MEDIA RELEASE

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Selective culling can't save the Tasmanian devil

The removal of diseased animals from the landscape will not control the spread of facial tumour disease among Tasmanian devils, new research published this week has found.

The paper “Models predict that selective culling is not a feasible strategy to prevent extinction of Tasmanian devils from facial tumour disease” is published in the *Journal of Applied Ecology* and supports a management decision by the Save the Tasmanian Devil Program in 2010 to move away from the removal of diseased animals as a strategy.

The new research was conducted by Mr Nick Beeton, UTAS School of Zoology and Professor Hamish McCallum of Griffith University.

Between 2004 and 2010, disease suppression trials of devils on the Forestier Peninsula - an almost completely isolated peninsula in south-eastern Tasmania - found that the strategy was unable to completely remove the disease from that population.

In the study Mr Beeton and Prof McCallum devised models to test the impact of more aggressive culling.

They found that an unfeasibly large number of devils would need to be culled to control the disease.

“For all the models we used, we found the removal rate required to suppress disease was higher than that which would be feasible in the field.

“Disease suppression can only work if you can catch enough of the infected animals in the population to make sure the disease won't bounce back,” Mr Beeton said. A much larger, sustained trapping program would be required to achieve this.

“Our models show that even for a trappable animal like the Tasmanian devil, catching enough of them to eradicate disease is a tall order.”

The latest results support the decision of the Save the Tasmanian Devil Program to end the disease suppression program on the Forestier Peninsula in December 2010 following a comprehensive assessment of the program.

Efforts to save the devil continue to focus on the three key strategies – setting up insurance populations, managing the population in the wild and the ecological impacts resulting in a decline in devils across the Tasmanian landscape. In addition to this, work is being undertaken to examine the possibility of genetic resistance and developing a vaccine.

“Given the limited progress in developing vaccines against human cancers, despite huge investment in research, hoping a vaccine can be developed against DFTD seems optimistic,” Prof McCallum said.

The disease seems to be increasing less rapidly in devils living in north-western Tasmania, suggesting this population may have some genetic resistance to the disease. There is also evidence that the disease is evolving, and this may be why in some areas it appears to be behaving differently.

At least 500 devils are now in captivity in Tasmanian facilities and Australian mainland zoos. Over the last year, disease-free populations of devils in large enclosures have been established in Tasmania and mainland Australia.

“It is important also to establish disease-free wild living populations on islands or in very large fenced landscapes. Wild animals are more suitable for reintroduction to the Tasmanian mainland if needed,” Mr Beeton said.

Tasmanian Devil Facial Tumour Disease (DFTD) was first detected in Mount William in north-eastern Tasmania in 1996. Since then the infectious cancer, thought to be transmitted by biting during mating, has spread across most of the devil's range. As a result, populations of the world's largest surviving marsupial carnivore have declined by 80 per cent.

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