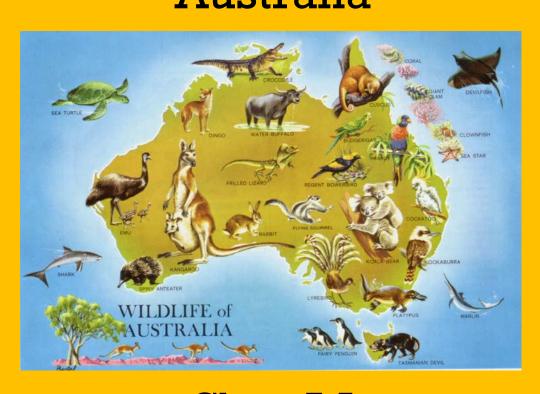
# Year 7 Science Fascinating Fact Sheets on

# Invasive and Endangered Animals or Plants of Australia



Class: 7.5



Source: Arkive.org

Mountain Pygmy Possum
Somerset College
Kaye Amores 7.5
Science- Mrs. Walker

Due date:

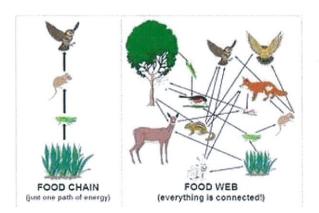


Source: Zoo.org.au

Scientific name: BURRAMYS parvus

Classification	
KINGDOM	Animalia
PHYLUM	Chordata
CLASS	Mammalia Mammalia
ORDER	Diprotodontid
FAMILY	Burramyidae
GENUS	Burramys
SPECIES SPECIES	B. parvus

Source: Red List.org



Source: Alpine Tundra-Weebly.com

Status: Critically Endangered

Why it is endangered: The federal fox and cats pose as real threats to their survival. The 2007 bush fires were close to burning the remaining mountain pygmy possum habitat at Mt. Buller. Major threats to their survival are the destruction of the pygmy possum's habitat from alpines resort development, the warming of the alpine region due to climate change. With the warmer temperature over winter have caused fragmentation or thinning of snow cover exposing the possums to the cold weather and disturbs

their hibernation. (Fame, 2017). This possum species needs about 1-3 inches of snow but with the climate change the thickness is and will thin out. Due to ski resort developments, at MT Buller al one, up to a third of the best breeding habitat has been lost. (UNSW Sydney, 2013). Their habitat has been destroyed by road and dam construction, and the development of infrastructure for the downhill skiing industry. Bushfires are also a threat to their survival because approximately 50% of the habitat supporting the Mt Bogong-Mt Higginbotham population was burned in 2003. Also in 2003 a bush fire burned 20% of the Kosciuszko habitat, killing the plant life aged 50-400 years in an extensive area of land (or heathland). Carrying around arsenic is their prey the bogong moth, they are travelers (migratory) and have been caught carrying arsenic from their breeding grounds to the Murray-Darling Basin mountains, where they assemble into their food chains. Bits of arsenic have been found in not only the pygmy possum, but also in other small like mammals, although the indication of this is still unknown. (Red List, 2008)

How this problem is being solved: The conservation agency staff in Victoria and New South Wales is working closely with ski resort operators to protect this rare and tiny possum species. They have made a recovery plan for the pygmy possum species that involve: undertaking the feral cat and fox control around important populations of the species; establishing more movement corridor to link up disjointed populations; restoring corrupted and fragmented habitats; decreasing the impacts and disturbances due to ski field activities, and of course regularly monitoring known populations. (Environment Australia, 2002). Another strategy that was successfully launched by the Healesville Sanctuary was a captive breeding program. In this program the scientists carefully select two fully healthy possums then breed them together. They also try to change the genetics of the possum so each one of them has different genetics. With the variety of genes it is possible for this species to adapt to the climate change therefore allowing this species to survive and to regenerate, increasing the population numbers. Another captive breeding facility is being established in Lithgow for the New South Wales population numbers. This captive breeding program is an insured policy against natural disasters. These program's aims are to: allow this species to thrive increase in numbers healthy, also to help the possums to adapt to the warmer climate change, to gain a greater knowledge on how this pygmy possum species will adapt to the climate change by using fossils. The pygmy possum family fossils have been found dating back to about 24 million years ago. (UNSW Sydney, 2013)

There are two sides to this solution they have found. One is the positive side and the negative side of this breeding program and this gene change.

Positive	Negative
<ul> <li>They can save this species</li> <li>Can get the population numbers up</li> </ul>	<ul><li>Can change the look.(deformation)</li><li>Can kill more possums</li></ul>
Can make sure they can have healthy	<ul> <li>There will be possums left out for the</li> </ul>
<ul><li>baby possums</li><li>They will each be different</li></ul>	<ul><li>breeding if they are not healthy</li><li>They will all be different</li></ul>

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# Tasmanian Devil By Darcy Beynon 7.5

Sarcophilus harrisii

Kingdom- Animalia

Phylum-Cordata

Class-Mammalia

Order-Dasyuromorphia

Family-Dasyuridae

The Devil Facial Tumour Disease (DFTD) is a serious threat to Tasmanian Devils. Diseases that threaten Australian wildlife are to be taken as serious issues as they can result in damaging ecosystems and possible cause extinction. The eradication of the devil facial tumour disease is essential for the preservation of Australia's unique species of wildlife. In this essay you will read about the problem of the disease and possibly any solutions to control said problem.

Tasmanian Devils, Sarcophilus harrisii, are the world's largest surviving marsupial and mostly consume sheep, rabbits and carcases of other marsupials. They are unique to Australia as the Tasmanian devils cannot be found any other place in the world.

The Tassie devils received their name from the Europeans. Convicts nicknamed the creature back in the 1800s. Their loud earthy screams resembled something or other of a devil. However the Aboriginals already called the marsupial 'tardiba', which-when translated, is completely unrelated to 'devil'.

The Devil Facial Tumour Disease was first identified in 1966 in North-East Tasmania. The disease is



characterised by the appearance of large, red lumps. The disease is a form of cancer, but unlike most forms of cancer it can be easily transferred from devil to devil. The disease has helped put the Tasmanian Devils on the 'endangered' list.

There are currently no chosen solutions for the DFTD that scientists use, however scientists are working on a solution. There is an experimental drug by the name of EBC-46. Stephen Pyecrof- a pathologist at Q biotics has been working for the program 'Save the Tasmanian Devil' since 2003.

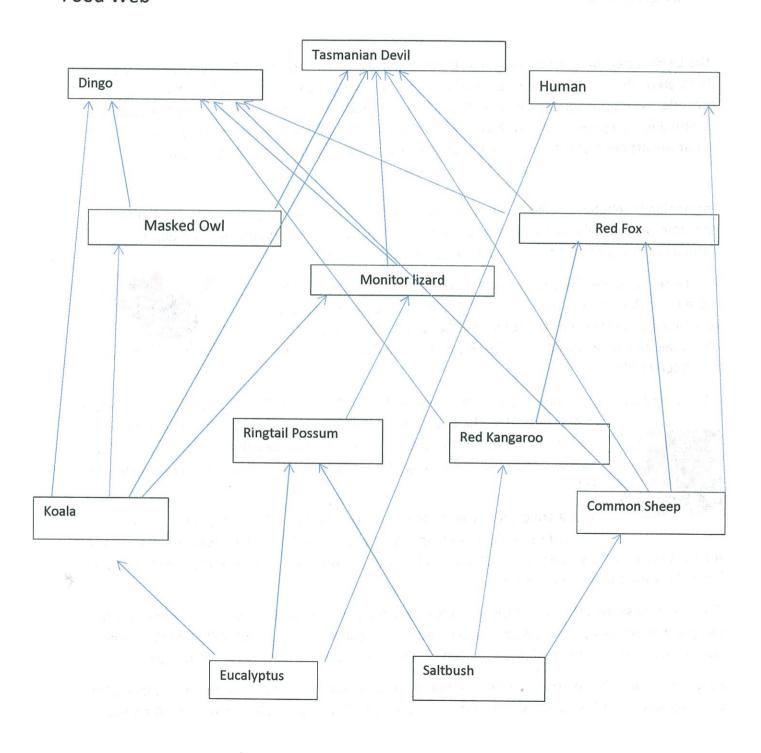
The drug slows down the cancer by breaking down cells. This, when treated to an infected mother can give her enough time to reproduce and teach her healthy pups survival skills. The drug is not a cure as the devils can be reinfected and it has only been tested to domesticated animals.

As there are no other current solutions, it is impossible to compare the solution listed above with other options, so this solution will be judged individually. This solution is very moral. When the

devils are introduced to this drug, it will not harm or hurt them in any way. This solution is also environmentally friendly. The only thing it will affect is the problem, not anything in the ecosystem. Finally, this solution is economical. Maintaining Australia's unique animals is definitely a good trade, considering the time, money and effort required for this solution

The Devil Facial Tumour Disease is clearly an endangerment for the preservation of Australian species of wildlife. The Tassie Devils are seriously endangered and their issue is to be taken seriously. Without the Tassie Devil some ecosystems will be destroyed. Organisations are definitely helping resolve the problem however there aren't any cures used at the moment.

### Food Web



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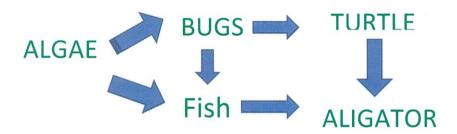
### Western swamp turtle

### By Ethan Carkazis

This is the western swamp turtle's classification:

Level of classification	Western Swamp Turtle
Kingdom	Animal
Phylum	Chordata
Class	Reptilian
Order	Testudines
Family	Chelidae
Genus	Pseudemydura
Species	umbrina
Scientific name	pseudemydura

### Food chain:



### Why is the western swamp turtle endangered?

The Western swamp turtle is endangered because of drainage of their swamps for agriculture. Unless the turtles are saved they will dry out and die. Their habitats are declining because of drought and bush fires. Also they are naturally hunted by birds, snakes and lizards. The Western swamp turtle is also hunted by introduced foxes, dogs, cats and rats.

### History:

The first European description of the Western swamp turtle was in 1839, since it was not sighted again it was thought to be extinct, until in 1954 when a Perth schoolboy showed one at a pet show.

### What are scientists doing to help save the Western swamp turtle?

To decrease the chance of extinction of the Western swamp turtle scientists are creating at least three wild naturally recruiting populations, increasing the number of Western swamp turtle.

Perth zoo also has Western swamp turtle habitats as well as a breeding program.

### Status:

The Western swamp turtle is critically endangered. The number has dropped dramatically from over 300 in the 1960's to less than 50 in the 1980's. (N. Mitchell. Jan 31, 2013) there are intense habitat management, captive breeding and translocations that have bought the number back to around 200 and rising.





As you can see the Western swamp turtle (AKA: WST) is quite small compared to many other turtles. The WST seems to always have a big smile on his face.

### Facts on the Western Swamp Turtle:

The Western swamp turtle's shell can grow to a maximum length of about 350mm. It is the smallest Australian freshwater turtle and the only one where males are bigger then the female. During the spring, winter and early summer the the swamp turtle lives in temporary swamps feeding on aquatic invertebrates. After the swamps dry in early summer they estivate (sleep over summer) under leaf litter or in underground holes.

### Western Swamp Turtle's breeding:

The Western swamp turtle is the only female tortoise or turtle species to dig their nest chamber with their front limbs not hind limbs. Females normally lay a single clutch of three to five eggs each year. The WST lives for around 70 years.

In 1987 due to lack of population a captive breeding program was created at Perth Zoo. In December 1998 they had 157 turtles including 7 breeding males and 10 breeding females and 140 hatchlings. The Western Swamp Turtle mates from June through to August and females lay their eggs in late October and early December. Finally, the hatchlings emerge from the nest late March through to early May.

Environmental: Much of the species habitats have been destroyed by developments and global warming. New habitats have been found and scientists are releasing them and seeing how they survive. Unfortunately, there is a lack of new sites to release this endangered species. Scientists are trying to rectify this issue.

Conclusion: In conclusion the Western swamp turtle is a critically endangered animal and is the smallest freshwater turtle. The only turtle that males are larger than females, they live for around 70 years and can have their shells grow up to 350mm (maximum). It would be unfortunate if these Turtles didn't survive to educate generations of children and continue to be an important addition to the swamp ecosystem.

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# Camelus Dromedarius(Feral Camel)

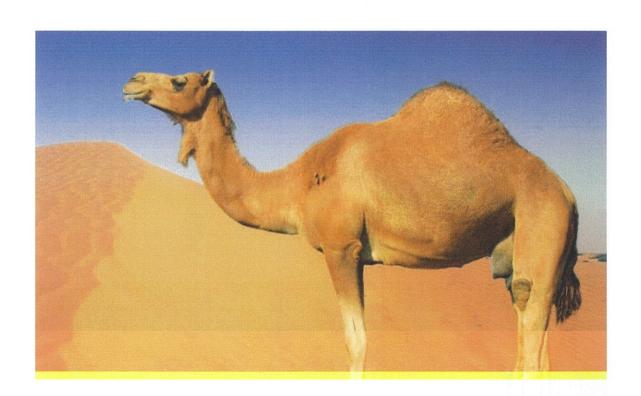
School: Somerset College

By Ryan Chen

Class: 7.5

Subject: Science

Teacher: Mrs. Walker



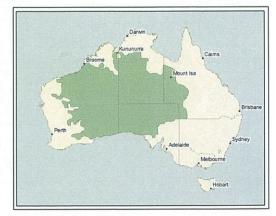
### Introduction

Over the history of Australia many foreign species of animal have been introduced overtime for various purpose and reason. One of the animal that was introduced in Australia was feral camel. This report will investigate the impact Feral Camel has in Australia.

### **Historic Timeline**

- 1822 -Danish French geographer Malthe Conrad suggested that camel is the ideal transportation for arid areas in Australia.
- 1840 First camel introduced in Australia by John Horrocks.
- 1860 24 camels arrived from India.
- 1870~1900 More than 15,000 camels arrived in Australia along with 3,000 cameleers.
- 1920 Introduction of railway and other forms of transportation replaced the needs of camel. Domesticated camels were released into the wild and base on its strong

resilience nature. It has quickly populated and spread across arid and semi-arid areas of the Northern Territory, Western Australia and South Australia as well as part of Queensland.



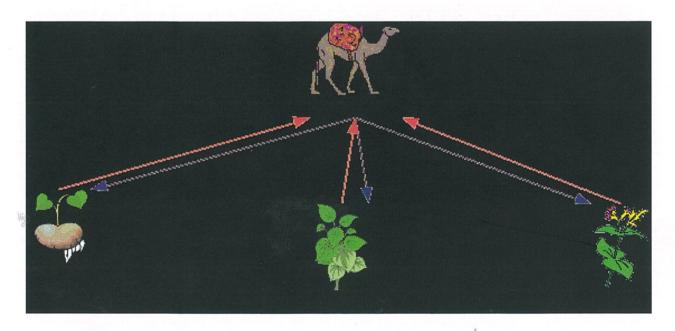
(Affected areas indicated in green.)

### **Ecology**

Current estimation population of feral camel in Australia is about one million with the estimated growth rate of doubling every 8 to 10 years. Feral camels are grazers that feeds on plants, such as leaves, hard woody twigs, fed dates, wheat, grass, oats as well as things like leather and other scraps.

Feral camels are found in the arid and semiarid parts of Australia. During winter, camels prefer open plains, salt marshes and lakes, while in summer they prefer dense bush country with trees for shade.

Feral camel consumes a large amount of water, a dehydrated camel can consume 200 liters of water within 3 minutes. Feral camel has no nature predator in Australia, it tends to die from old age in between  $40\sim50$  years.



### **Environmental Impact**

Over populated numbers of feral camels are the main concern of Australia. Because feral camels feed on most of the plants species in Australia, a large number of camels can easily over consumes plants in the areas that they reside in and sometimes even drives certain plant species to extinction.

Feral camel also causes problems in drought affected areas by over consuming drinkable water. It created the problems for other animals to live without water and consumable plants which also leads to extinction of other animal species in the same area.

In search of water during the drought, feral camels also cause disruption and damages to sacred sites and homes of Aboriginal people. It also causes damages to infrastructures such as fences, windmills, fixtures, water reservoirs, etc.

Feral camel is also susceptible to tuberculosis and brucellosis which makes it a potential threat to live stock and human.

Feral Camel also causes serious hazards to the roads, rail lines and airplane run ways.

### Solution

Australian government has worked out five key aspects towards the control and management on the over populated feral camel.

- 1. One of the method to control the feral camel is to work with the local land owner Aborigines to manage and restrict their habitant area.
- 2. Evaluate environmental impact as well as culture and social impact feral camel has in each area.
- 3. Promote the commercial value of feral camel base on exporting and human consumption.
- 4. Noncommercial approach method such as aerial culling and ground culling as well as chemical approach on birth control.
- 5. Establish cross jurisdictional management frame work among the affected area.

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# The Gilbert's Potoroo

# Potorous gilbertii

By Shromm Gaind

### The classification of Gilbert's Potoroo

The potoroos belong to the potoridae family (rat kangaroos) they are small marsupial that hop like kangaroos there are 4 types of potoroos Potorous tridactylus apicalis from Tasmania, Potorous tridactylus tridactylus from south east Australia also known as the long nosed Potorous from the Gippsland of in Victoria but the potoroo I'm do is Potorous gilbertii (Gilbert's Potoroo).

Adaptations

The Gilbert's Potoroo have a complex stomach that allows them to extract nutrition from their Diet. The gilbert's potoroo also has well-developed forefeet to help them in dig for food.

### Diet

The gilbert's potoroo eats the fruiting bodies of underground fungi called truffles make 90% of its diet there are also another food source in such as berries, fleshy seed-pods and insects but these are eaten in small quantities by the gilberts potoroo

Classification	Endangered animal
	Animal kingdom
Kingdom	
	Chor date
Phylum	
	Mamme
Class	
Onder	Marsupiala
Order	Potoridae
Family	Potoridae
1 Willing	Potorous
Genus	1 0101045
	gilbertii
Species	
	Macropdoidea
Superfamily	





# The history of gilberts potoroo

Did you know that the gilberts potoroo was once in the extinct animal list but the was rediscovered in 1994 after a century on the extinct list of mammals? The most common threat to the gilberts potoroo since the gilberts potoroo prefer to live in dense heaths which is a flammable substance, the wild fire it is not only a threat to the gilberts potoroo but also it is threat to the hole colonies in two peoples bay, WA. Another threat to gilberts potoroo is the foxes, feral cat and the native predators. One of the strategies that the scientist are researching to help the gilberts potoroo is to expand their growth and increase the number of gilberts potoroos but they failed in their attempts. The things that scientist could do is migrate the potoroos to mount gardener for the growth of the gilberts potoroos. the advantage of that will be the growth but the disadvantage will be that the migration of the gilberts potoroo will be very expensive.

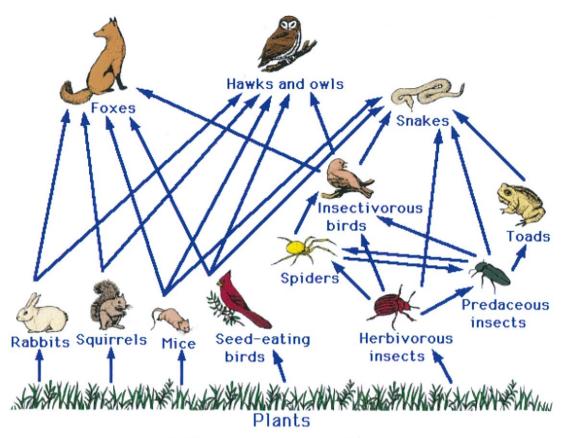
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## Science research...

### Red Fox.

Red foxes live around the world in many diverse habitats including forests, grasslands, mountains, and deserts. They also adapt well to human environments such as farms, suburban areas, and even large communities. The red fox's resourcefulness has earned it a legendary reputation for intelligence and cunning.

Red foxes pose a serious conservation problem in <u>Australia</u>. Current estimates indicate that there are more than 6.2 million <u>red fox</u> (*Vulpes vulpes*)[citation needed] and growing with a range extending throughout most of the continental mainland.[11] The species became established in Australia through successive introductions by settlers in 1830s. Due to its rapid spread and ecological impact it has classified as one of the most damaging <u>invasive species in Australia</u>.

As forest dwelling primates, orangutans are entirely dependent on the forest for their survival. Unfortunately, Indonesia and Malaysia have some of the highest rates of deforestation in the world, and logging, both legal and illegal, has seen wild populations decimated. Forest conversion for pulp and paper and palm oil plantations now pose an even bigger threat, and it is believed up to 1,000 orangutans are also killed every year, either for the pet trade, for consumption or as agricultural pests.

### Some bonus info.

•	Keen	eyesight,	pupils	are	vertical	as	in	felines.
•	Hearing		is		very			acute.
•	Sense	of	smell	İ	is h	nighly	c	developed.

 A variety of colour phases occur in the fur of red foxes: reddish with brown bands on the back and shoulders, black and silver. But all red foxes have a white-tipped tail.

Body length: 90 to 117 cm

http://www.orangutanrepublik.org/faqs-mainmenu-28/22-orangutan-plight/215-why-are-orangutans-

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http://www.humanima.com/decouverte/en/article/red-fox

Name Cemal Guneyli Class 7.5 Teacher Mrs Walker Subject: Science School: Somerset college



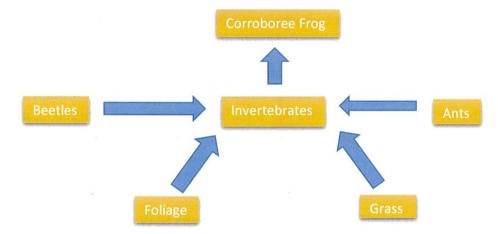
The Corroboree Frog.

There are two species of the critically endangered (Corroboree frog)

- 1. The Southern Corroboree frog, the pseudophryne corroboree.
- 2. The Northern Corroboree frog, the pseudophryne pengilleyi.

The two species are different in colour, patterns, home range and skin biochemistry.

The corrobboree frog is the apex predator in its food chain They eat small insects for example (black ants, and beetles). The corrobboree frog, because of its poisonous skin, does not have natural predators. Foxes and hawks generally eat frogs.



Their body length or size is about 2.5 to 3 centimetres.

They live in wetlands and surrounding areas in the Australian Alpes which is roughly 750 to 1300 meters above sea level.

Photo of the Corroboree Frog.



Cemal Guneyli

Name Cemal Guneyli Class 7.5 Teacher Mrs Walker Subject: Science School: Somerset college

1.	Level of classification.	Endangered species.
2.	Kingdom	Animal
3	Phylum	Chordata
4	Class	Amphibia
5	Order	Anura
6	Family	Myobatrachid
7	Genus	Pseudophryne
8	Species	Frog

### Why the species is endangered:

Their key threat is a disease caused by a fungus called (The Amphibian Chytrid Fungus). In the Alps the common Eastern Froglet, which lives alongside the Corroboree frog is the host for the fungus and does not seem to be affected by the disease. This way the disease gains access to be transmitted to other species like the Corroboree frog.

Habitat Degradation and Drought. Global warming is a major threat destroying the habitat of the Southern Corrobboree frog. Warmer temperatures affect breeding pools and vegetation of plants around them. Droughts cause egg and tadpole deaths

Weeds and Feral Animals. Feral animals like the feral pig, the feral horse as well as the samba deer have all contributed to the species being endangered by trampling through their breeding habitat, the wetlands. Weed species like the black berry overgrow breeding pools that prevent sunlight in these areas that are very important in the breeding cycle of the Corroboree frog.

How is science helping the Corroboree Frogs?

A Corroboree Conservation Strategy has been co-ordinated by the NSW office of Environment and Heritage.

Captive populations have been established both for research purposes as well as creating frog populations to be reintroduced in the wild. Captive breeding is very successful producing fertile eggs which are then released back into artificial pools in Kosciuszko National Park which are designed to ne fungus and drought proof. The only next concern is that the frogs take 4 to 5 years to mature which puts them at further environmental and habitat risk.

Another strategy that was implemented was to create frog-proof fences to keep other frogs from climbing into the breeding pools and enclosures where the Corroboree frog conservation has been established. This method was introduced to prevent for e.g. The Eastern Froglet to transmit the Chyrtid fungus into breeding pools.

Name Cemal Guneyli Class 7.5 Teacher Mrs Walker Subject: Science School: Somerset college

The James Cook University are doing research into the immunity of frogs to the Chytrid fungus. Special consideration is given to genetic differences and then to include selective breeding to make sure the frogs are resistant to the chytrid fungus.

Advantages and Disadvantages of the solution science gives.

Advantages		Disadvantages		
1.	Increase in numbers	1. Only increasing the numbers		
	of frogs in enclosed	in protected areas not the wild.		
	habitats.	2. With the James Cook		
2.	Reducing the	university and there work on		
	infection and	genetic selection. This may have		
	spreading of disease	a negative effect eventually in		
	caused by the fungus	changing evolution.		
	among the	3. By putting enclosed fences		
	Corroboree frogs.	around the breeding pools, it can		
3.	Spreading public	negatively affect the animals and		
	awareness.	plants in that area.		
4.	Positive political	4. Even though they can		
	outcome in showing	increase the egg numbers it still		
	the impact of global	takes four to five years for the		
	warming on the	frogs to mature. Global warming		
	environment	is a very big disadvantage.		

### History on population numbers:

Both species are distributed within the alpines of NSW and the ACT/ both in Australia. The biggest populations are in heavily protected field enclosures.

Within conservation areas large numbers of eggs are produced which will then be reintroduced into enclosed habitats. For the eggs to develop into mature frogs takes up to four to five years

The Southern frog species is at the brink of extinction. The estimated number of frogs in the wild outside of conservation enclosures is around 50. At times the numbers can be as high as 100 but greater numbers have not been reached. The number of frogs depend on their life cycle. The critically low number reached was once 2-4 frogs that were found in the wild.

Name Cemal Guneyli Class 7.5

Subject: Science School: Somerset college

Teacher Mrs Walker

Corroboree Frog in the media and Public Awareness.

Organisations like the Corroboree Frog Recovery Team has done a lot of work to gain Media attention regarding the endangered Corroboree Frog.

The Corroboree frog was also mentioned in the Good Weekend Magazine.

Amphibian Ark is an organisation that helps endangered frogs around the world including the Corroboree Frog. Its free to join. Organisations like these not only create public awareness about the Corroboree Frogs but all frogs in general. By making it free to join they encourage people of all occupations to participate in the program.

### Conclusion

The whole word is responsible for looking after endangered species. The main cause of the corroboree frogs critically endangered levels is because of Global Warming. The Australian society needs to stop litter and stop letting out gas emissions at least 30% to help in preventing Global Warming to make this species thrive. With further public awareness and scientific support in combatting all factors affecting the survival of the Corroboree Frog, this endangered species has an opportunity to be around for the future generations of the world. We all play a small part in looking after the endangered species of the world. The Corroboree frog and its critically low numbers is showing us to keep an eye on the big picture and the welfare of the earth as a whole.

Name Cemal Guneyli Class 7.5 Teacher Mrs Walker Subject: Science School: Somerset college

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Name Cemal Guneyli Class 7.5

Teacher Mrs Walker

Subject: Science School: Somerset college



# Northern Hairy Nosed Wombat

Mrs Walker Due: 7<sup>th</sup> March Scientific Fact Sheet by Thomas Kilmartin

Scientific name: Lasiorhinus Krefftii

Kingdom: Animalia

Phylum: Chordata

Class: Mammalia

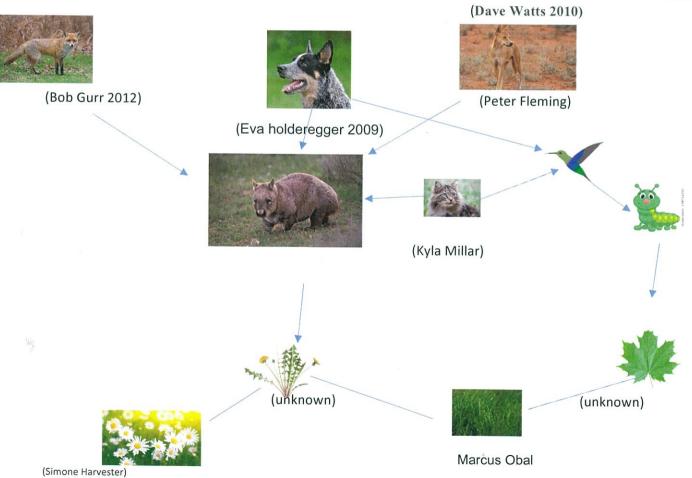
Order: Diprotodontia

Family: Vombatidae

Genus: Lasiorhinus

Species: L. Krefftii





### THE PROBLEMS

The Northern Hairy Nosed wombat was discovered in a small part of Australia in the 19<sup>th</sup> century. When they were found they were already low in numbers. Unfortunately the Wombat's habitat was used for cattle, and it turned into farmland in the early 20<sup>th</sup> century. The wombats don't venture far from their burrows so when the cattle grazed around the burrows the wombat's food source is depleted and the wombats starve. Now the Wombats are competing for food.

In 1982 there were about 30 individuals left in existence. Shortly after the cattle was removed to protect the wombats habitat. The wombats are not only nocturnal but extremely shy so this made them hard to study. In the late 1980s a capture and release programme commenced and studies showed that there were 63 in existence. As the population size is slowly increasing their extinction is inevitable. As they all live in one spot in the world one small thing can wipe them all out, these include a drought, flood, fire or a disease epidemic.

### THE WAY SCIENCE GIVES A SOLUTION TO THE PROBLEMS

Scientists have done many things to help increase the population of these wombats. Firstly in 1982 when they moved the cattle out of the wombat's environment to help protect them. Scientists have done DNA testing on individual wombats to help tell them apart from one another this helped monitor the increase of the wombats. In 2010 dingos came and killed 9 wombats, because of this a predator-proof fence has been built around the wombats habitat. Scientists have helped set up drinking and feeding stations to help support the wombats in lean times. Another goal of management is to establish populations elsewhere. The nature refuge was pre-fenced and there where artificial burrows made before the wombats where moved there.

### IMPLICATIONS OF THE SOLUTION SCIENCE GIVES TO THAT PROBLEM

ADVANTAGES	DISADVANTAGES
Studies done to date have helped scientists	Moving the wombats from one place to
with their research. DNA samples have	another have made some wombats die of
helped monitor the increase of the	unknown causes.
wombats. Studies on their habitat have	
helped create more habitats for the	
wombats to live in therefore increasing	
their population.	

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(Northan Hairy Nosed Wombat, 2017)

(Bisa, 2013)

# Black eared flying fox (Pteropus melontous)

By Georgia Knight 7.5

### Food Cycle









(source:wild.com.au)(source:demilked.com)(source:pinterest.com)(source:wisegeek.com)





(source:pexels.com)(source:slinkyjynx.deviantart.com)

### 7 Levels of classification

Class: Mammalia

Kingdom Animalia

Order: Chiroptera

Family: Pteropadiae

Genus: Pteropus

Phylum: Chordata

Species: Melanotus

### Introduction

The Black eared flying fox (Pteropus melontous) is an endangered Pteropadiae. The Black eared flying fox is native to islands in Southeast Asia, Christmas Islands, India and Indonesia. Black eared foxes live in tropical and terrestrial habitats. The species were established from Moa Island in Torres Strait Island.

### Food Cycle

Being herbivores they have a strong diet of fruits, flowers, rainforest trees, palm leaves, blossoms, coconut palms and Japanese cherry they always tend to always save the food for their relatives. This is their food cycle. They use they vision in low light to navigate food sources at night. Flying foxes see very well at daytime and better than human's as well at nighttime The Black eared flying fox's food chain is falling apart each second and 25% of the forest has been invested due to mining.

### Habitat

They tend to live north of Australia because there is a lot of plantation and rainforest area for them to adapt in. These species' habitat is in terrestrial and tropical areas. They live in swamp wetlands as well. They are found on Christmas Island, Andaman Islands, Nicobar Islands, and Sumatra. The black-eared flying fox disperses fruit seeds across the land allowing more plantations. They also are popular with the tourists. and when they visit them visit them in their habitat earning our country more money.

### Reproduction

Black eared flying foxes have a life span of 28 to 35 human years. Breeding occurs once a year in February but there still isn't enough that are still alive. The Black eared flying fox gains sexual maturity in a span of 6 months. That is less time than any other flying fox species known to man. Theses species have 1 infant on average each litter. Black eared flying fox species were first reproduced in the Southeast region of the globe.

### Push Factors of their habitat

There is also an invasive Yellow crazy ant has been newly introduced to Christmas Island widely having an effect on the eco-system. Domestic cats are the main predators of Black eared flying fox, as well as Humans. Humans also tend to eat the fruit bat. Cyclones happen once a year on average in Christmas Island and cyclones have a dramatic effect on Christmas Island and its plants and livestock and they are big influence on their lives. On the 13<sup>th</sup> February 1988 a traumatic Cyclone washed out most the Black-eared flying foxes and their habitat, pulling trees out of their roots. Tourists tend to harass theses species stealing their resources and taking over their land to explore.

### History

One of the oldest known fossil bats known to man are micro bats. Fossil bat teeth were discovering in Queensland, Australia dated back to 55 million years ago. Fossil bat beds were also found dated back to 25 million years ago. There is a theory that flying foxes are related to primate such as lemurs, lorises, monkeys, apes and man.

### Physical description

The Black-eared flying fox has short black-brown hair, except that their chest and neck is a light brown color. Has a wingspan of at least 610mm and has a weight mean of 710g. Males tend to be larger than the Females. 170 to 406 mm is the average body length of the Black-eared flying fox. The genus Pteropus is the largest species of bats to alive.

As a Society both we and locals believe that this matter should be taken more seriously

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### Western Ground Parrot (Pezoporus flaviventris)

### By Aaron Lim 7.5

The Western Ground Parrot is a critically endangered Australian species. The threats to the parrot are mainly habitat loss. Habitats have been destroyed for agriculture and wildfires. 90% of these species habitat have been affected in 2015. Some non-native species are also predators of this bird.

Level of classifical	ion	Classification
Kingdom		Animalia
Phylum	1	Chordata
Class		Aves
Order		Psittaciformes
Family		Psittacidae
Genus		Pezoporus
Species		Wallicus Flavientris

The Western Ground parrot is 135-145mm in length. It is mainly green with some red above its beak. It has some yellow stipes on its side and tail with some black spots on its back. Pictures are below to show how it actually looks like. It was originally in Cape Arid to Dongara. It is now only in their parks and Fitzgerald parks. The bird lives mostly on the ground but it is not flightless. It eats fruits seeds and flowers. This bird breeds between July and October. The bird usually flies to foraging areas either after sunset or before sunrise.





The Western Australian Department of Environmental and Conversation has set up a plan to recover and breed this bird. A small amount of the Western ground parrots are in care in captive breeding programs from Perth Zoo. Friends of the Western Ground Profit are trying to keep this species away from extinction. They raise awareness and lobbies for government help.

This parrot is still in serious threat. It is the rarest bird in the world. It is believed that there are less than 40 left. These birds are usually are hidden below vegetation. It usually feeds by itself or with another bird.



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Science

### Science endangered animal Research assessment

#### Mary River Turtle

The Mary River Turtle is an endangered short neck turtle that is endemic to the Mary River in South-East Queensland



Level of Classification	Endangered Animal
Kingdom	Animalia (Australian Museum
	2016)
Phylum	Chordate (AM, 2016)
Class	Reptilia (AM, 2016)
Order	Testudines (AM, 2016)
Family	Chelidae (AM, 2016)
Genus	Elusor (AM, 2016)
Species	macrurus (AM, 2016)

The Mary River Turtle was a victim of the pet trade throughout the 1960s and 1970. This collection of the turtles meant leaving an entire generation of turtles were taken away. Leaving a reduced aging population. Today they are threatened from feral animals and goannas going after their nests, and also their nests have been getting trampled by cattle. (Australian Government, 2017)

The turtles are getting threatened with extinction by the effects of increased runoff, siltation and pollution. (Australian Government, 2017)

#### Ways We are Using Science to Protect the **Endangered Species**

1. Artificial Incubation and Head start Programs for Nestlings

Somerset College

Bailey Loades 7.5

Mrs Walker

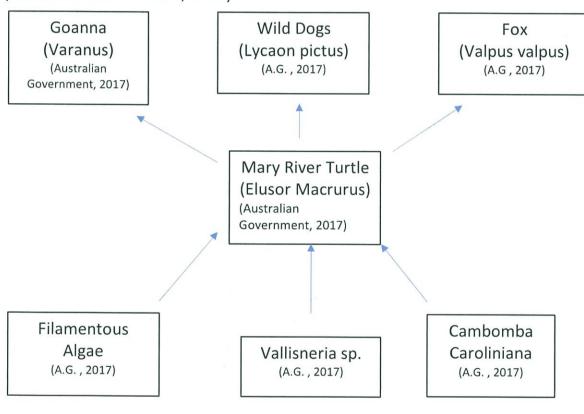
Science

Groups of the tortoises were transported to incubators near Bundaberg, while kept at 3 to 5 degrees Celsius. Then they were put in artificial incubators that were kept at 29 or 31 degrees, in purified sand that is kept damp by regular spraying. (Australian Government, 2017)

#### 2. Protecting nests from Predators and Trampling

 $\mathcal{T}$ 

Horizontal plastic screens covered loosely with sand have been built on recent nests of the Mary River Tortoise in-between Miva and Tiaro. Also there was electric fences placed around concentrated areas where there were many nests of the Mary River Tortoise to keep cattle out and prevent trampling. (Australian Government, 2017)



## Advantages (Environmental)

The tortoises that were raised in incubation would be healthy with no diseases because they were raised in a sanitary and clean environment. When they get released back into the wild they could spread their good genes.

#### <u>Disadvantages (Environmental)</u>

The electric fences that they put up to stop trampling could kill cattle or other animals who happen to come along and touch the fence.

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Somerset College	Bailey Load	des 7.5	Mrs Walker
Science			
The electric fences mazap to one of the cattle drover might take the different route the new would mean there would mean that wo the removal of the electric fences mazap to one of the cattle drover might take the different route the new would mean there would mean that wo the removal of the electric fences mazap to one of the cattle drover might take the different route the new would mean there would mean there would mean the electric fences mazap to one of the cattle drover might take the different route the new would mean there would mean there would mean the electric fences mazap to one of the cattle drover might take the different route the new would mean there would mean there would mean the electric fences mazap to one of the cattle drover might take the different route the new would mean there would mean the electric fences are the fences and the fences mazap the fences		Predators could at	ttack and try and eens they put over
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would mean there wou		something and ch	oke and die on it.
would mean there wol			
trampling and that wo			
the removal of the elec	ctric fences.		
		The plastic screen	s are obstructions
		to the movement	of the tortoises up
		and down the stre	
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	<u>Biblio</u>	<u>graphy</u>	
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)			
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#### **Bibliography**

### Why the thorny devil Is Endangered? Thorny Devil (Moloch horridus)-

Level of	Invasive non-native
classification	species
Kingdom	Animal
Phylum	Chordata
Class	Reptilia
Order	Squamata
Family	Agamidae
Genes	Moloch
Species	horridus



Harvester Ant (Pogonomyrmex



Food Chain





Thorny devil(dragon) (Moloch horridus)



Bustard (Afrotis afraoides)



Mesquite (Prosopis glandulosa) barbatus)



Brown Falcons (Falco berigora)

Goana (Varanus)



Science research task Mrs. Walker Jasper Mansell-7.5

Date of submission-6/6/17

The thorny devil is an endangered species that mostly lives lin Alice springs (Australia). Thorny Devil (*Moloch horridus*). (Halse et al,2000)

They feed in the cooler mornings and late afternoon. When they locate a trail of ants they lick them up with their short, sticky tongue. Scientists calculate that Thorny Devils might eat a thousand or more ants in a single meal. They can only eat one ant at a time with their sticky tongue, but can eat at a rate of up to 45 ants a minute. (Oxley,2011)

There are hygroscopic (moisture-attracting) grooves between their thorns. They obtain water from the dew that condenses on their bodies overnight, during rare rainfalls, or by brushing up against dew-coated grass. Any water that gets into the grooves between its thorns is drawn by capillary action to its mouth, allowing the thorny dragon to suck water from all over its body. Also, the thorns on their body protect them from the bustard, brown falcon and other lizards such as itself. The Bustard and the falcon eat the lizard by flipping it over and eating it from the belly. The Bustard is the main predator for the Thorny devil. (Oxley,2011)

Thorny Devils live in a shallow burrow. Thorny Devils grow up to 15cm long. The babies are about the size of a finger nail. The females are larger than the males as they produce eggs. Thorny devils can live up to 15 years. The Thorny Devil lays about 3 to 10 eggs underground, between September and January. The eggs hatch 3 to 4 months later. They reach maturity after 3 years. (Teresa, 2000)

At night, Thorny Devils partly dig them self into the soil to keep warmer. During hot days, thorny devils dig themselves a shallow underground burrow sometimes under small shrubs to provide extra protection from the hot. (Themes,2015)

They are named after a human sacrifice god. The thorny devil's scientific name, Moloch horridus, was inspired by John Milton's poem "Paradise Lost." In the poem, Milton describes the Canaanite god Moloch as a horrible king smeared with the blood of human sacrifice. The Latin word horridus can mean rough or bristly, or dreadful. (Zillman,2017)

The Thorny Devil has spiny orange yellow and black skin with a pretend second head on the back of its neck. Also, the thorns on their body protect them from the bustard, brown falcon and other lizards such as itself. The Bustard and the falcon eat the lizard by flipping it over and eating it from the belly. The Bustard is the main predator for the Thorny devil. (Oxley,2011)

The thorny devil is endangered because it is has too many predators. They are; goannas', habitat loss from 1997-1999, cane toad, foxes', bustards, brown falcons, bigger thorny devils, and other lizards. They are being hunted because there is very low food in the area. In an effort to save the thorny devil, conservationists have been protecting the nests and eggs by placing wire enclosures around them. By doing this, they are keeping predators out and providing a safe environment for the babies. (Halse et al, 2000)

The International Union for the Preservation of Nature (IUCN), are aiming to do an assessment which will help identify the largest threats to the thorny devil. This research will enable conservationists to prioritise actions that will ensure the survival of this species. (IUCN, 2016)

Unfortunately, conservation science is always needing funding to support their cause. Research and equipment needed to collect data and conduct their studies, can be expensive. Sometimes researchers need to turn to charities and private investors to help support the campaign. The Government is under constant pressure to invest money in endangered animal welfare, there are many Australian animals competing for this economical input. The thorny devil, does not get much attention for its survival. Public awareness needs to be increased to help this gentle but scary looking lizard. (Mance, 1998)

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#### TASMANIAN DEVIL

The scientific name for the Tasmanian Devil is SARCOPHILUS HARRISII, which means Harris' meat lover. Harris is the name of the scientist who described the Tasmanian Devil.

Although there has been evidence that the Tasmanian Devil we know today has lived in other parts of Australia many hundreds of years ago; it is now only found to live in the wild in Tasmania. We know that the species was found on the Australian mainland because of fossils that have been found. They became extinct on the mainland about 400 years ago. Currently the number of Tasmanian Devils reported to be living in the wilderness is between 10,000 - 25,000.

#### **HISTORY**

The early settlers in Australia didn't really like the Tasmanian Devil. Not only are they rather ugly, they also make a ferocious sound like that of a devil, and people were scared of them. They would be a nuisance and eat their chickens, so they were considered a pest. They became hunted, caught in traps or shot. They quickly became scarce and it became a worry that they might become extinct. It was only in 1941 that there was laws that was put in place to have the Tasmanian Devil become a protected species.

#### WHERE THEY LIVE / HABITAT

The Tasmanian Devil can live anywhere on the Island, but they prefer to live on the coastal areas, forests and bushlands. They sleep under rocks, caves or in burrows. The Tasmanian Devil is a nocturnal animal, sleeping throughout the day and awake at night.

#### DIFT

The Tasmanian Devil is a carnivore, which means they eat other animals, and are meat eaters. They are a solitary and secretive animal and like to find their food by themselves, and do not hunt in packs. They eat lizards, frogs, snakes and carcass'. This greatly assists in the food chain by eating sick or dead animals and therefore cleaning the landscape, and keeping the bush healthy. They will eat the entire animal, including the bones and fur.

#### **BREEDING / LIFE SPAN**

Devils breed in March and the babies are born in April or May. Being a marsupial the young live and feed in the mothers pouch for about 15 weeks. There is usually up to 8 babies but only 3 survive as the mother can only feed up to 4 babies. When it is time for the young to leave the pouch they stay closeby until late October when they live independently in the bush. The average lifespan for a Tasmanian Devil is approximately 6 years.

# ENDANGERED SPECIES & WHAT THE GOVERNMENT IS DOING TO SAVE THE TASMANIAN DEVIL.

DFTD – (Devil Facial Tumor Disease) is responsible for the drastic decline of population of Wild Tasmanian Devils by up to 97%. DFTD is fatal and is unique to the species. It presents as cancers around the head and neck. The animal finds it very hard to eat and they normally die of starvation within a few months. The cancer is contagious and is passed on by biting and close contact.

The Save the Tasmanian Devil Program was set up by the Tasmanian Government in 2003, and in 2005 The Tasmanian Department of Primary Industries, Parks, Water and Environment established a captive population of healthy devils. This program has gathered disease free animals from all areas of Tasmania that were captured and put into purpose built facilities so they could breed a disease free

population. This seems to be greatly assisting with the rejuvenation in numbers for the Tasmanian Devil so that one day the goal is to not be considered an endangered species.

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\*

# Will The Spotted Tree Frog Be

Spotted Again?

<del>\*</del>\*

By Jackson McMonagle 7,5

Anatomy: Spotted Tree Frogs can

normally grow up to 6cm in length, and are usually olive-green to grey-green in colour.
The frogs' back may be covered with darker

blotches, while its underside (or belly) is usually a paler colour. The groin and the back of the legs are orange, and the skin is warty

and uneven. Tadpoles are dark brown or black, with thick tails and long bodies.



Australian Geographic
http://www.australiangeographic.c
om.au/blogs/australianendangeredspecies/2016/01/spotted-treefrog

<del>\*</del>\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**History:** Originally found in around 19 rivers (streams) in Victoria and NSW, the spotted tree frog numbers have been declining for several years. The current population is estimated to be approximately just living in 15 streams (river) systems.

**Breeding:** The species breeds from late October to early December, which is advertised through extensive calling. During breeding seasons, adults can usually be found resting atop rocks lying within the stream while youngsters remain in shingle banks. Eggs are buried beneath boulders in streams.

#### Why are the spotted tree frogs endangered?

Disease is the main cause of the decline in the spotted tree frogs population. Chytridiomycosis is a deadly disease caused by chytrid fungus. This disease is affecting all types of amphibians around the globe. The diesase is affecting amphibians in four regions of Australia. In some cases, chytridiomycosis is able to make entire populations go extinct. Another reason that spotted tree frogs are endangered is because of Trout. Brown Trout and Rainbow Trout inhabit the same regions that spotted tree frog live in and are hunting the tadpoles for food. Also, disturbances such as dredging by human and also impacting the spotted tree frogs numbers

<del>\*\*\*\*\*\*\*\*\*\*\*\*\*\*</del>

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*** 个爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷爷 \* Recovery plans for the spotted tree frog: There is a recovery plan in place for the spotted tree frog. The plan aims to get rid of the threat of chytridiomycosis to frog numbers that aren't affected yet. The plan also tries to lower the impact of the fungus on infected frog populations and come up with a working captive breeding program. Range: The spotted tree frog lives in areas to the west of the Victorian Central Highlands, Mount Kosciuszko in NSW, and to the west of the Great Divide. The total amount of range that spotted tree frog is estimated to be less than five square kilometers. **Habitat:** The spotted tree frog is generically found in mountainous regions from 200 – 1100 m above sea level. It also normally lives in rocky places with nearby streams Classification: Spotted Tree Frog Kingdom Animalia Scientific Name: Phylum Chordata Litoria spenceri Class **Amphibia** Order Anura Family Hylidae Genus Litoria Species Spenceri **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*** 

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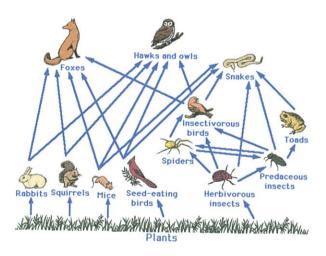
# Red fox (Vulpes-vulpes) By Xavier McMullen

#### Scientific name:

Kingdom	Animalia
Phylum	chordata
Class	sarcopterygii
Order	carnivora
Family	canidae
Genus	vulpes
Species	vulpes



#### Food chain:



#### Red foxes:

The red fox was introduced to Australia for hunting tho people thought it would be a good Idea they were wrong and they didn't realise that 162 years later that these foxes would be a pest and threatening the native wildlife. There is estimated 7.5 million foxes in Australia, foxes are an opportunistic hunter/scavenger and are a big threat to native wildlife and cause significant loss to live stock. Red foxes also carry disease like mange, worms, distemper, he patitis and parvovirus

#### Facts:

- The red fox was introduced to Australia in 1833 by the British colony for hunting
- Red foxes didn't populate Tasmania due to the Tasmanian devils as competition
- Today there are estimated to be 7.5 million Red foxes in Australia
- They are the apex predators in Australia with there primary food source the rabbit another introduced species in Australia
- The red fox is responsible for the extinction of 10 native animals
- These foxes learnt how to climb trees
- Fox hunting is illegal in all states
- Foxes prey on live stock which costs Australia so much money

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Dominik Mc Namara

#### Short nose sea snake



Kingdom	Animal
phylum	Chordata
Class	Reptilia
Order	Squamat
Family	Elapidae
genus	Asurus
Species	Apraefrontalis

Scientific name: aipysurus apraefrontalis

Food chain: algae –fish-upon eel and gobies –short nose sea snake

Why the short nose sea snake is endangered

The short nosed sea snake is endangered because it is getting to hot for the snake because of global warming. The global warming is affecting the sea snake because of coral bleaching that makes the sea snake loss it habitat it is also meant to be believe that the prawn fishing is making the sea snake loss it numbers as well prawn fishing is harming the sea snake because when they get court the you Sherly injury or death to the species.

Find two was that scientist are trying to protect the short nose sea snake

One way the scientist are trying to protect the sea snake is by tagging them and tracking them so they can fide out more about the sea snake like what it is its fever it food source to make it not be endangered any more. Another way the sea snake is getting protected by scientist is that they are making laws so you can not fish I certain placers where the sea snakes live to help them live longer.

Advantages	Disadvantages

It is very venomous snake
It can only live in Sarton temperatures
It only lives in Australian water and no where else in the world
Gets court in fishing nets
Low numbers
It is coitally endangered

#### **Photos**



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by Dominik mi Normara

#### Why is the Dingo endangered?

By Angus Millar 7.5, Science, Somerset College Teacher: Mrs Walker Date of Submission: Tuesday 7<sup>th</sup> March

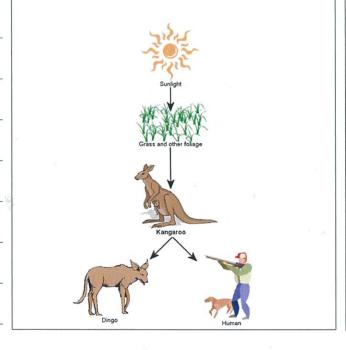




Why is the Dingo population slowly decreasing? The Australian Dingo is an endangered animal that has been seen as a threat to human kind.

Level of classification	
kingdom	Animal
phylum	Chordata
class	Mammalia
order	Carnivora
family	Canidae
genus	Canis
species	Lupus Dingo

Scientific Name: Canis lupus dingo



The dingo has been a victim of many types of traps to contain the population of wild dogs. There is no distinction between wild dogs and dingoes meaning dingoes have been trapped poison baited and shot. Also in recent years, children, have been attacked by dingoes giving them a bad reputation and making people worry when a dingo is in the area. Also, humans have pushed Dingoes out of ideal Dingo habitat meaning they find it harder to find food. 70% of the 100-120 dingoes on Fraser Island are malnourished (Save Fraser Island dingoes incorporated, 1992). Dingoes inhabit the area of Fraser Island, and every state except Tasmania. In regards to deserts where there is water decides where dingoes can live.



Why is the Dingo Endangered?

#### Why is the Dingo Endangered?

Scientists try not to interfere with the dingoes lives meaning there aren't many ways science is used to protect dingoes. However, one way they are protected is public awareness. In most houses on Fraser Island there is safety sheets on what you should do in the case of a dingo approaching you. Also, there are online websites and documents explaining how you shouldn't approach or feed the dingoes in any circumstance. The Gray Wolf is a close ancestor of the Dingo being in the genus and a similar species. A way the Gray Wolf is protected by law meaning it is illegal to hunt the Gray Wolf. However, in Montana over 6,000 hunting permits have been sold. Also the Nature conservation act 1992. Meaning you can't shot or harm Dingoes.

Morally there are advantages and disadvantages to the ways Gray Wolfs and Dingoes are protected.

Advantages	Disadvantages
It doesn't harm the animal in any ways	some people are evil and kill the animals for enjoyment
Most people are law supporting citizens meaning the will look at the laws and regulations	Traps can be set of by anything sometime catching unexpecting Dingoes and Gray Wolfs
Most people don't have bad intentions	Not everyone is good

Dingoes have been threatened and portrayed as a bad animal that does harm to humans. Once people see past the incidents with dingoes the will see they are a wonderful Animals. The Dingo has natural hunting instinct. This is like all wild animals like bears, wolfs or lions which means naturally they will attack anything that goes near the children or feels like you are a threat.

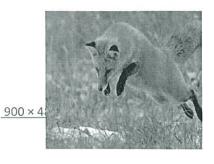




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# Somerset College Mrs Walker 6 Tuesday March 2017



#### European Red Fox facts sheet (Vulpes) College

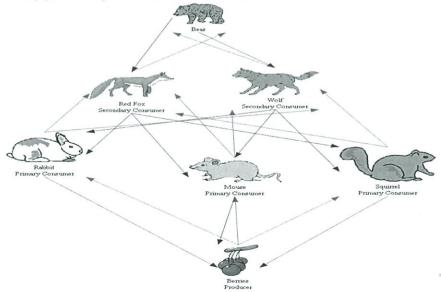
#### Sofia Miller 7.5

Classification sort	name
kingdom	animal
Phylum	Chordata
Class	Mammalia
order	Carnvivora
family	canidae
Genus	Vulpes
Species	The European Red Fox

The European Red fox entered Australia around 1870 for recreational hunting. Some offshore islands and part of Tasmania and Northern Australia is fox free.

#### **Hunting and Diet**

The European Red Fox is a scavenger, they are threats to mainly farmer because they prey on their cattle. Red Foxes eat Poultry, Lambs and goat kids. This is a major threat to farmers and their economy. These foxes also carry diseases that do not exist in Australia today. Every year we gain about 2 million foxes.



When the European Red Fox hunts it silently stalks its prey and then leaps into the air to ambush and leap on top if its prey. This leaves the prey with next to no chance of surviving. The European Fox has the teeth and jaw of a wild dog and the agility of a cat.

As shown in the Food web the European Red Fox is competing against the wolf. Which means that the wolf that was originally in Australia is now left with less prey. When the fox entered Australia it made the whole food web unbalanced and now they also spread pestweeds like Blackberries and olives.

#### What are we doing about it and what can we do?

- To control the numbers of foxes in Australia we commonly use bait. This can be a
  good method but is hard to get right. Animals in the environment can also be
  affected by fox bait and it is also poisonous to humans.
- Prevent foxes from moving to the fox free areas and islands.
- Research more about foxes and how to prevent over population and to extend knowledge on them.

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#### Referencing generator

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http://www.harvardgenerator.com

The deadly, dangerous and invasive Castor oil bean plant

By Lauren Mitnovetsky
Science, Mrs Walker
Somerset College





!.: http://www.rarexoticseeds.com/en/ricinus-communis-seeds-red-castor-bean-plant-seeds-castor-oil-plant-eeds.htm

The Castor oil bean plant or *Ricinus communis* is a highly toxic plant that has been accounted for killing dozens of people per year to date. This plant is considered to be invasive in several regions across Australia. This plant possesses a very beautiful appearance and therefore becomes a wanted and an attractive plant for the gardeners. Gardeners across Australia would love to add this one of a kind plant to their collection and prefer it to be the crown jewel of their garden however, gardeners across Australia are yet to know that one whiff of this plant can cause a slow, painful death spread across 4-14 days. Death from this plant can occur by sniffing, touching and eating just a single seed that contains enough risin to kill a child.

[: https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/weeds-diseases/other/castor-oil-bush, 2016]

Level of classification	Castor oil bean plant
Kingdom	3. Plantae
Phylum	4. Angiospermae
Class	3. Magnoliopsida
Order	3. Malpighiales
Family	3. Euphorbiaceae
Genus	3. Ricinus
Species	3. Ricinus communis

Risin is one of the most poisonous naturally occurring substances known. The seeds produce gastrointestinal disorders and then tend to cause neuromuscular disorders. Economic impacts of this plant are also extensive as it spreads over sandy soil areas, creek banks and gullies, which results in significant loss of prime grazing areas.

The Castor oil bean plant spreads very easily. The issue with this plant spreading easily is that it will poison more live species and put their lives in danger. There is still no known cure to man on how to cure possessed [ poisoning from this interpretation of the poisoning from the poisoning fr

Ricinus communis has several uses despite being one of the most dangerous and invasive plants that inhabit Australia. [http://www.cabi.org/isc/datasheet/47618, 2017] Science has tried to find ways to terminate the Castor bean plant however; some people disagree with getting rid of it because other properties that are included in the plant can be very useful. We use those properties on a daily basis from crayons to cooking oil. The main problem with exterminating the Castor bean is that the plant can adjust to any environment very easily and the seeds are spread by some of the flowers on the plant bursting. Scientist have been working very hard to come up with a way to grow the plant without the toxin included so we can still use the benefits of this pest. Scientists have recommended pulling out the plant by the stem NOT TOUCHING THE SEEDS OR INHALING THE PLANT. This insures the plant will have no roots left in the ground so it will not grow there again and spread it's seeds. This technique is only designed to control the invasive weed. The issue with this technique is that the plant can still spread in the process of someone removing it and someone could die while they are removing the plant due to inhaling the toxin if they are not wearing the correct safety protection suitable for facing the weed. [http://www.rarexoticseeds.com/en/ricinus-communis-seeds-red-castor-beanplant-seeds-castor-oil-plant-seeds.htm, 2016]

The Australian government has carried out several debates on the Castor bean plant. Environmentalists believe it is the right decision to abandon any ideas of using this plant due to the fact that it kills thousands of other species and livestock per year. Other people and the public believe that the plant should be grown in quarantine so it does not affect any more livestock; endangered species and house hold pets. The government is still stumped on a decision to make. [ : https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/weeds-diseases/other/castor-oil-bush,2017 ]

These are the legal requirements: Castor oil plant is not a restricted plant under the Biosecurity Act 2014. Although according to law one must follow a general biosecurity obligation to take required actions to minimize the risk associated with this invasive plant. Local governments have a biosecurity plan that addresses invasive plants.

When considering an extensive evidence regarding the deadly effects of the *Ricinus communis* on the live creatures and humans and its ability to be easily spread and invade the large areas very quickly, it would be very vital to exterminate and prevent this invasive plant from growing and spreading. It would be pertinent to invest more funds in to trying to develop this plant without a toxin, which may be later enjoyed and be used.

She

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Add to My References

# How can we stop invasive Water Hyacinths? from spreading around Australia?

Water Hyacinths Fact Sheet by Tanya Nagrani Somerset College Science 7.5 Mrs Walker

#### Taxonomy:

Kingdom	Plant
Phylum	Magnoliophyta
Class	Liliopsida
Order	Liliales
Family	Pontederiaceae
Genus	Eichhornia
Scientific Name	Eichhornia Crassipes
Smithsonian Marine S http://www.sms.si.ed s.htm	itation hu/irlspec/Eichhornia_crassipe



Full Service Aquatic http://fullserviceaquatics.com/aquatic-plants/water-hyacinth-in-and-out-of-your-water-garden/

#### Introduction:

The Water Hyacinth (*Eichhornia Crassipes*) is a non-native invasive plant. This aquatic water weed spreads around water ways and ponds choking them. It was first introduced to Australia in the 1900's as a decorative and ornamental plant but soon spread causing problems to waterways and ponds as well as native species.

#### Description:

The water hyacinth is commonly known as a floating water weed. This weed can grow up to be

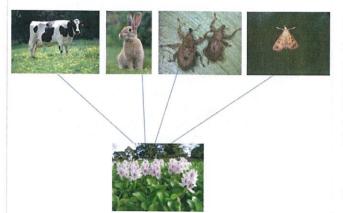
sixty-five centimetres tall with a root system that can be up to one metre tall! The Hyacinth has leaves that can vary in colour from bright to dark green. The stalk for the younger plants is more large and bulbous compared to the more developed plants which have a more elongated and elegant stalk. The flower is a light purple colour with a dark purple and yellow centre.



#### Habitat:

The Water Hyacinth prefers slow flowing water filled with high nutrients that is concentrated. Also, it is grown illegally in garden ponds as ornamental plants. In Australia, the Water Hyacinth was found in the coastal areas of Queensland and New South Wales where it is a major pest. It is also found in Africa, Asia.

North America and Papua New Guinea.



#### Food Chain:

Water Hyacinths are not often consumed by animals however, there are certain animals that do eat this invasive weed. Cattle eat water hyacinths but the weed has low nutritional value and can cause diarrhoea in the animals. Also, some rabbits eat hyacinths, however this is only when there is no other food around.

#### Problem:

Eichhornia Crassipes or Water Hyacinths are a nonnative invasive species. They are invasive and a pest to all waterways and ponds. The Water Hyacinth was
introduced in Australia in the 1900's. Native to Brazil, it was transported to Australia as a decorative and
ornamental aquatic plant, respected for its beautiful floral appearance. It was released into the lagoons and
ponds all over Queensland. Today, it is one of the world's worst weeds, choking on waterways, killing
native species and unable for recreational use. Also, the plant spreads as seeds float across the water so
this makes it difficult to control.

#### Impact:

Social: Water Hyacinths impacts on society in several ways. Due to this water weed, boats are unable to

move as the flower clogs the engine water-cooling system. Also, swimming can be very hard around large infestations while fishing is impossible. Water Hyacinths also interfere and damage the infrastructure.

Environmental: The impact that the water hyacinth has on the environment is devastating. The weed chokes on native waterways killing indigenous animals and plants. Water Hyacinths provide a breeding ground for mosquitoes. Also, they increase water loss and deplete water bodies of oxygen.

Solution: The Water Hyacinth can be controlled by in many ways:



Weedy Connection

http://www.weedyconnection.com/database/water hyacinth.html

Solution 1. You can control this invasive plant by picking the out with your hand or a machine.

Solution 2. Using Herbicide, you can stop hyacinths from spreading, however, spraying on an entire infestation can result in pollution from the sunken, rotting weed and can risk exterminating native plants.

Solution 3. This solution is the most effective solution as it is a biological solution. This biological solution is 4 South American native insects that eat hyacinths. The two weevil species and the two moth species are currently present in Queensland to control the weeds.

These solutions are all scientifically implicated and based environmentally.

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## The Ferrel European Rabbit

## By Mia Reeves Sciences, Was Walker

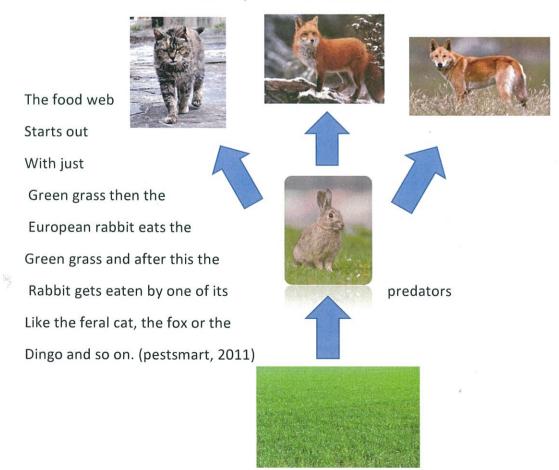
Kingdom	Animalia
Phylum	Chordate
Class	Mammal
Order	Lagamorpha family
Family	Leporidae
Genus	Oryctolagus cuniculus
Species	Oryctolagus cuniculus

#### The European Rabbit Intro

The European Rabbit is a species of rabbit that was imported from Europe into Australia in the mid to late 1800s at places like Canning River (Western Australia), Kapunda (Southern Australia), Victoria), Shoalhaven River (New South Wales) and Woody Island (Queensland). (The State of Victoria, 2016)

Add to My References

#### European Rabbit food web



#### Invasive species

An invasive species is an introduced species which threatens valued environmental, agricultural or other social resources by the damage it causes. The European Rabbit is an invasive species because it competes with native wildlife, damages vegetation and degrades the land. They ringbark trees and shrubs, and prevent regeneration of the plants by eating the seeds and seedlings. Their impact on the environment often increases during draught and immediately after a fire, when their food is very limited and they try and eat whatever they can find. Some people believe that feral rabbits may have caused the extinction of many small mammals native to Australia and have assisted in the decline in numbers of many of the plants and animals in Australia. In the Norfolk Island group, feral rabbits along with goats reduced Phillip Island all the way down to just bedrock, leaving at least two plants locally extinct. (Commonwealth of Australia, 2011)

#### Solutions to the problem

The aim of the control methods is to reduce the impact of rabbits on farms and natural environment. Where the rabbit density is medium to high the objective is to reduce the population to a manageable level – This is usually done by a poisoning program, however only during the non-breeding season. During the breeding season they usually use warren ripping (destroying their home) or fumigation to lower the numbers. If the density is low then the objective is to reduce the population further so that it cannot recover quickly. This is usually achieved by fumigation and harbour destruction. When the densities are very low, we start to use advanced control methods such as shooting, trapping, fumigation and shelter destruction to keep the amount of rabbits low in the longer term. (NSW Government, 2012)

#### Advantages and disadvantages

There are many advantages and disadvantages to all the solutions. An advantage for trying to get rid of them is that it is environmental because then they won't eat all the vegetation and herbs on the farms however using warren ripping and shelter destruction is not very environmental because this tears up the ground. A disadvantage to trying to kill them is that it is not morally right, they are still living things and some people may not feel right about it.

This matter needs to be fixed because the rabbits cannot be going around and eating all the vegetation and herbs like that which leaves nothing for the people. Scientists have come up with many solutions to the problem like shooting and trapping. Most of these are working however there are disadvantages and advantages to all of them.

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Red Foxes history:

Red foxes, scientific name, Vulpes, Vulpes, they are Mammuls, and omnivores, they weigh about 12kg, the size of a medium dog and live in the wild between 2—4 years. The Red Fox was introduced in Australia in 1830. It lives in other parts of the world in many different habitats including forests, gmashands, mountains and deserts. They also adapt well to human environments used as firms, subinbrain areas, and even large communities. The red fox's resourcefulness has earned it a very good reputation for intelligence and cumingness. Red foxes in Australia area scrious problems. There are more than 6.2 million red foxes here in Australia and they cause many problems for out primary producers. The red Fox is classified as one of the most invasive species in Australia.

Red foxes have nestry reddish brown fir, their colour can vary and have black, silver or cross colors in their markings. Their trail is somatimes called a brush, or sweep because of it's long lash thickness. The red fox can somatimes lave white or black tips on it's ears and back of kgs. In winter the red fox grows more fir which is it's winter fir and keeps it warm in cold mounts.

Foxes have strong les and they can somatime reach speeds of up to 48km per hour which assists in catching it's prey or running away from predators.

Red foxes Prey and Predators:

These are some of the main predators of the red fox. They are wolves, coyotes, and bobcats, in desert lands, their predators are wild dogs, large cats, hyenas, and cougars, other vicious animals might sometimes attack a weak or sick fox. All species of foxes are known for their cleveness in escaping their predators.

The Red Fox can make 28 different calls to communicate with each other. Red Foxes also have amazing vision, sense, hearing and smell,

# \*\*\*\*\*\*\*\*\*\*\*

Why are Red Foxes Endangered?

Red foxes are in danger of becoming extinct, in many different places around the world. This is because, the Red fox and arctic fox has long, soft für that is highly valued for hunters. Some of these hunters trap the foxes for their für and raise them on animal für farms. Some other causes of fox mortality are shooting, and predation by diagos. Diseases also may have a massive impact on the cause of death in fox population.

\*\*Ecology of Red Foxes:\*

The Red Fox can survive in many different habitats, including urban, arid and alpine areas. It appears that it is most abundant that the red fox is typically found in a gifculture landscapers that have a wide variety of shelter and food. The red fox is mostly sleeps at day in logs, dens and other like shelters, it is mainly nocturnal. The red fox easts almost anything, scavenging and preying on whatever is available. Its main food source is small animals, but it also eats insects and fruits, especially in summer when preferred prey is less abundant.

The red fox has played a major role in down fall of ground-nesting birds, small mammals such as the greater bilby and reptiles like the green turtle. The red fox has also helped threatened species as the malleefowl, the brided nail-tail wallaby and the night parrot in the recovery from the road of extinction. The fox creates significant losses for farmers by preying on new born animals mainly lambs in Australia.

Foxes eat 500gm — 1kg of food a day they mainly eat birds, insects, earthworms, grass hoppers, small reptiles and fish, blackberries, dead animals, mice, rabbits. Foxes are known to eat almost anything.

RED FOXES IN AUSTRALIA

Red loxes in Australia is listed as a key threatening species under the Commonwealth Environment Protection and Biodiversity. Act 1999. It has caused a major role in the loss of a number of native animals, the greater Bilby, the green turtle, the Malkerôwl, the bridled Nail Tail Wallaby and the night Parrot. The red fox in Australia cates damage for the fa

# by Jules V 7.5

#### Bent Wing Bat research assignment

Name: Miniopterus schreibersii bassanii southern bent-wing bat

Endangered satus: Critically endangered

Range: South-east South Australia and western Victoria

Habitat: Roosts in mines and caves, often near coastal cliffs, particularly the World Heritage-listed Naracoorte Bat Cave in SA

Classification:

Kingdom: Animalia Phylum: Chordata Class: Mammalia Order: Chiroptera

Family: Vespertilionidae Genus: Miniopterus

Species: schreibersii bassanii

#### Threats to the southern winged bat:

The continued climate change and habitat loss is affecting the southern bent-wing bat. Human disturbance is also affecting the southern bent winged bat because tourists and Australians are going into the caves and disturbing bats with torches and loud noises which drives them away from their caves. They will have to work hard to find a suitable habitat.

#### How is science protecting the bent wing bats

Natural parks have set up rules for visitors so bats can live in their caves with no disturbance and

Zoos Victoria is committed to securing a future for the Southern Bent-wing Bat. We are currently investigating the role we can play in improving the long-term viability of a self-sustaining wild population of this species. (Victoria-Zoos, 2006, p. 1)



Advantages and Disadvantages

Advantages: Will provide protection to the endangered Bent-Wing Bat

Disadvantages: Might cause endangerment to another species (because the bent wing

bat will eat the species till their extintion

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(Haberle, 2013)

# The Tasmanian devil Somerset College

Nadia 7.5 Von Papen Science with Mrs Walker

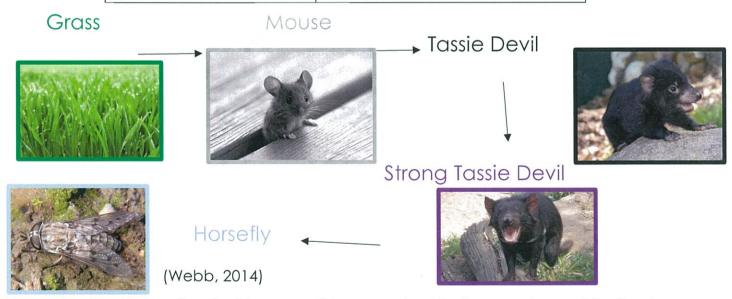
Tuesday Week 7A



An animal that is in grave danger and on the verge of extinction is the Tasmanian devil, nicknamed the Tassie Devil.

Scientific Name: Sarcophilus harrisii (Wikipedia, 2016)

Level of classification	<u>Tasmanian Devil</u>
Kingdom	Animalia
Phylum	Chordate
Class	Mammalia
Order	Dasyuromorphia
Family	Dasyuridae
Genus	Sarcophilus
Species	harrisii



The real native Tasmanian devil is rare well-known animal is disappearing rapidly. It only lives on the Australian island state called Tasmania. Also, known as the Tassie Devil, this marsupial is being wiped out by a rare cancer called the devil facial tumour disease (DFTD) (Zooborns, 2017).

It was estimated that in 2014 there was around 20,000 - 50,000 mature individuals left in the wild ( Parks & Wildlife Service of Tasmania , 2014). DFTD forms tumours around the mouth, face and neck of the Tassie devils. This disease is fatal and is spreading at any increasing rate by biting and mating. In February 2010, it was estimated that had spread to about 60% of Tassie. It has caused the sudden and enormous decline that is rapidly killing the Tassie devils (Zoos Victoria, 2010).

Scientists studied and found out that the disease can be help fought against and now are doing research to invent a vaccine which will help the devil fight the disease. We have ensured that large numbers of devils will survive. This plan includes putting some healthy devils in quarantine (separating them from infected devils). These devils also have a breeding program called the Insurance Population. There are more than 600 healthy devils all around Australia as part of this population right now and hopefully more soon (Department of Primary Industries, Parks, Water and Environment Tasmania, 2017)!

The Tasmanian Devil and the controlled breeding system with the vaccination from an environmental perspective:

Advantages	Disadvantages
<ul> <li>This could cure the poor marsupials from their face tumour that is rapidly killing them one by one, and with this vaccine and controlled breeding system we could cure every Tassie devil on the Earth and be rid of the disease.</li> </ul>	We still don't have this vaccine and when we do which would probably be in a long time, it could hurt the devils.

The Tasmanian devils need to be cured of the disease fast because this disease is a problem and no one realises how fast these animals are dying out apart from the people who are working on it. Everyone needs to help even if it means just donating one dollar! It would still help the vaccine be invented and save the devils. So please, I want you all to try and donate to the 'Save the Tasmanian Devil Program' or a program like that were you can donate \$2 or do a fun run and lots of other stuff (Department of Primary Industries, 2015). Even if you don't donate, just leave a mental note in your mind, because if we make the whole world know, then the whole world can save help save the cute things that have the name of Tasmanian devils.

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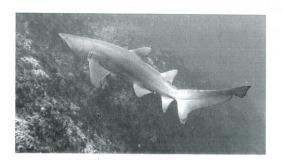
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# The Grey nurse shark

By Joe Wright-Smith, 7.5, Somerset College, science, Ms Walker.



The grey nurse sharks scientific name is *Carcharias Taurus* and it is a harmless shark. There are two populations of grey nurse sharks is found in Australia. The first is found in Western Australia but the endangered shark is found in New South Whales and Sothern Queensland.

#### SEVEN LEVELS OF CLASSIFICATION

Kingdom: Animal

Phylum: Chordata

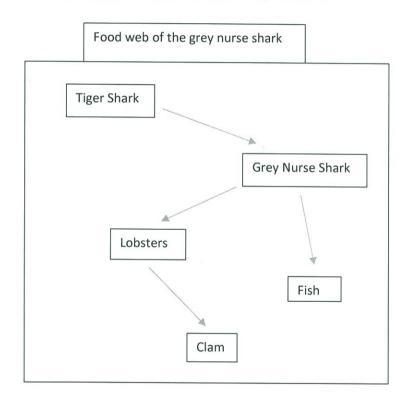
Class: Chondrichthyes

Order: Lamniformes

Family: odontaspididae

Genus: carcharias

Species: Taurus



### WHY THE GREY NURSE SHARK IS ENDANGERD

The shark is now critically endangered. A study done by the New South Whales Fisheries in 2000 said there could be as few as 292 individuals left in the wild. This is mainly because they were heavily fished, nearly to extinction in the 1950's, 60's and 70's. Recreational spear fishers were a big threat to the shark as the shark was thought to be a man eater and their calm behaviour made them an easy target. Now the sharks' main threat is getting caught accidently by recreational fishers, in fishing nets and beach protection nets. An autopsy on a grey nurse shark found that several small fish hooks had caused stomach perforations. This is from recreational fishing waste. Another problem for the Grey nurse shark is their slow maturity and reproduction system. Female sharks mature between 9-10 years while male

sharks mature between 6-7 years. The pregnancy last about 9 to 12 months. They only give birth to two offspring per pregnancy and they are thought to breed once every two years. This very slow reproductive system means time is needed to bring the population back up to a healthy level.

#### WHAT IS BEING DONE TO PROTECT THE GREY NURSE SHARK

Many places where the grey nurse sharks live are now in protected zones. Fishers have been asked to use and are now trying and trialling de-hookers and line-cutters in order to decrease by-catch. This can help the shark as they are often caught by mistake. There are very strict diving rules now in place so that the sharks are not disturbed. Some of these rules include: No diving between 6pm and 6am, no touching or feeding the sharks, no harassing or chasing the sharks.

#### IMPLICATIONS WITH PROTECTION SOLUTIONS

The first implication is that fisherman cannot fish in places they may have before as the areas where the sharks congregate are no fishing zones. Also fisherman have to change their lines, hooks and sinkers. This is a big social matter as the protection of the sharks is effecting peoples' jobs, in particular fishermens jobs, it also effects recreational activities. It is also a cultural matter as people think that the Grey nurse shark is deadly and a man-eater when it is neither and actually very placid, so attitudes need to change.

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## Christmas Island Flying-fox (Pteropus melanotus natalis)



## Somerset College

Jennifer: 7.5 Yeung Science with Mrs Walker

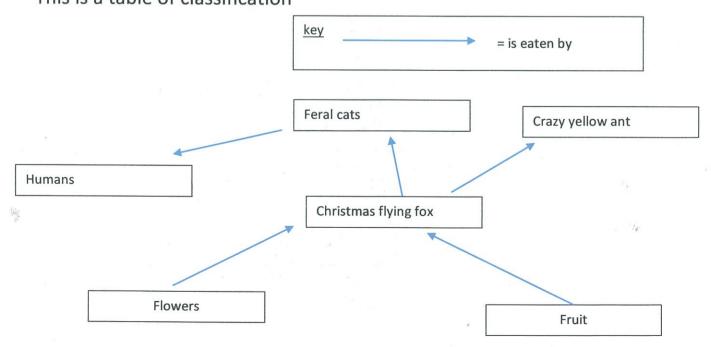
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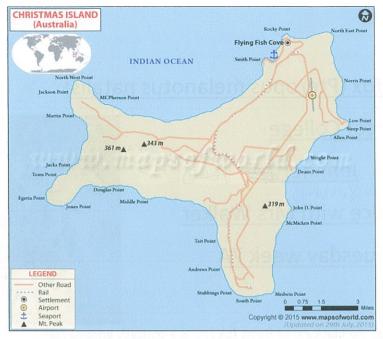


The Christmas flying fox is also known as the black eared flying fox and is a critically endangered Australian native animal. They are restricted to Christmas Island because they are the only native mammal left on Christmas island flying fox. They are hunted by feral cats and their habitats are sometimes storms and cyclones. But the main threat are the yellow crazy ants disturbing these bats.

Level of classification	Christmas flying fox
Kingdom	Animalia
Phylum	Chordata
Class	mammal
Order	chlroptera
Family	Pteropodidae
Genus	Pteropus
Species	melanotus

This is a table of classification





Did you know that the Christmas island flying fox only breeds once a year.

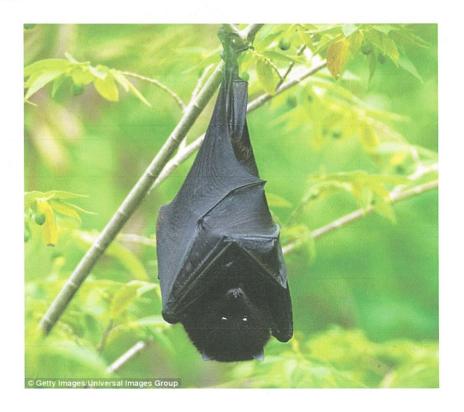
The Christmas Island flying fox lives everywhere on Christmas

This is a map of Christmas Island (zoomed in)

compare infobase Ltd., 2002-2017. *Christmas Island Map.* [Online] Available at: <a href="http://www.mapsofworld.com/australia/christmas-island-map.html">http://www.mapsofworld.com/australia/christmas-island-map.html</a> [Accessed 5th March 2017]

# **Actions**

These species are currently under the protection of the Indian wildlife (protection) act. Controlling invasive species will also increase the population of the Christmas island flying fox as well.



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Eliza Young 7.5 Somerset College

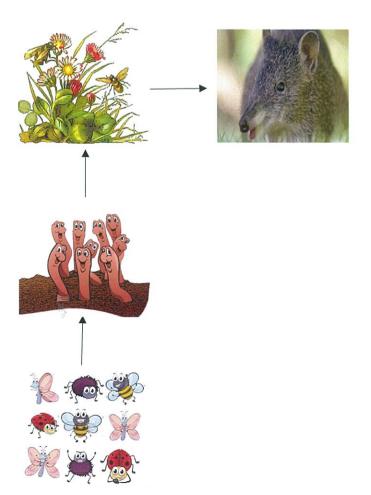
Science with Mrs. Walker

7 of March 2017 7A

The Southern Brown Bandicoot is native to Australia and is an endangered animal. The southern Brown Bandicoot is approximately 28 cm - 36 cm in length. They usually prefer to live in scrubby habitats with plenty of low ground in Northern Queensland, New South Wales, Victoria, Southern Western Queensland and Tasmania.

## Feeding and Diet:

As the southern Brown Bandicoot is a Nocturnal animal it hunts at night time and sleeps during the day.



## Other Behaviours and adaptions.

The Southern Brown Bandicoot aren't always found together. The Males and Females can be found in separate areas which changes considerably in size depending on the habitat and individual.

## **Conversation Status**

The Southern Brown Bandicoot has decreased since the European settlement mainly as a result of vegetation clearing, introduced foxes and cats, and changes to the frequency of bushfires. The Southern Brown Bandicoot is listed as an endangered species in the New South Wales and is known from only two areas.

## Classification

Species:	Obesulus
Genus:	Isoodon
Family:	Peramelidae
Order:	Peramelemorphia
Subclass:	Marsupialia
Class:	Mammalia
Subphylum:	Vertebrata
Phylum:	Chordata
Kingdom:	Animalia

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(could not find bibliography for picture o plant)