

Devil Facial Tumour Disease

What are Tasmanian devils?

Tasmanian devils (*Sarcophilus harrisi*) are small carnivorous mammals that are confined to Tasmania. They are about the size of a small dog with a thick-set body and black fur. They generally inhabit open forested areas where they hunt small animals for food or scavenge on the carcasses of dead animals. They were once regarded as a pest in Tasmania and were trapped, poisoned and shot in their thousands. They were fully protected in 1941 and their numbers gradually rose. In 1996 the first case of devil facial tumour disease (DFTD) was reported and since then their numbers have declined rapidly. It is believed that the number of devils remaining in Tasmania is between 25,000 and 50,000. They are now listed as an endangered species.



A healthy Tasmanian devil

What is devil facial tumour disease (DFTD)?

DFTD is a cancerous infection that affects the facial areas of the devils, causing ugly cancerous growths around the mouth and face which kill the animal within several months of it being infected. It is an unusual type of cancer in that it can spread from one affected animal to another healthy one.



A devil with facial tumour disease.

The disease is spread from animal to animal by biting. This occurs when the animals are feeding on the same carcass or are mating. Cancerous cells from an infected animal are transferred to the other healthy animal via the biting wounds where they cause a new infection. It is believed that the original source of these cancerous cells was a mutation in a single animal.

The disease is prevalent across most of eastern Tasmania but has not yet spread to the western parts. The infected animals die from starvation because the facial tumours prevent them from feeding.



Areas affected by DFTD (2007)

What is being done to combat DFTD?

Because the population of devils has been decreased by an estimated 60% and no obvious cure or prevention was available for it, scientists decided that the first step in saving the devil from extinction should be to establish disease free populations of devils that are isolated from infected animals. Around 500 devils are housed in nineteen zoos and wildlife parks on the Australian mainland and two in Tasmania itself. These animals are known as an “insurance” population and should prevent the complete extinction of the species should DFTD spread into all the wild populations of devils in Tasmania

In November 2012, seven male and eight female devils were released on Mariah Island off the east coast of Tasmania. Mariah Island has no naturally occurring devils. Monitoring of these devils in April 2013 has shown that at least six of the females were carrying young in their pouches. Similar breeding populations of devils have been established on islands near Bichino, Freycinet and Bridport. Plans are underway to establish wild populations of disease

free devils in other isolated areas of Tasmania. These will involve the use of devil proof fencing and road grids to prevent devils entering these areas from populations where DFTD exists.

Meanwhile scientists have been busy trying to find a preventative treatment for this disease. To date (July 2103) they have not been successful. Recent discoveries about how the tumour cells become established in previously healthy devils has given scientists some hope that they might be able to develop a vaccine to protect healthy devils. Developing the vaccine will be one thing but being able to use it in wild populations of devils will be a very significant challenge indeed.

In summary, wild populations of devils have plummeted by around 60% since DTFD was first observed in 1996. Much is yet to be done in order to discover a means of preventing this disease and thereby protecting the remaining wild populations of devils in Tasmania.

Related links

<http://www.parks.tas.gov.au/?base=387>

<http://www.tassiedevil.com.au/tasdevil.nsf>

<http://www.tashost.com.au/s4d/facts.php>

<http://www.nature.com/news/vaccine-hope-for-tasmanian-devil-tumour-disease-1.12576>

<http://www.tassiedevil.com.au/tasdevil.nsf/TheDisease/BD2717C762779EE8CA2576F1001D0110>