



SAVE THE TASMANIAN DEVIL.

FREE NEWSLETTER



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Bringing up baby

\$492,000 in grants for Insurance Population

The Save the Tasmanian Devil Program is sending a group of Insurance Population devils to NSW in January 2011 as the first animals for the Devil Ark breeding project.

Devil Ark is an ambitious program to establish and maintain a genetically representative population of devils in 'Tasmania-like' bush conditions. As a further boost to its success, Devil Ark has been allocated \$350,000 under the Tasmanian Devil Conservation Grants scheme.

Devil Ark founder and Australian Reptile Park director, John Weigel AM, said the project will feature hundreds of large enclosures encompassing the natural bush conditions on the high-elevation Barrington Tops property.

"The plan is to hold 360 devils by 2016, and approximately 1,000 devils by 2020," John said.

"We're certain that Devil Ark presents the Insurance Population with a unique and

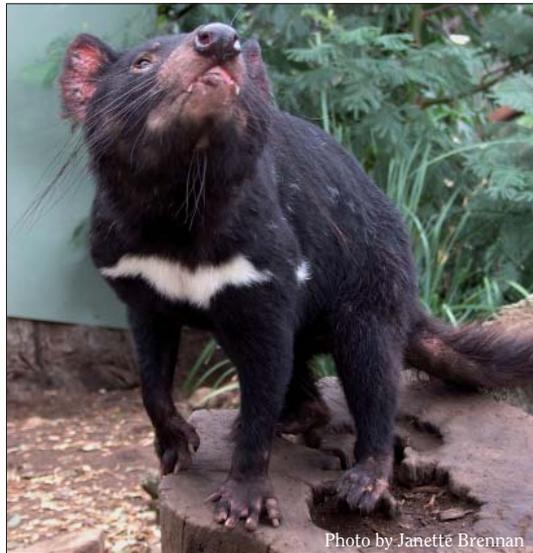


Photo by Janette Brennan

potentially key role in the establishment of the 'big numbers' approach, so we maintain very ambitious goals for the short, medium and long term."

The Program's current target for the entire nationwide Insurance Population is a total of 450 animals by 2015, but we appreciate the enthusiasm of our Insurance Population members. - Ed

The Tasmanian Devil Conservation Grants scheme was established in 2009 by the Save the Tasmanian Devil Program and is administered by the Zoo Aquarium Association's Wildlife Conservation Fund. The purpose of Tasmanian Devil Conservation Grants is to increase the capacity and number of Australian institutions contributing to the Insurance Population – a disease-free population of devils that is being managed in zoos and wildlife parks across Australia.

Two grants for Tasmanian-based projects were also recently announced by the Program.

Trowunna Wildlife Park will receive \$105,000 for a project that will see their sub-population of Tasmanian devils incorporated into the Insurance Population, which is jointly managed by the Save the Tasmanian Devil Program and the Zoo and Aquarium Association.

Tasmania Zoo's Devil Conservation Breeding project will receive \$37,000 toward the construction of extra holding pens. This project will also bring valuable new devils, currently being held at Tasmania Zoo, into the Insurance Population.

Manager of the Save the Tasmanian Devil Program, Andrew Sharman, said the projects under this round of grants are looking at completion by the end of 2011.

"Potential future projects include further free range enclosures, and assistance to help Tasmanian wildlife parks become part of the Insurance Population," he said.

"It's an exciting time in securing the long-term Insurance Population. The establishment of this grants scheme reflects the confidence that the Save the Tasmanian Devil Program has in the zoo industry's ability to deliver great conservation outcomes." 

FROM THE MANAGER'S DESK

Many hands...

I am surrounded by talented and committed staff who make me feel very privileged to be heading up an endeavour as important as the Save the Tasmanian Devil Program. Along with our committed team, one of our greatest assets is the support we receive from the public. That's why we're devoting this issue to the 'many hands' that are generously giving of their time and resources to make this epic conservation effort a success. We're celebrating just some of your countless efforts as a way of saying 'thanks'.

While it is important to acknowledge the great support we receive from the community (these days it is a global community) we also need to make sure the community has the opportunity to contribute to the Program and the development of long term strategies to save the devil. In line with this, we are inviting the public to comment on the draft Recovery Plan for the Tasmanian devil, which has been prepared by the State and Commonwealth Governments.

Of course the major conservation efforts of the Save the Tasmanian Devil Program have been operating for years. But the new Recovery Plan (a requirement for all species listed under State or Commonwealth Threatened Species Acts) maps out the actions that will be undertaken to assist the species' ongoing survival.

The draft Recovery Plan identifies that DFTD is the main threat to the ongoing survival of the Tasmanian devil. It also details the measures required to:

- maintain a disease-free Insurance Population;

Program Manager Andrew Sharman took on a devilish look for the month of November in support of "Movember", to raise awareness of men's health.



- manage and protect Tasmanian devils in the wild;
- maintain the genetic diversity; and
- manage habitats to allow for the re-establishment of Tasmanian devils.

This recovery plan was prepared in consultation with a range of stakeholders. It is intended to act as an overarching strategic document, which identifies the key threats, options and actions required to ensure the recovery of the Tasmanian devil. All recovery plans need to undergo a public consultation process before being adopted. This includes inviting public comment on the proposed plan and considering all comments received.

The draft plan will be available for public comment until 11 February 2011. Copies of the plan and information on making a submission are available at the Department of Primary Industries, Parks, Water and Environment website: www.DPIPWE.tas.gov.au

Let us know what you think. 

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.



Australian Government



Tasmania
Explore the possibilities

The Program is a joint initiative of the Australian and Tasmanian Governments.

THE STORY SO FAR...

The Devil Facial Tumour Disease (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. Death follows as a result of starvation and the breakdown of bodily functions.

DFTD is transmitted from animal to animal through biting. Because of the general lack of genetic variation within the population, the foreign cells of the tumour aren't recognised or rejected by the individual animal.

To date, at least 13 different strains of DFTD have been identified. DFTD is mutating in the wild.

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.

A COFFEE A DAY...

Recent studies suggest that drinking coffee can help prevent Parkinson's disease and type 2 diabetes – and now, it can also help to beat the Devil Facial Tumour Disease (DFTD).

Celebrated Australian chef Annie Parmentier, and the gang from Hobart's Dev'Lish Espresso café, have donated more than \$30,000 to help save the Tasmanian devil... and the money (around \$250 per week) continues to come in.

"I actually moved down here from Sydney to retire," Annie said, "and I was also keen to give back in some way.

"Around that time I started hearing about DFTD. I realised that without devils, all the other native animals in Tasmania would also be vulnerable –



Marco Genaris and Annie Parmentier create the perfect brew to help fight DFTD.

the very wildlife that I'd fallen in love with when I used to holiday down here.

"So I thought I could have a vehicle that allowed me to cook again, which I was missing, but would also give something to the Tasmanian devil. Hence the café and the name - **Dev'Lish.**"

The Dev'Lish team – which includes Marco Genaris, Erin Milota and Rose

Derrick – donates 10 cents from every cup of organic free-trade coffee from its Macquarie Street outlet (as well as its canteen at the Hobart ABC), and 50 cents per kilo of coffee sold by supplier, Delarno. The team also donate all of their tips, as well as 100% of proceeds from the sale of \$15 devil tote bags.

On a more personal level, Dev'Lish brews exceptional coffee. It makes the members of the Save the Tasmanian Devil Program feel special that Marco always remembers their individual orders and coffee preferences.

"What satisfies me now is the quality of life I can create for others. When I see the little zeros at the end of the amount of money that we've been able to give, that makes me happy.

"And what would make me even happier is if devils make it through this battle", said Annie. 🦊

DUSK TO DAWN

If you drive faster than 54km/h on Tasmanian roads between dusk to dawn, you won't have time to avoid possible collisions with a Tasmanian devil, new research published in the journal *Wildlife Research* has found.

Dr Alistair Hobday, a senior research scientist with the CSIRO, measured the distance that motorists need to detect different animals while driving at night. He discovered that Tasmanian devils (being mostly black) are the hardest of all species to see between dusk and dawn.

Combining these findings with reaction times and braking distances, Alistair determined that drivers can travel no faster than 54km/h with their lights on high beam, or 38km/h on low beam, if they want to give themselves enough reaction time to avoid hitting a Tasmanian devil on the road.

It's the first time in Australia that safe driving speeds have been quantified across the range of our native animals.

"But the key point to remember is that roadkill isn't distributed evenly across the State," Alistair said. "About 80% of

roadkill occurs on 20% of roads, and around Tasmania there are about 50 to 60 high-density roadkill 'hotspots'.

"In terms of management, that's an advantage. It means we can target our mitigation in those areas."

The precise locations of these hotspots can be downloaded as files for your car's GPS, or as printable maps, from the roadkill website: www.roadkilltas.com

"We're really lucky in Tasmania to have such a lot of wildlife," Alistair said, "and that requires a different kind of social responsibility to other regions in Australia. An example of what I mean would be if you lived near a school – you'd modify your driving accordingly.

"Not all species of Tasmanian wildlife are in trouble, but for animals like devils and quolls, roadkill is probably a significant impact on the population. It's estimated that roadkill contributes about 5% of the mortality rate of devils."

The next stage of Alistair's research is in partnership with DIER, who will erect warning signs in the hotspots - with suggested driving speeds, strip monitors that record speeds, and flashing lights - to see whether roadkill numbers can be reduced. 🦊

ROADKILL VOLUNTEERS

The Save the Tasmanian Devil Program's **Roadkill Project** has been extended to involve trained community volunteers.

Last summer the Program received more than 400 devil roadkill reports from members of the public and specially trained Parks and Wildlife Service volunteers. This information helps inform ongoing management strategies of wild populations.

This summer, community volunteers – regular road users from local organisations, government agencies and businesses – are being trained to complement the reporting work. In fact all motorists are being encouraged to keep a supply of **Roadkill Project** report forms in their car so that when they see a roadkill devil, they can complete a form and drop it into the nearest mail box.

Forms are available from outlets around Tasmania, including Service Tasmania and visitor information centres. A list of outlets is available at: www.tassiedevil.com.au 🦊

DEVILISH FOLK Farming for the future

It is amazing to consider the hospitality of the Dunbabin family, from the *Bangor* farming property in south-eastern Tasmania. For nine to 10 days out of every month, Matt and Vanessa Dunbabin permit the laying of more than 100 devil traps across their Forestier Peninsula property. They also welcome the scientists and volunteers from the Save the Tasmanian Devil Program, who live and work around their home.

"Programs like this require landholders to chip in and do their bit," said Matt, who manages the property with Vanessa. "And we think the work of the Program is really important in being able to look after the native animals on *Bangor*."

Since November 2004, scientists from the Program have removed diseased devils from the geographically-isolated Forestier Peninsula as part of investigating whether it was an effective tool in helping to protect wild populations from the disease threat. *Bangor* has been integral to this project because most of the Peninsula's devils live in the property's 6,500ha of native forest and pasture. The Program is



Vanessa and Matt Dunbabin on *Bangor*

now reviewing the performance of the disease suppression trial with a view to its current value in the management of wild populations.

An added bonus is the fact that Vanessa and Matt both have PhD's in science. It's one of the reasons why they're so keen to combine agricultural production (an extensive grazing operation) with careful environmental management.

"The land is something we like to look after," Matt said. "I know it sounds clichéd to say that we're taking care of it for the next generation, but we certainly try to look after it far beyond our lifetime."

Bangor is a property rich in history.

In 1642, the Dutch flag was hoisted on what is today the *Bangor* coastline by a member of Abel Tasman's crew. Farming began at *Bangor* in the 1830s, supplying food for the penal settlement at Port Arthur.

Hoping to encourage others to make a connection with native wildlife, the Dunbabins are developing spotlighting tours on their property. They've also organised visits for local schoolchildren, who get the opportunity to observe first-hand the work of the Save the Tasmanian Devil Program.

"These are country kids, but many wouldn't have seen a devil in the wild," Vanessa said. "They huddle around the trap and take on board the message about the Devil Facial Tumour Disease. They find it interesting that groundbreaking and exciting research is happening in their small community."

"It's a chance for the kids to develop a connection with wildlife that they might later pursue."

For more information on *Bangor*, including spotlighting tours, go to: www.bangor.com 

EDUCATING THE NEXT GENERATION

An education resource Kit on the plight of the Tasmanian devil was launched by the Save the Tasmanian Devil Program in October.

When the Program set about putting the Kit together it enlisted the expertise of Paul Robinson and Kate Vivarelli, both teachers from The Hutchins School in Hobart. Paul and Kate volunteered their time to develop the Kit's content into exercises practical for use in the classroom. Local artist Lucinda Hunnam generously donated the delightful original artworks.

Kate Vivarelli said the Kit includes activities that will fit easily into the

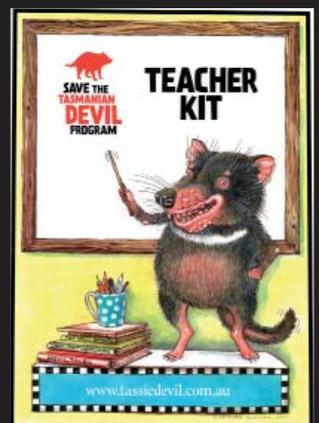
national curriculum.

"These children are the next generation and it will eventually be up to them to make a difference. We have designed activities that are 'hands on' to engage students. When children can relate to information, they're usually keen to do something with it and to act on it."

The Teacher Kit features word searches, writing and comprehension exercises, colouring in, quizzes and codes to crack. It contains information about the Tasmania devil's biology, lifecycle, habitat, behaviours and DFTD. The Kit also discusses the history and myths associated with devils, and how

attitudes towards the endangered animal have changed.

The Kit has been distributed to all Primary Schools in Tasmania and can be ordered by schools or downloaded online: www.tassiedevil.com.au 

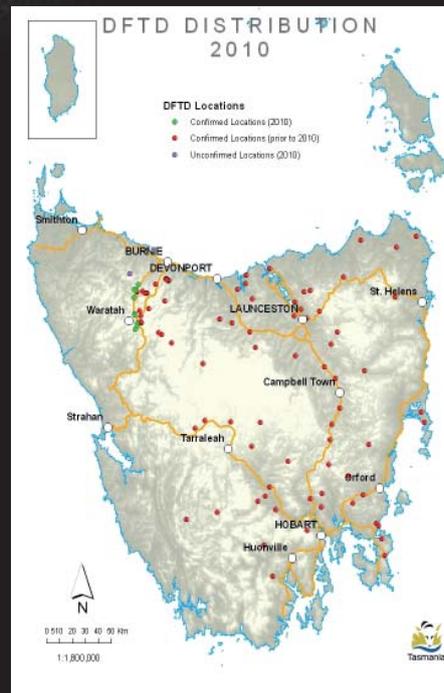


DISEASE FRONT CONTINUES TO ADVANCE

Cases of the Devil Facial Tumour Disease (DFTD) have been confirmed west of the Murchison Highway, indicating that the disease front continues to move westerly across the State.

Last month four monitoring teams from the Save the Tasmanian Devil Program trapped 234 devils in an area between Wynyard in the north, down to Waratah in the south. Eight devils had confirmed cases of DFTD. These animals were all trapped within a few kilometres to the west of the Murchison Highway (last year the disease front was one kilometre to the east of the highway). One devil, with a high probability of disease, was found 5km due-west of the previous most westerly known case of disease, but this was unable to be confirmed with histology.

Dr Samantha Fox, a wildlife biologist



Current DFTD distribution and disease front. See the full-size map on our website.

with the Program, said a conservative estimate would be that the disease front has travelled around 7km in the last year.

“All the areas we trapped this year had populations with healthy abundance and good age structure,” Sam said, “and this suggests that the disease is fairly new to these areas.”

“The cases we found last year and this year indicate that we are pretty much right on the disease front. As well as working around the Murchison Highway, we also laid traps much further to the west and we didn’t find any cases there at all.”

DFTD has spread across more than 60% of the State since 1996, when it was first observed at Mt William (north-east Tasmania). It is estimated that the Tasmanian devil population has since decreased by 80%. 🐾

A twist in the tail – ancestral chromosomes

Tasmanian devils are unique in many ways. One of these is associated with their genetics and a particular chromosome: **chromosome 5** (piC5). In most devils this particular chromosome looks very much like an ancient marsupial chromosome (AC5), only it appears to have been turned upside down or twisted – the technical term is a *pericentric inversion*. We still see the occasional devil with chromosome pairs featuring one original AC5 chromosome and one piC5 chromosome.

Earlier this year Androo Kelly, of Trowunna Wildlife Park, was able to successfully breed two of these AC5 + piC5 animals and this has resulted in something never seen by the Program: a devil with two AC5 chromosomes.

Androo Kelly’s name is synonymous with devil breeding and he has led the

way for decades in developing successful husbandry techniques, which have been adopted by zoo’s and wildlife parks around the country, including those participating in the Insurance Population.

What is the importance of this AC5 animal? There is growing evidence that devils are more cancer prone than their close relatives in the Dasyurid family. The main difference between devils and the other dasyurids, such as quolls, is their chromosome 5.

In producing this devil Androo has bred an animal that resembles the ancestral form of the devil. Having rare animals like this one will assist us to unravel the mystery of why devils have become susceptible to DFTD. Thanks to Androo another piece of the puzzle may have been placed on the table. 🐾

FROM CRAZY ANTS TO DEVILS

Dr Chris Boland has been appointed as Science Manager for the Save the Tasmanian Devil Program. This is a newly created position, with a focus on the application of research in the fight to save the Tasmanian devil. Dr Boland commenced with the Program in early December.

Chris has most recently been managing the Yellow Crazy Ant Program on Christmas Island, and his new role will be to integrate research information from outside the Program into our management actions.

With adaptive management being the Program’s catch cry, Chris has had to hit the ground running and we are certain that he will be a great addition to the team. 🐾

ROUND THE TRAPS

Bringing up baby

A road accident many years ago changed Patsy Davies' life – although she was miles away from it at the time.

"A friend called to say that he'd hit a wombat and that there was a baby in its pouch," explained Patsy. "He asked if I could look after it, probably because he knew I loved animals and that I had a farming background.

"I told him to bring it over and I'd see what I could do. And that's how it all started."

Today Patsy co-ordinates the placement of orphaned devil young with dedicated wildlife carers. There are up to 280 wildlife carers across the Tasmanian network, although only a few have the expertise to look after devil imps.

Some devils are orphaned through road accidents. Others come from wild mothers infected with Devil Facial Tumour Disease, who can no longer care for their young. Over the past few years approximately 60 devil imps have been placed with volunteers, with the

young animals spending at least four months in care.

"It's a world of interrupted sleep and early mornings," Patsy said. "The young animals can require five to six feeds over a 24-hour period.

"Devil imps can be sloppy feeders and there's usually a bit of cleaning up to do after a feed – and once you've cleaned up the head, there's the other end to deal with! Young devils are stimulated by their mothers to pass faeces and urine, so the carers simulate this after each feed (usually with a damp cloth) until the imp is old enough to toilet itself."



Wild behaviour in imps is the sign of a good carer – someone who has known when to step back. Photo by Jenny Banks.

Independence is the key

The greatest challenge for the carers is to ensure that the devils, once weaned, become as independent as possible. This is vital because many imps will

A day in the life of an orphaned just-furring devil imp: **Feeding... sleeping... feeding... sleeping...**

A day in the life of an orphaned fully-furred, eyes-open devil imp: **Feeding... sleeping... playing... sleeping... feeding...**

be re-introduced into the wild (where their progress is monitored by the Save the Tasmanian Devil Program).

"The focus of a really good carer is to get an animal to a stage where it's 100% fit, both mentally and physically, to be released back into the wild," Patsy said.

"To do that, carers try to replicate what the Mum would be doing in the wild, slowly moving the imps from indoor housing to aviary-type enclosures outdoors. The young are then moved to larger enclosures on the carer's property and eventually into halfway facilities for release into the wild.

"It gets to the point that the devils are so wild that they'll run and hide if a human, even the carer, approaches the pen. That's the sign of a good carer – someone who has known when to step back."

To report sick or injured wildlife across Tasmania, contact 6233 6556. 🐾

ARC grants for devil research

Australian Research Council (ARC) grants have been awarded to researchers in NSW and Tasmania. The University of Sydney was awarded a \$510,000 ARC grant to study devils whose genes may hold the key to stopping DFTD.

Associate Professor Kathy Belov

said her research team is using the latest sequencing technology to try and understand how the cancer is evolving in devils.

"Then we can try to use this information to stop the spread of the cancer," she said. "We've realised over the past year or two that the cancer's changing and

different regions of Tasmania have different variants of the cancer."

Meanwhile Dr Menna Jones, from the University of Tasmania, received an ARC grant of \$370,000 to investigate the genetic basis for heterogeneous susceptibility of Tasmanian devils to DFTD. 🐾