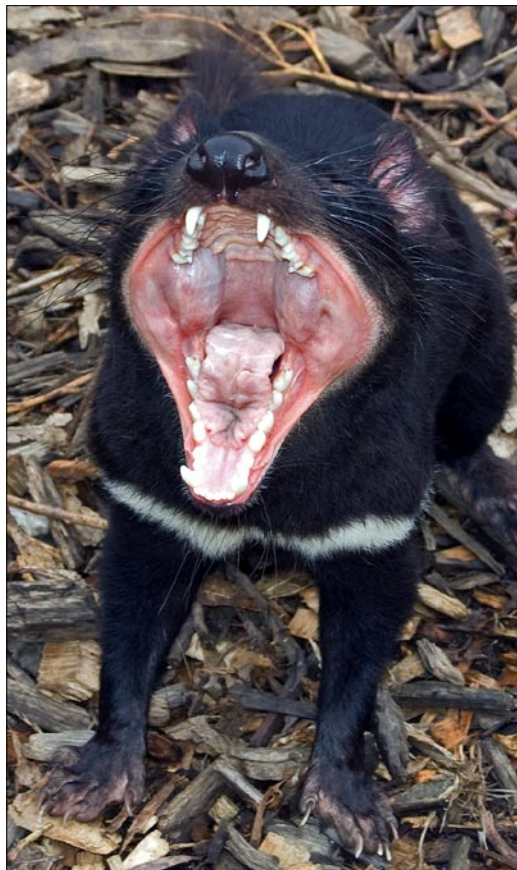
## HEALTHY DEVILS RETURN TO NORTH-EAST

A population of healthy Tasmanian devils is returning to north-eastern Tasmania, the very region where, in 1996, the Devil Facial Tumour Disease (DFTD) was first observed.

Thanks to the efforts of the dedicated Devil Island Project volunteers, the Save the Tasmanian Devil Program will soon finalise “Devil Island Two” – a 22ha Free Range Enclosure (FRE) near Bridport. This black peppermint forest habitat, on undulating sandy soils, has been secured by double fences that were designed by wildlife experts and fencing contractors.

“It’s an emotional walk through that landscape today,” said Andrew Sharman, the manager of the Save the Tasmanian Devil Program.

“Any time that I’ve looked at devil habitat in the north-east over the past few years, I’ve known that much of it is compromised – after all, spotlighting surveys indicate that devil numbers in the north-east have dropped by 95% since the disease was first noticed.



“But now I look on this habitat differently. It’s just very nice to know that disease-free devils will again be running wild in this part of Tasmania.”

FREs are large-scale, fenced enclosures that feature a minimal management approach. They’re a crucial part of the Program’s Insurance Population because the devils within FREs hopefully retain their wild behaviour (but, at the same time, there’s a degree of control over breeding).

There is already one Devil Island FRE operating in Tasmania – a 12ha enclosure, which was opened in 2008 by Bruce and Maureen Englefield of East Coast Natureworld. Devil Island One has already produced two successful breeding seasons.


But a feature of the newest Devil Island FRE, said Jocelyn Hockley, the senior keeper of the Program’s Captive Management and Reintroduction section, is that it will provide an even better replication of a natural system by having devils of different ages living together.

“When the first Devil Island was finished, we only had one-year-old devils available in the Captive Insurance Population,” Jocelyn said.

“But due to the growth of the Insurance Population over the last few years – mostly through

breeding in the Program’s facilities – we’re now able to provide devils that are one, two and three years of age.

“It will give us a better comparison of how the animals behave in a natural situation.”

The perimeter fence of the Bridport enclosure is 1.8m high and made of cyclone chain mesh. It has a floppy top to ensure that no animals can climb into, or out of the FRE. 

# FROM THE MANAGER'S DESK



Andrew Sharman at the Taroona Zoo education facility (with a sunbathing devil in the background).

What does the completion of the Devil Island Two Free Range Enclosure (FRE) have in common with the re-organisation of close to 6,000 ear tissue biopsies? And how does a fencing proposal in north-western Tasmania relate to research into the immunology of the Devil Facial Tumour Disease (DFTD)?

The September issue of the Save the Tasmanian Devil Program Newsletter touches on the numerous projects that come under the Program's umbrella. Yes, they are incredibly varied. But their diversity doesn't detract from the fact that they're all directed towards the same vision: securing an enduring and ecologically functional population of Tasmanian devils living wild in Tasmania.

The truth is that on its own, not one of the individual projects within the Program has the complete solution to saving the devil. Their strength is in their collective impact: genetic studies shape the composition of the Insurance Population; the Insurance Population provides animals for FREs; the behaviour of animals within FREs helps determine the approach to large-scale fencing; fencing projects help us to understand the

ecological function of devils; and, insight into what makes up an ecologically functional population of devils will be crucial if we ever need to reintroduce the species back into the wild. Everything is interlinked.

Of course our coordinated efforts to save the devil extend beyond Tasmania. I recently visited the \$1 million Taroona Zoo breeding centre and education facility, which was opened in Sydney in June. It's one of the best displays I've seen. The 200m<sup>2</sup> facility, which is part of the Program's mainland Insurance Population, includes observation windows that reveal devil sleeping dens, and a call to action for visitors to find out how they can help the endangered species.

Many of you have already responded to the devil's plea for help. The Save the Tasmanian Devil Program is fortunate in that we can boast scientific expertise and internationally-endorsed conservation strategies – but your support has always been our greatest asset. 🦏

**By ANDREW SHARMAN**  
*Manager, Save the Tasmanian Devil Program*

## 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 in partnership with the University of Tasmania.



## THE STORY SO FAR...

In 1996 the Devil Facial Tumour Disease (DFTD) was first observed in the State's north-east. Since then, devil numbers across Tasmania have declined by 80%.

DFTD is a rare, contagious cancer that spreads between devils through biting. The foreign cells of the tumour aren't rejected by an individual animal's immune system because of a lack of genetic diversity among Tasmanian devils.

The disease produces small lumps in and around the mouth, which develop into large tumours on the face and neck. Death by starvation and the breakdown of bodily functions appears to occur in all cases, usually within six months of the appearance of the first tumour.

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

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, collaborative laboratory-based investigations of DFTD, and management strategies for wild populations.



The Tasmanian devil is a keystone species.

## HELLO ... OR GOODBYE

A series of Threatened Species Day public forums were presented across the State earlier this month by the Save the Tasmanian Devil Appeal.

Presentations featuring interactive displays and public discussions were organised in Hobart, Launceston and Burnie.

Dr Clare Hawkins – senior zoologist of the Threatened Species Section within the Department of Primary Industries, Parks, Water and Environment – said the public forums helped highlight the stabilising role of the devil within Tasmania’s ecosystem.

“The devil is a great flagship for all of Tasmania’s 680 threatened species,” Clare said. “It’s what we call a keystone species.

“If we lose a species like the devil, which has such significant interactions with so many other species, it can cause lots of changes in the ecosystem. This can contribute to other species going extinct too.”

The Save the Tasmanian Devil Appeal is the fundraising arm of the Save the Tasmanian Devil Program. 🦊

## DR. TALL POPPY

Congratulations to Dr Robert Shellie, a separation scientist from the University of Tasmania (UTAS), who was recently named the 2010 Young Tasmanian Tall Poppy of the Year.

Robert is a member of the research team from the Australian Centre for Research on Separation Science (ACROSS) that’s been working on a pre-clinical blood test for DFTD.

“By measuring the amount of certain small molecules found in Tasmanian devil blood, we aim to be able to rapidly, effectively and inexpensively diagnose DFTD,” Robert said.

The Tall Poppy Campaign was created in 1998 by the Australian Institute of Policy and Science to recognise and celebrate Australian scientific excellence and to encourage younger Australians to follow in the footsteps of our outstanding achievers. 🦊



Dr Robert Shellie (right) received the Young Tasmanian Tall Poppy of the Year award from The Honourable Chief Justice Ewan Crawford, Lieutenant Governor of Tasmania.

## DONATIONS BOOST DEVIL IMMUNITY STUDIES

The immunology of the Devil Facial Tumour Disease (DFTD) was the focus of the August 2010 grants from the Save the Tasmanian Devil Appeal.

The Tasmanian devil’s immune system has baffled researchers for its failure to fight the foreign DFTD cells when they invade a bitten animal. The University of Tasmania and the University of Sydney will share \$54,000 Dr Eric Guiler Tasmanian Devil Research Grants to further explore this complex issue.

Associate Professor Kathy Belov, of the University of Sydney’s Faculty of Veterinary Science, received \$30,000 towards the development of a comprehensive sequencing database of the entire Major Histocompatibility Complex genetic sequence of one potentially DFTD-resistant, and one infected devil.

This will help researchers design better measurements of genetic diversity in devils so that potentially resistant animals could be identified and managed.

Meanwhile Associate Professor Greg Woods and Dr Alex Kreiss, of the UTAS Menzies Research Institute, received funding to explore immunisation options against DFTD. The project may also help determine which component of the Tasmanian devil’s immune response could protect it against developing DFTD. 🦊

# DEVILISH FOLK

## BRENT ANSTIS

Our quarterly newsletter gives us the opportunity to introduce members of the Save the Tasmanian Devil team. This time we'd like to celebrate the efforts of Brent Anstis, the operations manager non-dairy at Woolnorth in north-western Tasmania, as well as the support of the property owners, the Van Diemen's Land Company.

Brent Anstis and his family regularly see Tassie devils around Woolnorth, where they've lived for the past 20 months. It's kind of special for them because they're from New Zealand and they'd never before come this close to the unique carnivorous marsupial.

But what makes this experience even more precious for the Anstis family is that the devil population in the north-west of Tasmania continues to thrive, seemingly free of the Devil Facial Tumour Disease (DFTD).

"Being Kiwis, devils are new to us and our first involvement was when (wildlife biologist) Sam Fox brought a monitoring crew on to the property," said Brent, who manages the beef, sheep and heifer-rearing operations at Woolnorth.



Brent Anstis with children Kelsey and Dani.

"Sam helped us to understand about wildlife biology. She'd talk about the differences between the male and the female devils, and what they weigh, and how long they live.

"So we're all really keen to see the devil population at Woolnorth maintained. We appreciate the threat of DFTD and the need to look after the population up here."

Woolnorth is a 27,000ha property on which the Van Diemen's Land Company runs a dairy, beef and sheep operation. Dating back to the time when DFTD was first identified, the company also allows the Save the Tasmanian Devil Program access to its private property for regular monitoring trips.

Since moving his family to Tasmania, Brent has taken it upon himself to organise accommodation for the Program's crews, as well as food. When he realised that the teams were working such long days that they didn't have time to cook the food, he also arranged for their meals to be prepared.

On top of this, the Van Diemen's Land Company has recently given permission for a feasibility study on a fencing project in the far north-west of the State to protect the disease-free population.

"It's only at the very early stages because we need to be careful about how it might impact farming operations, which are what keep all of us alive," said Brent. "But you'd be hard pressed to find someone who wasn't at least interested in looking into it.

"We definitely see devils as beneficial to our farming operations. They keep the property tidy through their scavenging. But the really special thing about devils is that you can find them only here. They don't occur anywhere else in the world. And the rest of the world's a pretty big place when you line it up against Tasmania." 🦘

## NEXT STEP FOR NORTH-WEST FENCING

A feasibility study into the potential impacts of a broad-scale fencing project in north-western Tasmania will soon be prepared for the Save the Tasmanian Devil Program.

A barrier fence could protect healthy populations on the Woolnorth farming property by breaking the disease transmission cycle. But Dr Samantha Fox, a wildlife biologist with the Save the Tasmanian Devil Program, said the possible risks of building the structure must first be assessed.

"We need to make sure that we understand the effects of constructing

the fence," Sam said, "as well as be aware of any actions that we need to take to mitigate those risks."

The feasibility study will consider factors such as the route of the fence, its design, and the eventual cost. Most importantly, it will assess the impact of the fence on other animals, the farming operations at Woolnorth, and the natural and heritage values of the landscape.

"Woolnorth is the healthiest and most abundant population of devils in Tasmania. From the data that we've collected, we believe there are around 550 devils on the property. So this

fence would protect a large number of devils, as well as preserve their wild behaviours. We'd also be maintaining genetic diversity within the wild population."

Fencing for conservation has been used on the mainland in landscapes as diverse as the South Australian outback (the Roxby Downs Arid Recovery Project) and the grassy woodlands of the ACT (Mulligans Flat Nature Reserve). The Department of Environment and Conservation (DEC) in Western Australia has also used fencing extensively – most recently in strategies for the endangered woylie (or brush-tailed bettong). 🦘

# NIPPING DISEASE IN THE BUD

The change to a monthly trapping regime for disease suppression work on the Forestier Peninsula has increased the chances of removing infected animals before they further spread the Devil Facial Tumour Disease (DFTD).

Since November 2004, scientists from the Save the Tasmanian Devil Program have removed diseased devils from the geographically-isolated, south-eastern peninsula in an attempt to contain the impact of DFTD. Traditionally, this was done every three months by setting 120 traps and checking them daily over a 7-10 day period.

But wildlife biologist Stewart Huxtable said the monthly trapping regime, which was introduced in May, has led to a more meaningful intervention within the diseased population.

“By going back to trap every month,



Monthly trapping increases the chance of catching DFTD at an early stage.

we're catching animals at an earlier stage of the disease progression,” Stew said.

“We've actually had quite a few examples of devils that seem completely healthy one month, but have early stage DFTD the following month. If we'd waited three months, then the disease would have been quite advanced by the time we caught it.

“So monthly trapping is giving us the opportunity to catch the diseased animals before they're infectious. We're working on the assumption that if the disease is at an early stage and the tumour hasn't yet broken through the skin or mouth lining, then we can remove the devil before it has been able to spread the disease to other devils.”

From the first few monthly trapping trips, Stew said there had been a noticeable difference in the symptoms being displayed by the caught devils. Nearly all of the infected animals had only small, early-stage tumours, rather than the advanced DFTD that they'd normally expect.

Does this observation mean that monthly trapping will eventually reduce the spread of the disease on the Forestier Peninsula? Only time will tell. Scientists hope to gain a clearer picture over the next few months. 🦊

# THOUSANDS OF SAMPLES AND LITRES OF ALCOHOL

Since 1999, every Tasmanian devil that's been trapped in the field has had a tiny sample of their ear tissue collected. It's what scientists call an ear tissue biopsy.

These samples, which have been collected by members of the Save the Tasmanian Devil Program and researchers from the University of Tasmania (UTAS), provide an archive of devil DNA – precious information that has allowed scientists to explore the genetic diversity of the species, the immune systems of Tasmanian devils,



and any changes that have occurred with the progression of the Devil Facial Tumour Disease (DFTD).

Recently, the sample collection has undergone a re-organisation to make sure the samples are well preserved and easy to find. The result is the most comprehensive list of tagged devils ever assembled.

Dr Abe Passmore, from the UTAS School of Zoology, described the experience as a big job. After all, since 1999 there have

been 5,642 devils tagged at 85 sites across Tasmania.

“The collection contains samples from 4,462 devils caught in the field, 539 pouch young and a small number of samples from road kills and captive devils,” Abe said.

“The re-organisation required 150 samples boxes, 10,000 screw cap tubes, 20,000 labels and 10 litres of ethanol.

“The ethanol was for sample preservation, although I admit there were times during this job when I was tempted.”

The collection, which is being stored in two separate locations to insure against its entire loss, will be curated by Robyn Taylor from the Department of Primary Industries, Parks, Water and Environment. 🦊

# THREATENED SPECIES DAY

## DEATH BY A THOUSAND CUTS

National Threatened Species Day is held on September 7 each year to commemorate the death in 1936 of the last known Tasmanian tiger.

Today, all these years later, 680 native Tasmanian species are facing the same fate – that's 190 animal species and 490 plant species. More than 300 of these are classed as either Vulnerable or Endangered – and 160 of our most seriously threatened species (classed as either Vulnerable or Endangered) are found nowhere else in the world. If they do go extinct here in Tasmania, they go extinct globally.

“When it comes to threatened species, we're talking death by a thousand cuts,” said Dr Clare Hawkins, senior zoologist from the Threatened Species Section, within the Department of Primary Industries, Parks, Water and Environment.

“Many of us wouldn't consider it a huge deal to cut down 'just one' tree.



Photos (from left) by: Niall Doran, Chris Green and Chris Tzaros


But even a single blue gum sapling, for instance, can support 65 species of invertebrate. If a thousand people cut down a full grown tree – especially if they then take it away – then hundreds of thousands of animals lose their homes.”

But it's not all bad news – and this is the focus of Threatened Species Day 2010. You can help save a species, and it all starts in your own backyard. Being aware of what's on your land, and how you can manage those habitats, plays a role in the ongoing survival of our native plants and animals.

Clearing land, building, gardening, and burning vegetation can all affect threatened species. But if we know ways to minimise the negative impacts, such as undertaking certain activities only at certain times, we can really make a difference.

**THREATENED:** The Mt Arthur burrowing crayfish is restricted to one small location in north-eastern Tasmania; the Ptunarra brown butterfly is listed as Vulnerable because much of its habitat has been turned into pasture; and there are only thought to be 1,500 forty-spotted pardalote remaining in the world.

You can find out more about the species in your area using the Natural Values Atlas, a web-based application that details where more than 20,000 Tasmanian plants and animals have been recorded.

For more information on threatened species, as well as the Natural Values Atlas, go to: [www.dpipwe.tas.gov.au/threatenedspeciesday](http://www.dpipwe.tas.gov.au/threatenedspeciesday) 

## SLOW DOWN BETWEEN DUSK AND DAWN

Hundreds of Tasmanian devils are killed on our roads each year. It's a distressing and senseless waste, particularly in regions where the population has declined due to the impact of the Devil Facial Tumour Disease.

Last year, The Save the Tasmanian Devil Program launched the Roadkill

Project. Because of YOU, it was a huge success! The Program received more than 400 roadkill reports, which have helped inform ongoing management strategies of wild populations.

We'd like to ask for your support again this year. Please let us know of any devil roadkill that you come across. There are several ways you

can do this (SMS, on-line, reply-paid envelopes etc). All the details are at: [www.tassiedevil.com.au/roadkillproject.html](http://www.tassiedevil.com.au/roadkillproject.html)

Of course the most important aspect of the Roadkill Project for devils – indeed all Tasmanian wildlife – is to slow down on our roads between dusk and dawn. 