Year 7 Science
Fascinating Fact Sheets
on
Invasive and Endangered Animals or Plants
of
Australia

Class: 7.2

Science fact sheet

Australian Sea Lion

Karma Bathols 7.2

Australian Sea Lion/ Neophoca cinerea

7 levels of classification

Kingdom: Animalia, Phylum: Chordata, Species: Cinerea, Order: Carnivora, Family: Ootariidae, Genus: Neophoca

Class: Mammalia

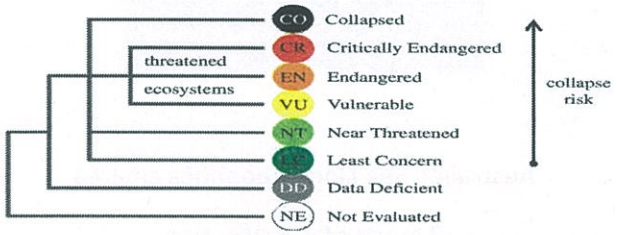
Why are the Australian sea Lion extinct?

The sea lion species are endangered! Some of the reasons why they are endangered are because in the 18th and 19th century the seals were hunted heavily for their oil and hide. Their population declined drastically and has never recovered. Recent research has shown that even though we are protecting the seals, the population is still declining. At the Dangerous Reef in South Australia they look after the pups and evidence has shown that the pup mortality rate is 41%.Ever since 1964 the Sea Lions have received full protection and has been listed under rare in the south Australian legislations. Another main reason why the Sea Lions population is declining is because of fishing. Sea Lions are getting caught in fishing nets are drowning. Fishing industries are trying really hard to repair the damage . It is really scary that even though we are improving and protecting our wildlife their population is still declining.

How are we using science to help the Australian Sea Lions?

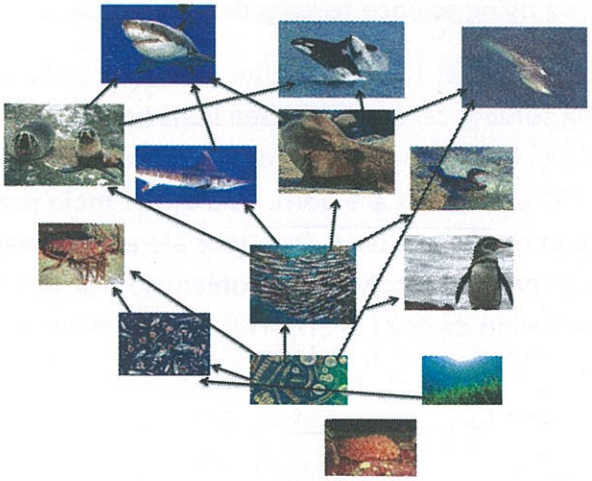
We are using science to help recover the population of the Australian sea lion. We are doing this by constantly having surveys taken on the Sea lions population and making sure the breeding sights that breed sea lions population aren't declining. Although this is happening, in the breeding season only 100 or so pups are born. One of the main reasons why the Sea Lions are endangered is because of the fishing nets. Sea Lions always get trapped in them and sadly drown. Fishing industries are trying to resolve this problem so a device has been invented, a sea lion exclusion device (SLED). This stops sea lion pups

from going near the lobster pots. If a Sea Lion is caught more than ten-15 times the fishing company will be shut down. Another thing that has been done is that sea lions are being satellite tracked. The population of the Sea Lion just keeps on declining. In 2005 on the ICUN red list the Sea Lion/ *Neophoca Cinerea* was put in the category vulnerable. 12 years later there population is still declining and has now been put in the category endangered.



What are the implications of the solution?

Satellite tracking is meant to resolve the solution but are there any downfalls? To start the satellite process you first have to catch the Sea Lion. This would put the animal under a lot of stress and might have lasting effects on the animal. Being kidnapped is not a good feeling so imagine being a seal, taken away from the ocean to a new environment where you are put to asleep and then injected with a satellite device. It would be awful. If it were a human that it happened to then there would be major charges. We understand its so the Seals can be looked after and kept an eye on but its also important to look at it from the seals point of view. There are no side effects on the sea lion if it were to be injected with a satellite dish. The (SLED) is a device that was made to prevent pups from swimming into the lobster pots and drowning. Could that stop Lobsters from going into the pot? Vegetarians might think that's a good thing that the fishermen aren't catching any fish but the fishermen sure do care. Lobsters are very expensive and tasty to some people. It would be important that the lobsters are still getting caught with the seal device I the trap.



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The Orange-Bellied Parrot

(Neophema chrysogaster)

Amaani Bhasin, 7.2, Somerset College, Sciences, Mrs. Walker

The Orange-Bellied Parrot is a critically endangered species that migrates between the Australian Mainland and Tasmania, they spend summer in Tasmania and winter in Coastal Victoria and South Australia. Some things that threaten their species are:

- Habitat loss and modification
- Predation by cats and foxes
- Spread of noxious weeds
- Mortality caused by collisions with structures
- Inbreeding due to small population and other genetic factors

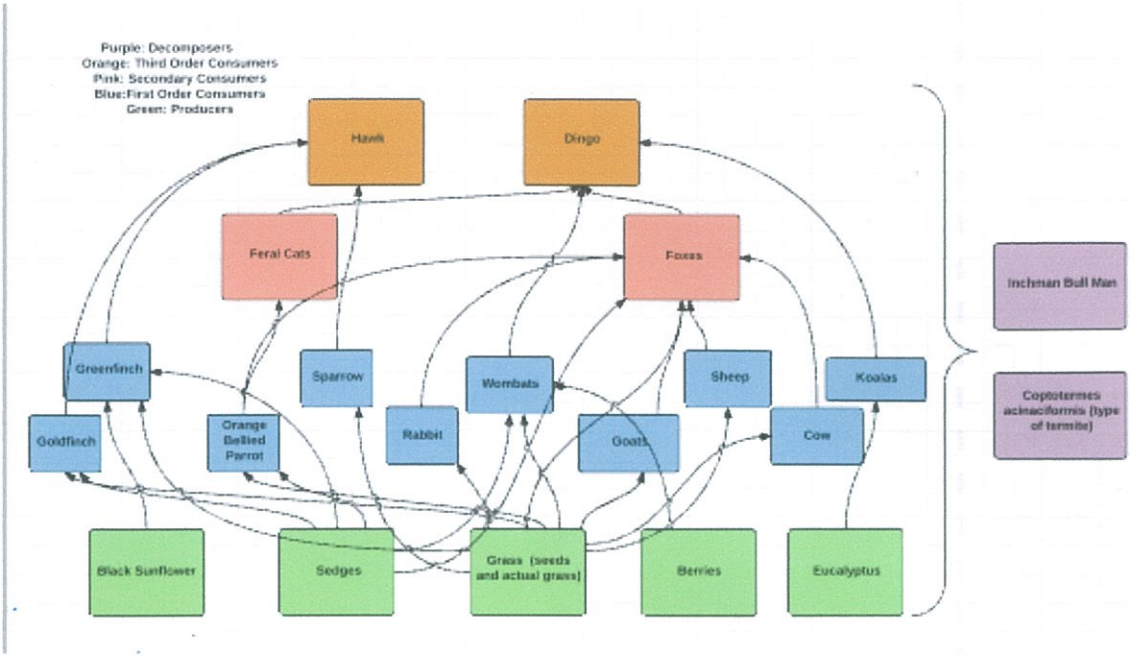
Scientists are having trouble finding a way to stop this incline to the species though, they have found numerous ways for this. (Birdlife Australia, 2010)

(Garnett, 2014)

(Wikipedia , 2017)The seven levels of classification for this bird are:

Kingdom	Animalia
Phylum	Chordata
Class	Aves
Order	Psittaciformes
Family	Psittaculidae
Genus	*Neophema*
Species	*N.chrysogaster*

The Orange Bellied parrots are very low on the food chain, as shown in the image below.



Scientists have found many ways to make sure this species doesn't go extinct. In 2006, the Australian Government committed $3.2 million to protect and expand the Orange Bellied Parrot's habitat by:

- Working with landholders in their winter breeding grounds in Victoria and South Australia
- Conserving breeding and nesting habitat in Tasmania
- Improving important migratory habitat and controlling predators in north-west Tasmania (Birdlife Australia, 2010)

The advantage of controlling their predators that are coming into their habitat is that the orange bellied parrot can now roam free in the wild and is able to find food for its young without worrying too much about the predators lurking about. This helps them reproduce and not die off too quickly.

The disadvantages of controlling the orange bellied parrot's predators are that the predators of this species can no longer hunt their food which they need to be able to survive. Also if humans accidentally hurt one of the animals it could cause serious damage to that animal.

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By Morgane Garrier 7.2
Somerset College
Science, Mrs Walker

Bettong

A Bettong is a marsupial and its scientific name is Bettongia Penicillata, it's also known as the bush-tailed Bettong and sometimes a Woylie. A Bettong is an extremely rare animal therefore it is endangered. The ICUN listed the woylie as endangered in 1982. Why is the woylie endangered ? It is endangered because of the food chain and the environment although cats is not on the food chain they ae a major threat to a Bettong.

Kingdom : Animalia

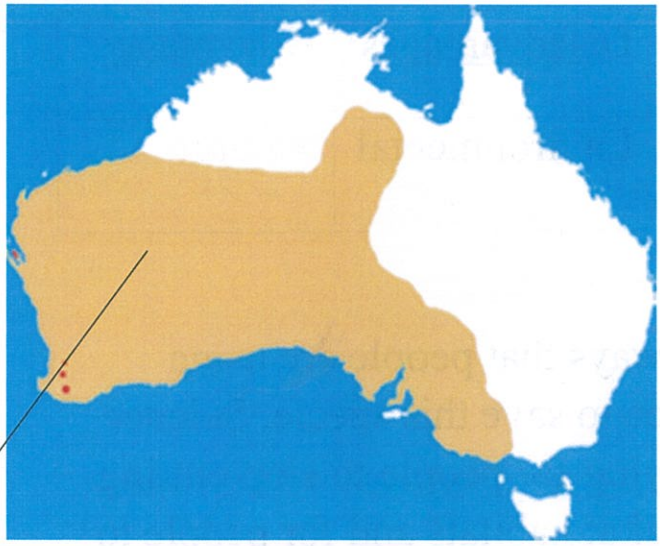
Phylum : Chordata

Class : Mammalia

Order : Diprotodontia

Family : Portoroidae

Gunus : Bettongia

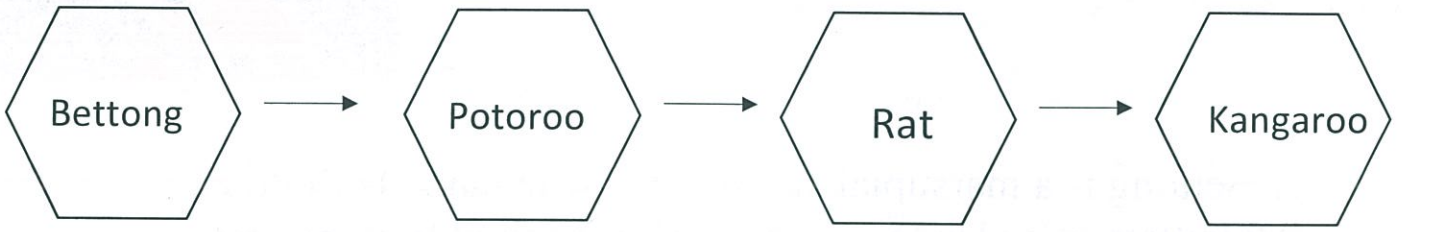


The yellow area is where the most bettongs are placed in Australia.

Fun fact !

Bettongs do eat things in the food chain but they also eat plants.

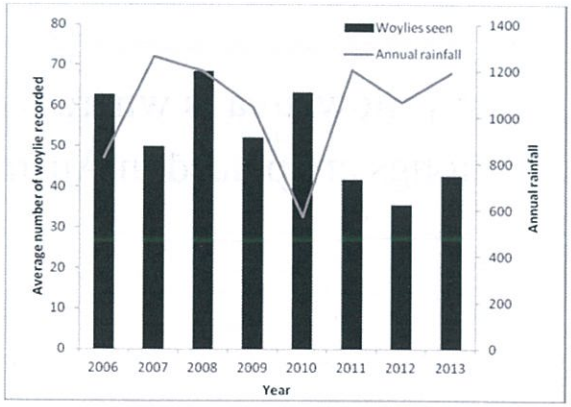
Bettongs Food Chain



Disadvantages:	Advantage:
Environmental	Nature

Two ways that people are using science to save this specie. Science are trying for people to stop cutting trees aka: habitats and for people to try and stop littering. Also the people are also trying to save the Bettongs by donating money to help the environment.

The wildlife could be very good for the Bettong and very bad at the same time. The habitat of a Bettong is normally in the forest or red sand or bushes. The humans used to be a bit careless and started polluting which did affect the it but the nature is very helpful for Bettongs.



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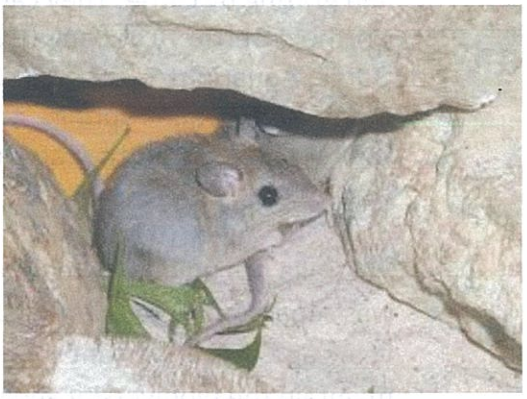
How can a tiny rat help us see the bigger picture?

By Marc Hagan 7.2 Somerset College Subject: Science Teacher: Mrs. Clare Walker

Due: Wednesday, 8th March 2017

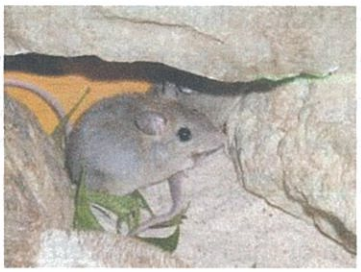
The Carpentarian Rock Rat is an endangered species.

Kingdom: Animal	Phylum: Chordate
Class: Mammal	Order: Rodent
Family: Murids	Genus: Zyzomys
Species: Palatalis	Scientific name: *Zyzomys palatalis.*



(The Corversation, 2013)

A Carpentarian Rock Rat Food Chain



Carpentarian Rock Rat

Zyzomys palatalis

Fruit of *Terminalia catappa*

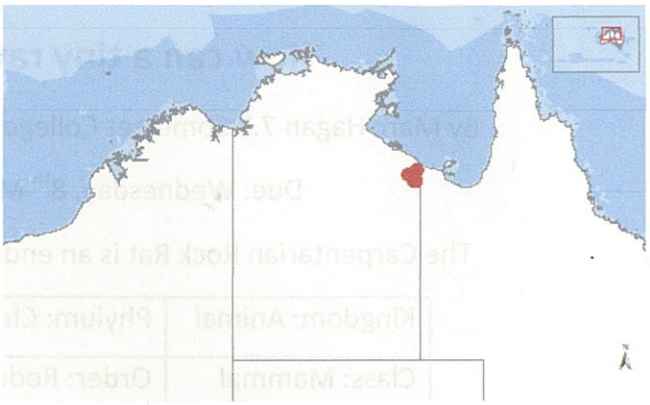
Feral Cat

Felis catus

Dingo

Canis famliaris

This species is endangered because they live in sandy gorges near to rocky slopes inside dry monsoon forests which are slowly dying off due to bushfires and grazing by cattle. They can be found only in the Northern Territory at Banyan Gorge, Moonlight Gorge, Aquarium Springs, McDermott Springs, Camel Creek and Redbank Springs. These areas are where shelter and food for the rats are conducive to the species.



Distribution Map of the Carpentarian Rock Rat

(Australian Government, 2017)

Australia has unique animals and plants because it was separated from other land masses 100 million years ago. It is important to protect these animals to maintain the biodiversity and uniqueness of this continent. Many animals in the Northern Territory are under threat and based on current monitoring programs, many native mammals will become extinct in the next 10-20 years.

Some animals such as Dingoes, Pythons, Ghost Bats, Northern Quolls and Rufous Owls, and the invasive species the Feral Cat, are all potential predators to the Carpentarian Rock Rat. By trapping and euthanizing feral cats, and using dingoes against them, scientists will save 75 million animals per night. There are about 15 million feral cats in Australia and every night each one of them hunt between 5-30 small animals.

The Parks and Wildlife Commission of the Northern Territory (PWCNT) are trying to maintain the remaining Carpentarian Rock Rat population by repopulating them so that they can be slowly reintroduced into what is left of their habitat and other potentially suitable habitats that are free from feral cats. PWCNT are also testing to see what other animals are preying on the Carpentarian Rock Rat so that these animals can be removed from the habitat the Carpentarian Rock Rats will be moved to.

Copper mines in the area can also potentially destroy the Carpentarian Rock Rat's habitat which leaves them with no food or water to survive. Mining has a negative impact on the environment unless it is carefully managed. Mining is important to Australia's economy and it is crucial to have guidelines in place to minimize the impact to animals and plants.

By conserving forest areas and managing wildfires, wildlife conservationists can provide safe environments for these small mammals. Eco tourism is also important to Australia's economy. The revenue of ecotourism businesses reached 1.11 billion in 2015. This shows the need to protect the biodiversity of Australia's flora and fauna to ensure future generations get to enjoy Australia's special animals and forests.

The Carpentarian Rock Rat is an essential part of the Australian wildlife and conservationists are successfully breeding and repopulating the Carpentarian Rock Rat into their monsoon forests though some challenges are to be expected. Australia has a moral responsibility to combat these challenges to hopefully create an outcome that will help the Carpentarian Rock Rat and the environment whilst still achieving economic progress.

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White-Throated Snapping turtle

By Oscar Harris 7.2 science research assignment.

Kingdom:	Animalia
Phylum:	Chordata
Class:	Reptillia
Order:	Testudines
Family:	Chelidae
Genus:	Elseya
Species:	E.Albagula

Why its endangered?

The white throated snapping turtle is endangered for a number of reasons a few is because of its poor breeding success mostly due to feral animals like foxes and goannas as well as cows trampling on nest sites destroying the eggs. The constructions of water impoundments on rivers and streams has minimized the habitats of the turtle thus making breeding harder. Boat strikes also happen and can badly injure or kill the turtle.

How we can help:

We can save this turtle from extinction by protecting the sites from where these animals breed. We can do this by maybe fencing it off and stopping farms and or other accessories from being built near their breeding places, we can also relocate carniverous animals that feed on the turtle legs (goannas and foxxes. Making suitable habitats in zoos and or making habitats on un used river and or nothing being dumped in to it. Landholders could also make sure they are not harming its nesting grounds and making sure they put up some form of protection.

What do white-throated turtles diet???

These turles generally have a diet of algea and small fish.

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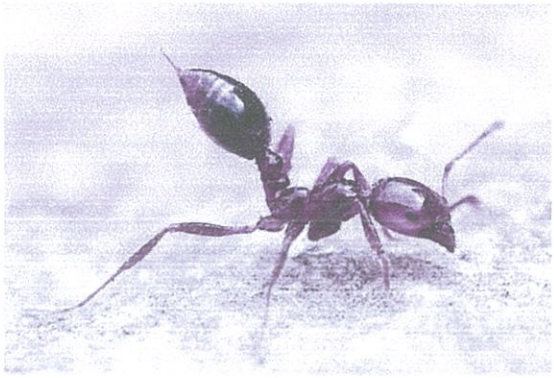
Lachlan Hartley, 7.2, Science, Somerset College, Mrs Walker, Due 8/3/2017

Fire Ants



(Yoshida, 2017)

A fire ant is an Australian pest that originated in South America. (Qld DAF, 2016)

Fire ants were first detected in Australia in the Brisbane area in February 2001. (Qld DAF, 2016)

There have been six separate incursions of fire ants into Australia with the last being into the Brisbane airport area in 2015. (Qld DAF, 2016)

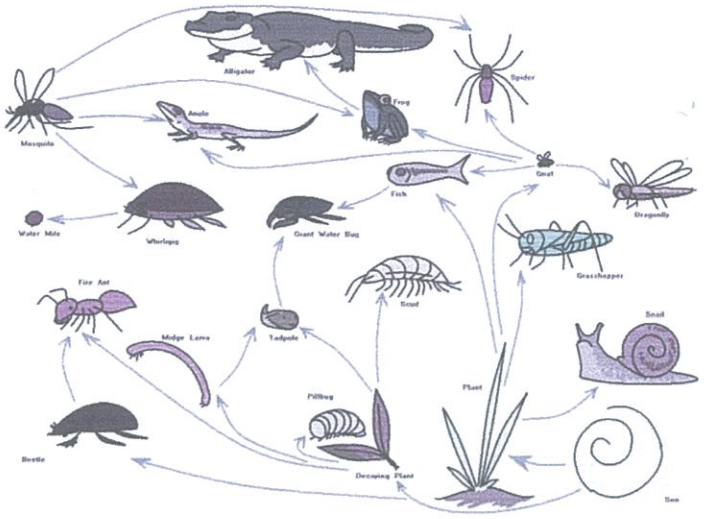
Fire ants are an invasive species in Australia because they:

- Stop people walking around in bare feet and playing in parks due to the severe pain from their sting in their tail
- Interfere with the food chain by undermining entire crops and consuming small livestock when they develop into super-colonies
- Fire ants may displace or eliminate some of Australia's unique native species (Sturmer, 2016)

Classification

Kingdom	Animalia
Phylum	Arthropoda
Class	Insecta
Order	Hymenoptera
Family	Formicidae
Genus	Solenopsis
Species	Mandibularis

Scientific Name: Solenopsis mandibularis (Wikipedia, 2017)



Food Web (Bugproject, 2017)

Ways that science is being used to control fire ants (Qld DAF, 2016):

- Field officers perform emu parades over areas of land suspected of housing fire ant colonies
- Sniffer dogs are specially trained to smell-out fire ants. It is reported that they can sniff out a single ant
- Helicopters are also able to detect ant colonies using thermal cameras whilst on the move

Implications of the current solution and alternative solutions (Qld DAF, 2016):

- The current solution is deemed to be very effective and safe
- The chemicals that are being used to get rid of fire ants only last for 24 hours and are not harmful to most other insects, animals and humans.
- The solution is very effective because it does not kill the ants but sterilises the queen causing her to have no further offspring
- Alternative solutions including boiling water, petrol and kerosene do not work because hot water only kills a few ants, petrol and kerosene pollute the environment and kill other animals and the grass.

Economic implications of the solution

- Australia has spent $330 million on fire ant eradication since they were first detected in 2001 (Chung, 2016)
- Without eradication the cost to the Australian economy will be about $10 billion over the next 30 years (Chung, 2016)
- It is projected that for every dollar spent eradicating the fire ants $25 will be saved (Sturmer, 2016)

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Scientific Fact Sheet

By Victoria Jones 7.2

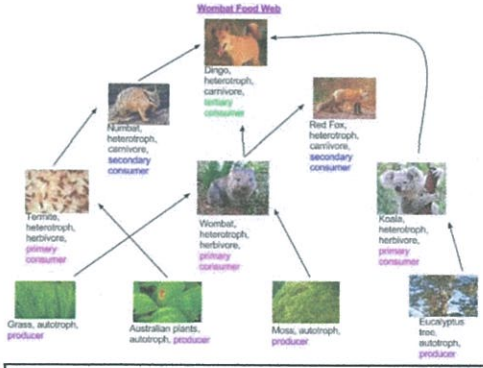
Name: Numbat **Other names:** Banded Anteater

Conservation status: Endangered **Scientific name:** Myrmecobius fasciatus

The numbat is an endangered mammal native to Australia. It is commonly found in Western Australia. The numbat is the Animalia in its seven levels of classification. Its scientific name is Myrmecobius fasciatus.

Kingdom	Animalia
Phylum	Chordata
Class	Mammalia
Order	Dasyuromorphia
Family	Myrmecobiidae
Genus	Myrmecobius
Species	M. fasciatus

http://tweedart.com.au/tweed-art-animal-of-the-week-the-numbat/



http://www.thinglink.com/scene/385369078757326849

The numbat is a secondary customer in its **food web**. This means that it is second in line – tied with the red fox. The dingo is apex predator and following the numbat and the red fox are termites, the wombat and koalas. The produce eaten by the three primary customers is grass, Australian plants, moss and the eucalyptus trees.

The numbats **food chain** starts off with the dingo as the apex predator, followed by the numbat being the secondary customer, third in line are termites which eats Australian plants.

Why is the numbat endangered? Numbats are extinct through most of its range, which means they now are only living in the wild. Numbats have declined drastically since the first European settlers arrived in Australia just 200 years ago (http://www.bagheera.com/inthewild/van_anim_numbat.htm) The constant growing of

infrastructure and agriculture in Australia led to numbats losing their habitat. The loss of habitat was also affected by wild/brush fires.

The slow moving mammal is also threatened and killed by introduced animals. These animals include introduced cats, dogs and foxes. Since the numbat moves so slowly, it is easy-to-catch and is caught and killed by animals.

How we are using science to save the numbats.

1. Science is helping by creating safe places to breed and take care of numbats. An example of a place is the Perth zoo. There is a group called the numbat project who rescue numbats in danger or babies who have lost their mother. They bring the mammals to the zoo to take care of them and get them back on track.
2. Another scientific method that has been introduced is the tagging of the numbat to track where the numbat lives and who dangers the species. This is explained in the next paragraph.

Political

The Western Australian government in 2013, fitted six collars to numbats and trained them to escape and avoid predators. Environment Minister Albert Jacob spoke at the Perth Zoo. "These numbats have been well prepared for their new life in the wild as part of a joint project between the Department of Parks and Wildlife (DPaW) and Perth Zoo," Mr Jacob said.

Moral

The moral implications of saving the numbat are numerous. It is everyone's responsibility to protect their country's natural habitat. Even though the numbat is close to extinction, we should not forget about the numbat and take care and responsibility towards saving it from its disappearance.

Any effort to prevent the numbats extinction costs money. Some people suggest that money should be used on education and infrastructure, and not on animals. Human beings are the most intelligent species on earth, so we should use this advantage to help the numbats who are struggling to live by creating safe environments to allow these animals to double from less than 1000 species to 2000 species and higher.

There is very little time left so we must act now!

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Somerset College

CLASS: 7.2

NAME: Harry Jordan

Mrs Walker science

Date of submission: Thursday 8

Blob fish

(Psychrolutes marcidus)

A blob fish is an extremely endangered animal. There are only 420 blob fish left in the world, so great efforts are being made to save them.

The blob fish is endangered for many reasons. A huge reason is because of overfishing. Blob fish live where other tasty sea creatures do, also. Blob fish are often caught by bottom trawling nets. The blob fish does not seem to be an important animal in the ecosystem, so the fishermen do not always put blob fish back. However, each time an animal goes extinct, the food web has a new hole in it. Blob fish eat whatever floats into their mouth, because they do not have muscles. Because of their lack of muscles, they cannot swim around and look for food. Instead, a piece of something may float in their mouth. This is another reason blob fish are endangered.

Blob fish eat anything that floats into their mouth, which is very dangerous. If a piece of trash or other harmful things that aren't meant to be eaten are simply floating around near a blob fish, the blob fish may eat it. This would cause sickness and possible death for the blob fish. The fact that us humans know our trash is killing many animals may seem like an idea for others to stop littering, but it isn't. We continue to litter and don't realize just how much damage it is making to our ecosystem. Thanks to us, Blob fish are on the verge of extinction.

What are scientist trying to do to help Blob fish?

Scientists are trying to find ways to make fishers throwback blob fish if they find them. Also they are finding ways to help them like some are trying to get 1000 signatures then they can write to the Australian government and complain about the right of the blob fish.

What do blob fish eat?

The blob fish eat sea urchins. mollusks. crabs. lobsters. microscopic bacteria. sea urens and other slow moving ocean bottom feeders. They have to eat these things because they have pretty much no muscles, so how would they catch fast moving prey.

The advantages and disadvantages of what science is doing to help blob fish.

Disadvantage: If they don't get enough people to support their complaint so that they can take it to the government.

Advantage: If they get enough people to help them then they can maybe help the blob fish a lot.

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By: Kate Jordan, Class: 7.2, Teacher: Mrs Walker, Subject: Science, School, Somerset College, Submission date: 8th March

TASMAINIAN DEVILS

The Tasmanian Devil, also known by its scientific name, *SARCOPHILUS harrisii,* is an endangered Australian animal. It is found exclusively in Tasmanian and nowhere else in the world. It especially likes to live around coastal forests and scrublands and since Tasmanian is an island, there are lots of places that fit those criteria.

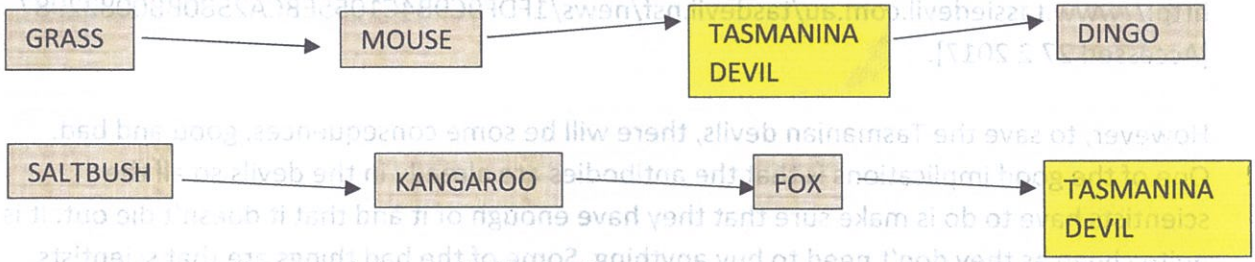
The Tasmanian Devils seven levels of classification are as follows:

LEVEL OF CLASSIFICATION	SCIENTIFIC NAME	NORMAL NAME
Kingdom	Animalia	Animals
Phylum	Chordata	Chordates
Class	Mammalia	Mammals
Order	Dasyuromorphia	Marsupial Carnivore
Family	Dasyuridae	Dasyurids
Genus	*SARCOPHILUS*	Tasmanian Devil
Species	*S. harrisii*	Tasmanian devil

(Regants of the university of Michigan, 2014. *Animal Diversity Web.* [Online]
Available at: http://animaldiversity.org/accounts/Sarcophilus_harrisii/classification/
[Accessed 23 2 2017].)

The Tasmanian devil is the largest carnivorous mammal in the world. Being carnivorous, it only eats meat. Its normal diet is birds, snakes fish and insects but sometimes it scavenges for carrion (animal carcasses). Live science, 2017. *Live science.* [Online]
Available at: http://www.livescience.com/27440-tasmanian-devils.html
[Accessed 2 3 2017].

As you can see in the food chains below, the Tasmanian Devil is quite high up.



Anon., 2016. *Save the tasmainian devils.* [Online]
Available at: http://savethetassiedevilsprogram.weebly.com/about-the-tasmanian-devils.html
[Accessed 23 2 2017].

The Tasmanian devil breads every year in March, with the babies being born in April. Believe it or not, the Tasmanian devil can have up to fifty young at once! Unfortunately, there is a deadly disease called the Devil Facial Tumour Disease(DFTD) that kills hundreds of devils every year. The DFTD is extremely contagious and spreads when one devil bites another which can happen on a daily basis. This disease doesn't take long to spread or take effect. The end result is swollen boils on their faces and necks, making it hard for them to eat and drink. This also affects their internal organs, which means that they don't function properly. For two decades, this disease has spread through wild devil populations, killing devils and reducing their numbers drastically. Their only hope for survival is that

scientists can find a way to stop the disease.

Luckily, scientists have managed to find not one, but two ways of potentially saving the Tasmanian Devils. The first way, and probably the one that will hold the most success, is that scientists have recently discovered a natural antibody that all Tasmanian devils have. Naturally, the devils with the most antibodies have the highest chance of beating the DFTD and, therefore, survival. With enough of this protection in their bodies, the devils have lifelong protection against the disease. The antibody cure has been trialled on humans and, surprisingly, it works against human cancer, a sure sign that it will continue to work for the devils too. To make sure that the devils have enough of these antibodies, scientists are working on duplicating it and injecting more of it into their bodies. This way, scientists know how much they need to help them survive. Deakin university, 2016. *Natural antibodies could save the tasmainian devils.* [Online]
Available at: http://www.deakin.edu.au/research/research-news/articles/natural-antibodies-could-save-tassie-devils
[Accessed 27 2 2017].

The second, less affective way of saving the Tasmanian devils comes from an organisation called the Save the Tasmanian Devil Program. This programs goal is to re-introduce Tasmanian Devils into wild devil populations in Wukalina and Mount William. These colonies have not yet been affected by the tumour or at the least it hasn't spread too far yet. Their aim is to stop the tumour from spreading around the area first and then put as many devils into the area so that as many devils as possible are living away from the tumour. They are aiming to have this plan put into action in May, 2017. The Tasmanian devils may have hope for their survival.
Tasmainian government, 2017. Save the tasmanian devil. [Online]
Available at:
http://www.tassiedevil.com.au/tasdevil.nsf/news/1FDF9C9B4C1055EBCA2580BB00822987
[Accessed 27 2 2017].

However, to save the Tasmanian devils, there will be some consequences, good and bad. One of the good implications is that the antibodies are already in the devils so all the scientists have to do is make sure that they have enough of it and that it doesn't die out. It is quite cheap as they don't need to buy anything. Some of the bad things are that scientists may have to duplicate the antibodies and so that may cost a bit but not too much. Another bad consequence is that since the antibody is natural, the cells of the disease may be able to avoid recognition and so they are able to transform into something that will also kill the devils.

Kate Jordan thinks that scientists may be able to put a stop to the DFTD by way of the natural antibodies but she is unsure whether the relocating idea is the best because it could spread the tumour even further. However, she has hopes that the Tasmanian Devils will continue living for a long time yet.

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What is Grey-Headed Flying-fox?

Science fact sheet from Betty Ke 7.2

Somerset College

Scientific Name:

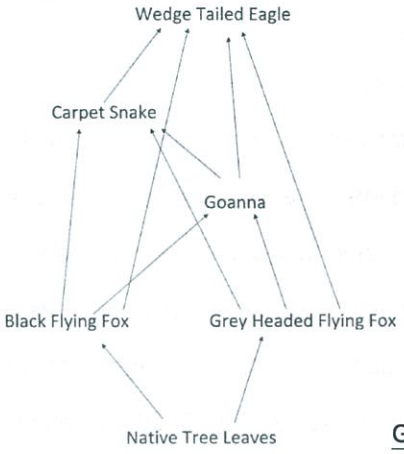
Pteropus poliocephalus

Alternative Name: Fruit bat

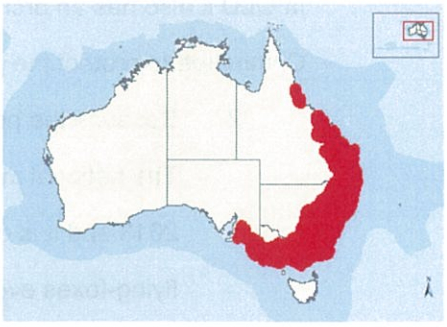
Classification:

Kingdom:	Animal
Phylum:	Chordate
Class:	Mammalia
Order:	Chiroptera
Family:	Pteropodidae
Genus:	Pteropus
Species:	Poliocephalus

Food chain:



Grey-headed flying fox Living Area:



Hobbit: Urban areas, forests and woodlands, intertidal mangroves.

What is Grey-headed flying fox?

Grey-headed flying fox is an Australia endanger animals.

Why is Grey-headed flying fox being endanger?

The population of headed flying fox was up to million, but in 2002 it was estimated that only around 400,000 Grey-headed flying fox left.

- The main threat that the grey-headed flying fox is facing is the destruction of foraging and roosting habitat loss due to urbanization and agriculture expansion.
- The climate change is also a threat to Grey-headed flying fox. For example, a research shows that since 1994, more than 24,500 grey-headed flying foxes have died in their roosts when temperatures exceeded 42 degrees Celsius.
- Many farmers think bat is a bad thing because they would cause destruction to crops, so the farmer often kill them.
- There are also some bats flying into the power line and died from electrocution.

- The number of bat killed is unknown, but it is estimated that the average number of bat killed in one year is 100,000.

Why we need to protect Grey-headed flying fox?

Grey-Headed flying fox just like a big bee, they spread out the seed and pollen, without them the plant can't survive.

How do we protect the grey-head flying fox?

1. The government start an action plan for Grey-headed flying fox:

   Recovery objectives-

   - Stabilise the population at its current level.
   - Define patterns of landscape use, and identify and protect essential habitat.
   - Develop non-destructive methods for crop protection.
   - Develop non-destructive methods for management of camps in problem areas.
   - Ensure consistent management of the species across all range states (Queensland, New South Wales and Victoria).

In QLD it also has an orchardists and researchers have a formed a Flying Fox Consultative Committee to protect the grey-headed flying fox.

2. Because the population of grey-headed flying fox still unknown, so there is a program: The national monitoring program for the grey-headed flying-fox stared from 14 February 2013 and it is conducted every three months. This is the biggest census of grey-headed flying-foxes ever undertaken across the species' entire national range, it can predict the population in the future.

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What is a Brush-tailed bettong? (Bettongia penicillata)

Science Fact Sheet

Somerset college Debby Kuo 7.2
Mrs. Walker 2.3.2017

The brush-tailed Bettong

- The brush-tailed bettong is an endangered species

Classification-

kingdom	Animalia
phylum	Chordata
class	Mammalia
Infraclass	Marsupialia
family	Potoroidae
genus	Bettong
species	b. ogilbyi

Appearance-

- There is a black crest of fur that extends along the end of its tail
- Similar in appearance to a small kangaroo, the brush-tailed bettong has dense grey-brown fur on its back and pale white-brown underparts, and it typically stands and hops on muscular hind limbs while holding its shorter forearms close to its belly. Its eyes are relatively large and the small ears

Ability's-

- *The tail is prehensile and is used to grasp and carry nesting material such as grass*

Habitats-

- A brush-tailed bettong makes its nests from tussocks of grass most commonly found in open forests and woodlands which have a low clumped understory of tussock grasses or woody shrub land

Why it is an endangered species-

- Was seen as a pest
- predation by feral cats and red foxes

2 Ways science is taking care

- Scientists are helping woylies by baiting red foxes to get rid of them - as they are an invasive species
- Scientists are informing and educating the community about the brush-tailed Bettong, and involve the community in, recovery actions.

Brush-tailed Bettong population

- The total population size is estimated to be no more than 6000
- *Decreasing. Between 2001 and 2006 it is estimated that the species had declined by 70-80% (approximately 8,000-15,000 individuals). The declines have continued and there are no clear signs of population recovery.*

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URL:http://www.arkive.org/brush-tailed-bettong/bettongia-penicillata/image-G38854.html

Article title: Bettongia penicillata (Brush-tailed Bettong, Woylie)
Website title: Iucnredlist.org
URL: http://www.iucnredlist.org/details/2785/0

Article title: EDGE of Existence
Website title: EDGE of Existence
URL:
http://www.edgeofexistence.org/mammals/species_info.php?id=1416

Photo
https://www.google.com.au/search?q=Bettongia+penicillata+cute&safe=strict&client=firefox-b-ab&source=lnms&tbm=isch&sa=X&ved=0ahUKEwifsY3v-KTSAhWBpZQKHQkRB5UQ_AUICCgB&biw=1440&bih=821#imgrc=Wvj4qhq6Wzzi1M:

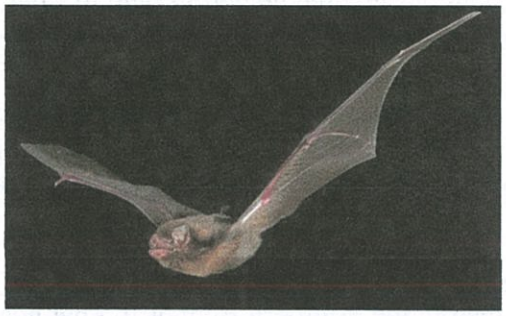
Somerset College

Name: Charlie Liu
Subject: Sciences
Teacher: Mrs Walker
Date due: Wednesday week 7

The Southern bent-wing bat might be extinct if we can't have a chat!

Description

The southern bent-wing bat is a critically endangered species. It is one of the five listed critically endangered mammals in Australia. Currently, it is estimated there are only approximately 20000 to 30000 individual bats left. Ranging in size from 52 to 58 mm, the Southern Bent-Wing bat outstandingly weighs only 15g. That's right grams! The fur of the bat is very dull but under the stomach it gets slightly lighter. Its scientific name is



Kingdom: Animalia
Phylum: Chordata
Class: Mammalia
Orders: Chiroptera
Family: Vespertilionidae
Genus: Miniopterus
Species: schreibersii bassanii
This was stated by the Australian geographic.

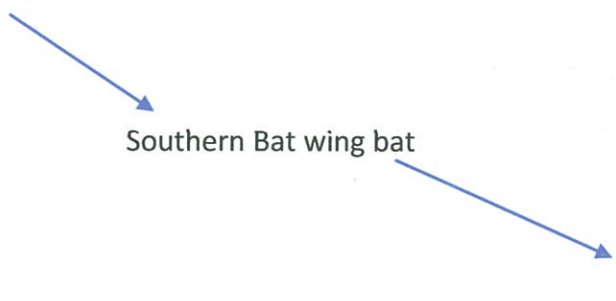
https://www.zoo.org.au/animals/southern-bent-wing-bat

Ecology

The southern bent-wing bat is found in south-eastern South Australia and western Victoria. It is a cave-dweller and is dependent on caves which have the right conditions for babies to be bred. The ideal caves have structural characteristics that make them hot and humid for the baby bats. The distribution of the Southern bent-wing Bat is coastal, in areas with major drainage systems. This information was found by the Australian government.

Food Chain

This is the basic food chain:



Threats

The southern bent-wing bat is threatened by various threats, but these are the maim two.

Firstly, loss of habitat has played a big role in this Bat's decrease of population. This includes loss of wetlands, degradation of rivers, loss of foraging habitat and agriculture intensification. This was all stated by the Australian government.

Finally, disturbance of breeding caves. This is considered as one of the deadliest threats as it could result in cave abandonment and unsuccessful breeding. That was stated by the Australian government.

What science is doing to help

Science is helping this species by multiple reasons. Here are two. Firstly, the Australian government has created an action plan to save these animals. They have a variety of ways that they are going to help the bats. The Australian government will be funding these bats so that they can stay alive.
Finally, awareness is raised. There are multiple charities and zoo's that support this bat. An example is zoo's Victoria. Scientists will then get the money and find cures to diseases, why their habitat gets lost and find what creatures disturb the caves and how to stop it.

Conclusion

In conclusion, the Southern Bent-Wing bat has threats but science is trying to help it. The bat is critically endangered, but we are certainly finding ways to help this creature. It can eat insects to survive, but can be eaten by feral cats. The bat deserves care and it has been received. With the help of science, the bat won't be extinct, because we had a chat!

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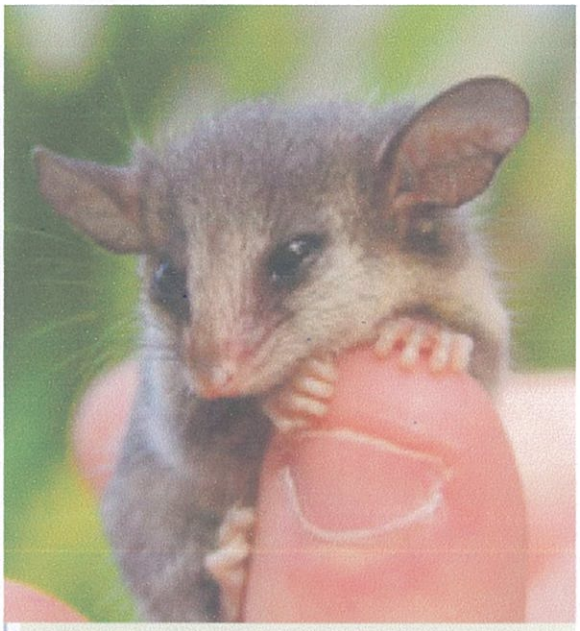
Olivia Mackintosh.

The Mountain Pygmy Possum



Scientific classification	
Kingdom:	Animalia
Phylum:	Chordata
Class:	Mammalia
Infraclass:	Marsupialia
Order:	Diprotodontia
Family:	Burramyidae
Genus:	*Burramys*
Species:	***B. parvus***

The Mountain Pygmy Possum, once recorded in 1965 as the rarest species in the world by The Guinness Book of World Records, is a tiny creature we know as the Pygmy Possum. Scientifically named the Burramys Parvus from the species Burramys, the Pygmy Possum is actually the largest of the species and also the only member of this species to still exist. The population is estimated at 2,600 adults (in counting) however the population is slowly but surely decreasing, due to the wild foxes and large cats living in the area. The Pygmy Possum's habitat is also at risk from human development of land for mountain resorts.

The Mountain Pygmy Possum weighs 45g and is 110mm in length (smaller than a mouse) excluding their tail which is an enormous 140 mm.They are nocturnal creatures, therefore mainly feasts at night on Bogong Moths, fruits and seeds, They are omnivoric creatures meaning they eat both meat and plants.

The Pygmy Possum is the only Australian mammal to live exclusively in alpine areas. For some time, it was believed that the species was extinct, until in 1998 Heinze D and Williams L lead to the discovery of Mountain Pygmy Possums living on Mount Buller , Victoria. They have now also been found living on Mt Bogong and Mount Kosciuszko (also in Victoria).

Female Mountain Pygmy Possums live for up to 3 years, and the males live up to 5 years. Following birth, babies stay with their Mother for up to 4 weeks. After mating, females and males separate and never stay together.

Mountain Pygmy Possums hibernate for up to 7 months of the year. They can double their weight in the summer seasons to build up fat for winter. Prior to hibernation, the Mountain Pygmy Possums store fruit, nuts and moths in their habitats (on rock and boulder plains). They wake up every few weeks to eat a portion of their stored food, before returning to hibernationwith them until they wake up after 3 weeks at a time then eat.

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European Hare

(Lepus europaeus)

By Callum McClure 7.2, Somerset College, Science, Mrs Walker, 8th March 2017

The European hare is a species of hare native to Europe and parts of Asia. It is among the largest hare species. Hares are herbivorous and feed mainly on grasses and herbs. Their natural predators include large birds of prey, many species of the dog family and many species of the cat family. They rely on high-speed and endurance running to escape from their enemies; having long, powerful limbs and large nostrils.

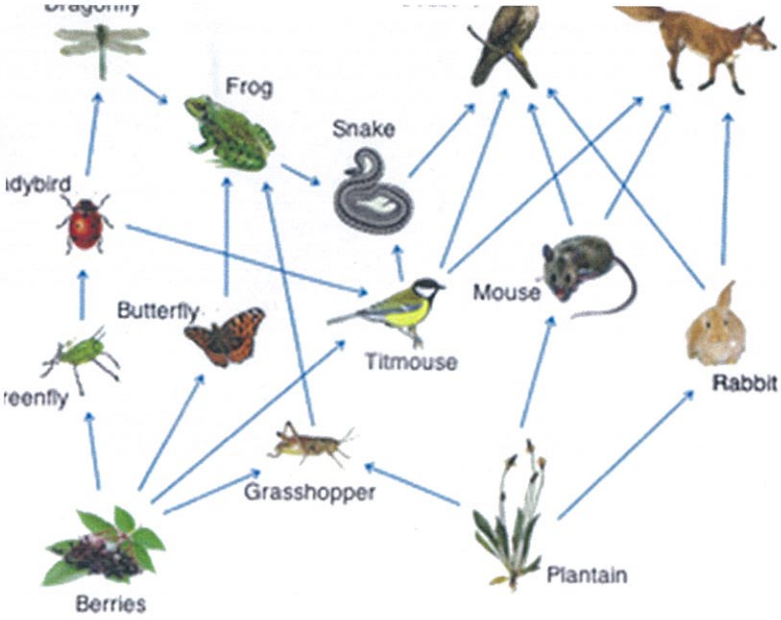
Generally nocturnal and shy in nature, hares change their behavior in the spring, when they can be seen in broad daylight chasing one another around in fields. Sometimes while they are running a round they will hit each other with their paws. This is usually not competition between males, but a female hitting a male, either to show she is not yet ready to mate or as a test of his determination. The female nests in a depression on the surface of the ground rather than in a burrow, and the young are active as soon as they are born. Litters may consist of three or four leveret and a female can have three litters a year. Hares can live to be 12years old. The breeding season lasts from January to August.

The European hare was introduced to Australia in the late 1830s in Tasmania, although it failed to create a population in the wild.

They first successfully created colony of hares to be created in Australia was on the shores of Westernport Bay in 1862. The following year another hare colony was created on Phillip Island by the Acclimatisation Society of Victoria for the use in the sport 'coursing'. Hares released on the mainland thrived with limited hunting pressure.

The hare became a widespread species throughout much of south-east Australia by 1870. Spreading at about a of 60 kilometres per year, hares crossed the Murray River in 1875, where they made their way along the western slopes and tablelands of New South Wales. By 1900, hares had reached the Queensland border and become a major agricultural problem in northern and western Victoria.

A few techniques to stop the hare is shooting, poisoning, mustering and trapping. These techniques are effective however the trapping technique is dangerous as other animals such as a kangaroo or other native animals could be trapped and hurt and that would not go well as there is never a surety that it will get trapped and instead could start killing other animals. The other ways of culling hares are good as they will normally insure a quick death or will bring the hares together so that they can either be killed or infected with a disease to spread so to put the other wild hares in danger and to counter the problem.



There are not many initiatives that are trying to counter hares as they are considered a minor pest. There are a few initiatives trying to counter them and without them it is probable that the hares would spread wildly and become a major pest within months.

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Northern hairy-nosed wombat
By Vivian Milosevic, 7.2, Somerset college, science; Mrs. Walker, 8/3/17

https://www.bing.com/images/search?view=detailV2&ccid=zW4Ud6Tl&id=E590AB4A604E4B65BF709C49B1E8191645AECAC6&q=northern+hairy+nosed+wombat&simid=608049439281974792&selectedIndex=1&ajaxhist=0

Lasiorhinus krefftii aka the **northern hairy-nosed wombat** is a **endangered species** that has warm blood, has a very hairy nose and is a aussie mammal. The levels of classification for the Australian mammal are....

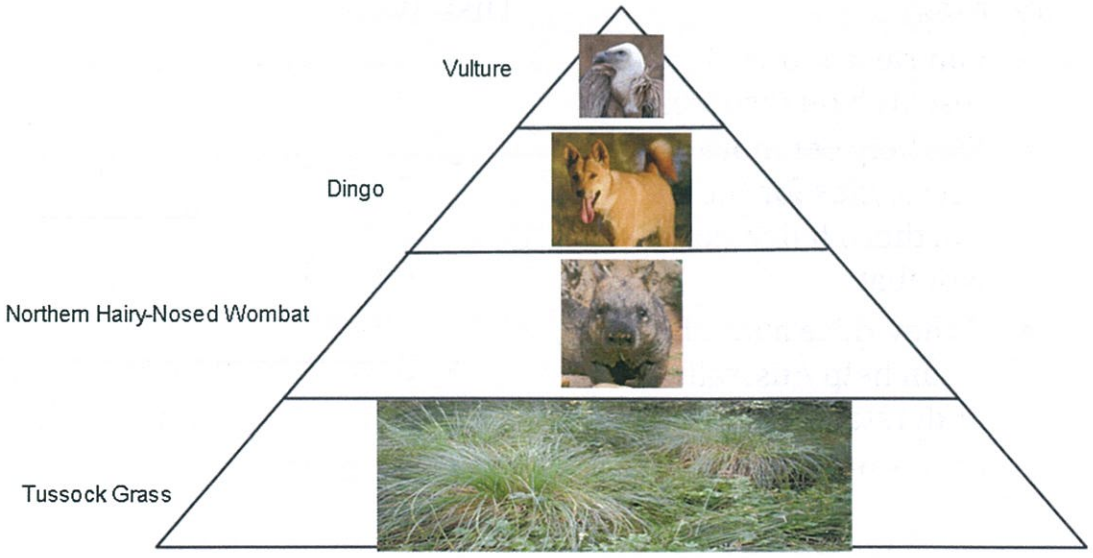
KINGDOM: Animalia
PHYLUM: Chordata
CLASS: Mammalia
ORDER: Diprotodontia
FAMILY: Vombatidae. In older references the family was sometimes called phascolomyidae (also spelled Phascolomidae).
GENUS: Vombatus **SPECIES:** L. krefftii

~~

Common name: northern hairy-nosed wombat
Scientific name: only had one scientific name, which is the Lasiorhinus krefftii

~~

This is the food chain of the Northern hairy-nosed wombat. The main predator is usually the dingo or the fox. But the vulture as you can see eats both of them. The northern hairy-nosed wombats diet consists of a lot of grasses such as the tussock grass, poa grass and spear grass. They also sometimes eat farm vegetables. During the droughts the wombats usually eat bindyi or bluebush.



http://kaylahuynh.weebly.com/uploads/4/5/8/6/45865537/4241352_orig.png

History and why the Northern Hairy-Nosed Wombat is endangered:

History ~
Early in the 20th century it was thought that the Northern Hairy-nosed wombat was extinct. Then, in the 1930s, a small population was discovered in what is now Epping Forest National Park in central Queensland.

Reasoning for being endangered ~
There isn't only one main reason on why the northern hairy nosed wombat is endangered. A lot of people say because of their food source and they must fight for food to survive. Also because of diseases, droughts, wildfires, loss of habitat, predators and small populations.
~~

The two ways that science helped protect the northern hairy nosed. One is by trying to find solutions for the reasoning's of the northern hairy nosed wombat being endangered like finding out diseases, finding new habitat that don't cause a lot of problems etc. and the other way that science helped was when they were trying to increase conservation efforts.
~~
My chosen topic is economical:

Advantages	Disadvantages
• Can raise money for research on diseases • Can help get more necessities for the Northern hairy-nosed wombat • If they raise a lot of money, it can help Australia understand the help that the wombats need	• Threatens Private Property • Doesn't help with other issues such as loss of habitat and small population • Sometimes doesn't raise enough money for the wombats

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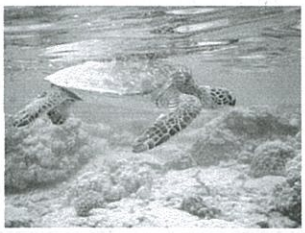
Is The Green Sea Turtle Going Extinct?

Somerset College Science CWA

Hugh Munro 7.2 (Due-8/3/17)

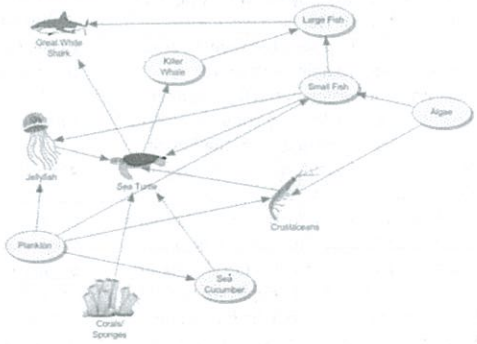


Endangered Species: Green Sea Turtle, By Clark Little, North Shore, Oahu, Hawaii, USA. 2017. *Highly Honored - Endangered Species: Green Sea Turtle, By Clark Little, North Shore, Oahu, Hawaii, USA*. [ONLINE] Available at: https://naturalhistory.si.edu/exhibits/natures-best-2010/4_ClarkLittle_HH_Turtle.html. [Accessed 23 February 2017].

Chelonia mydas

Kingdom	Animalia
Phylum	Chordata
Class	Reptilia
Order	Testudines
Family	Cheloniidae
Genus	Chelonia
Species	Mydas
Scientific Name	*Chelonia* mydas

Green Sea Turtle Food Web



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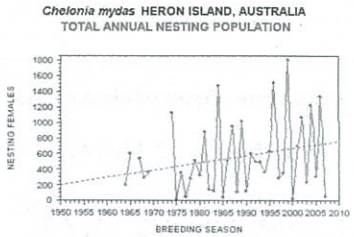
Why the Green Sea Turtle is Endangered?

WWF. 2017. *Green Sea Turtle*. [ONLINE] Available at: http://www.worldwildlife.org/species/green-turtle. [Accessed 26 February 2017].

The Green sea turtle currently is classified as endangered. Like other sea turtles, Green Sea turtles migrate great distances between beaches and feeding grounds from where they hatched. They are threatened by hunting of adults, being caught in fishing gear and loss of nesting beach sites and overharvesting of their eggs. Throughout Australia's waters, hundreds of thousands of sea turtles are caught per year by accidentally getting caught in shrimp trawl nets, on longline hooks and in fishing gillnets. Sea turtles drowned once ensnared in these nets as they need to reach the surface to breathe. This is known as bycatch, and it is a serious threat for green sea turtles. As fishing activity increases this threat is becoming more of a hazard. Yet another cause is of decreasing population is habitat loss. Green sea turtles rely heavily on beaches for nesting. Unconstrained coastal development, vehicle traffic on beaches, and other human activities have directly ruined or disturbed sea turtle nesting sites around Australia. Green sea turtles feeding grounds, which are seagrass beds are also at risk from pollution and sedimentation caused by developments on the coast. Plus the warmer water temperatures caused by pollution and global warming have resulted in coral bleaching which is the explanation for coral to be dying. When water is too warm, corals will expel their nutrients causing the coral to turn completely white and eventually die. This results in the turtle having lower amounts of food and a lower chance of survival. The last reason turtles are classified as endangered is resulted off overharvesting and illegal trade. Globally, the green turtle continues to be hunted and have their eggs harvested. Much is for human expenditure, but trade of turtle parts sadly remains a successful business. Great numbers of green sea turtles are gathered every year, particularly in parts of Western Pacific and Asia on there long migratory routes. Along the Eastern Pacific coast of Mexico, although completely protection, green turtles are still at risk from hunting. The good news it that protection and laws are juristically helping to help the green sea turtles population make a major comeback and help boost the population back up into a healthy status. "The Sea Turtle Conservancy estimates that there are **85,000** to **90,000** nesting female green sea turtles worldwide. The population of males and immature females is not known", stated Refernce.org (https://www.reference.com/pets-animals/many-green-sea-turtles-left-71469ed74f6198f5)



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What is science doing to help the Green Sea Turtle?

Many organizations like WWF and governments such as the Australian are trying aid the recovery of Sea turtles by using science and here are some of the solutions they are implementing.

What Science is Doing	Advantages	Disadvantages
Working with fisherman to not place nets or hooks in places with turtle populations.	Slashes the chance of turtles getting stuck in nets and eliminates a huge hazard for sea turtles.	Limits fishermen and may affect the fishing market and industry as well as the fisherman not getting the highest amount of profit he can make.
Getting smaller organizations or charities to monitor nesting beaches and feeding sites (coral reef) to ensure sea turtles have a safe place to nest, feed and migrate freely.	Helps protect nesting sites and is extremely effective because actual humans are over watching and monitoring these feeding and nesting sites. Plus since it is a charity or small organization donations will be made and payment for the workers is not unnoticed if organization or free if charity.	It takes time and effort out of peoples days and prevents them from seeing friends or family .
Satellite tracking on the Green sea turtles.	The satellite tracking enables researchers to track sea turtles as they migrate. These satellite tags do not harm the turtles whilst on the turtle in any way and are designed to eventually fall off. The data will inform researches where populated feeding areas may be, therefore helping them to understand migration patterns, and help prevent where turtles may come in contact with fisheries and their gear in the future	Disadvantages of this are that when the satellite tracker eventually falls off it will sink to the bottom of the ocean and partly pollute the ocean even further. The second disadvantage is to place the tracker on the turtle, the requirement of catching the turtle is needed and this can place the turtle in a lot of stress, which is not good for the turtle's health.
Helping local communities to not rely on turtle poaching and harvesting to support themselves or their families.	The organization WWF states that "WWF works with local communities to reduce turtle harvesting and egg collection. Exploitation of turtles is often driven by a lack of economic choices. WWF works to develop alternative livelihoods so that local people are no longer dependent on turtle products for income. WWF also supports programs that promote the value of sea turtles. WWF works to stop the illegal trade of turtle meat and eggs, through TRAFFIC, the world's largest wildlife trade monitoring network. We also train and equip local rangers to protect turtles from poaching and patrol nesting beaches", as stated on their website (http://www.worldwildlife.org/species/green-turtle).	A problem with this is that turtle poaching may be the only choice for ones income and ability to support themselves or a family and they may be willing to fight for it, therefore being a ranger who may get in the way of the business it may be dangerous. Yet another disadvantage is because some cultures use turtles for medicinal purposes and this then stops them from doing so.

Because of these solutions green sea turtles are being saved from extinction and have a brighter future.

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Due 8/3/17

Teacher: Mrs Walker year 7 Science

Northern Hairy Nosed Wombat

By: Brigette Newing Somerset College 7.2

The Northern Hairy Nosed Wombat is one of the rarest mammals on land. Making it perfect for this assessment. Its scientific name is .This incredible animal was 3 feet long and 1 foot weighing 40 kilograms. It is one of Australia largest wombats. Its proper name is Lasiorhinus krefftii (Lasio = hairy; rhinus = nose; krefftii bats) and its scientific name is Vombatus Ursinus. The Northern Hairy Nosed Wombats classification its Kingdom is Animalia, its Phylum is Chordata, its Class is Mammalia, its Order Diprotodonta, its family Vombatide, its Genus is Lasiohinus and its Species Krefftii. This animal lives in woodland and coastal shrub land. Also the average litter size is 1, its furs colour is brown, tan and grey, its lifespan is 20-26 years, its lifestyle is solitary, its top speed is 40km/h

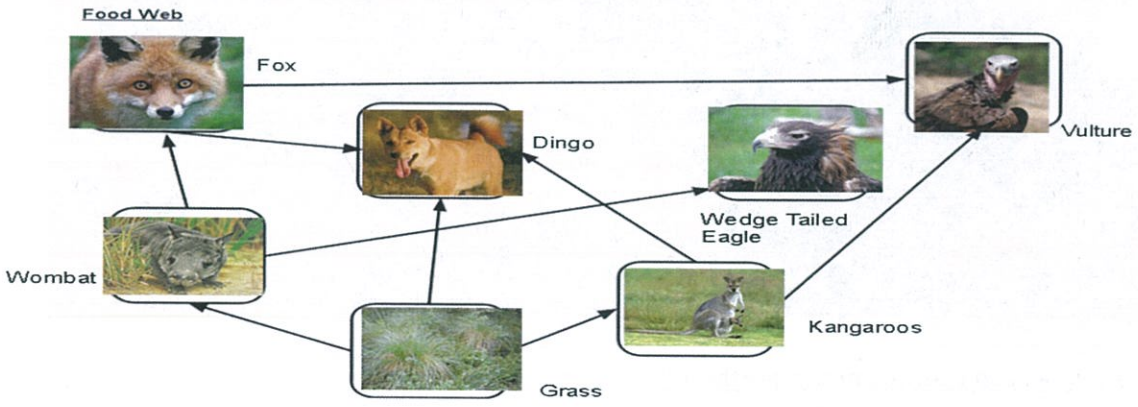
http://www.factzoo.com/mammals/northern-hairy-nosed-wombat.html

http://www.factzoo.com/sites/all/img/mammals/marsupials/mama-joey-hairy-nosed.jpg

There are only 168 of them left in the world.

This animal is critically endangered because it lives in a very harsh environment which is very dry. They are at risk of extinction having to fight with domesticated animals like sheep and cows for food. It is especially true that they are endangered because of there slow breeding rate, its large figure and how slowly it is reacting to corporations efforts. In the 20th century everyone thought that it was extinct. Wombats never go far away from there barrows when over grazing removes all of the pasture from around their barrows then they starve. But the main threat to this species is food shortage (they only eat grass) due to overgrazing of livestock. Inbreeding is also a big concern and on top of that there are diseases such as toxoplasmosis which also poses a threat to the species.

Science is doing many things to help save the Northern Hairy Nosed Wombat of extinction. They are doing things like setting up foundations such as The Wombat Foundation who say "With donators help, we can achieve a future where the wombats' populations grow to a point where they are taken off the critically endangered list and live sustainably across their historic range." They fund vital research in a field, they also fund vital recovering actions to help injured wombats and build awareness about how Northern Hairy Nosed Wombats are indeed going extinct. Some advantages of this is that they help fund research but disadvantages of that is they might not be funding to the right facility an advantage is that they build awareness and they help injured wombats by funding vital recovery actions. Some disadvantages of these points are that they aren't funding recovery actions quick enough because wombats are still dying and they don't inform lots of big groups just lots of small groups.



https://clipartfest.com/categories/view/b9afdf387a3fa77a6e421e569184f29830b5190c/left-arrow-image.html

The Northern Hairy Nosed Wombat eats grass, shrubs and roots (it's a herbivore) but it still is prey to other species the main ones are the Fox, Wedge Tail ed Eagle, dingo and wild dogs.

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ed Eagle, dingo and wild dogs.

Science Research Assessment – By Peter Osborne 7.2

Somerset College | Teacher - Mrs. Walker | Science

Due Wednesday 8 March 2017

The animal that I will be researching is the Numbat. The Numbat is an Australian species that is endangered. The classification of the Numbat is below.

(Australian Geographic, 2017)

Kingdom – Animal

Phylum – Chordata

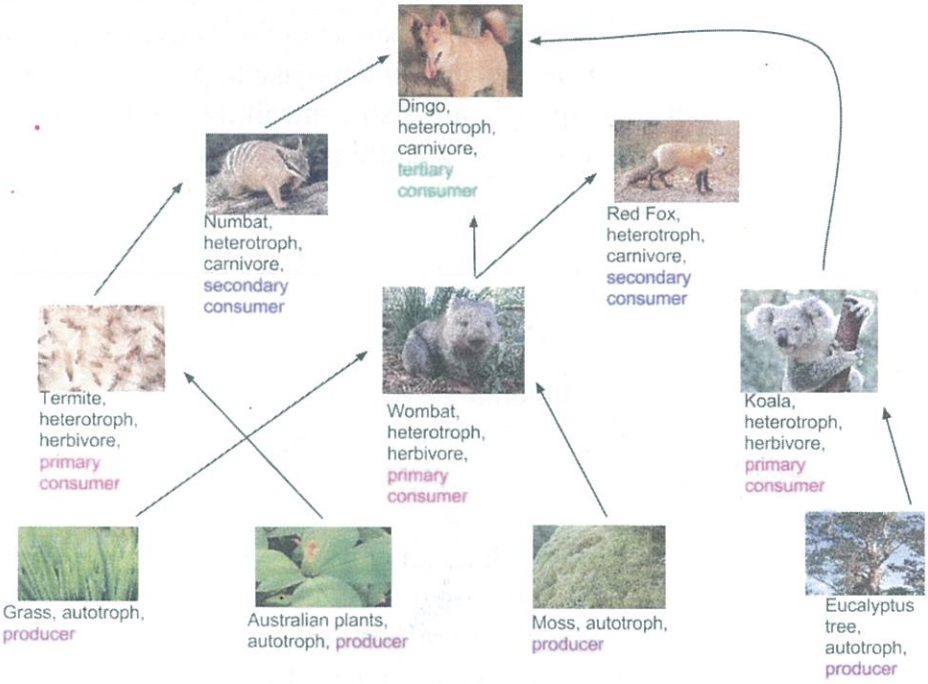
Class – Mammalia

Order – Dasyuromorphia

Family – Myrmecobiidae

Genus – Myrmecobius

Species – M.fasciatus



(Thinglink.com, 2017)

Why is the Numbat Endangered? Numbat Statistics

The Main Reason for why the Numbat is endangered dates back to when the first European settlers came. The reason for why they are endangered is due to their habitat being cleared for agriculture/farming and bush fires in their environment. In addition, since the Numbat is a slow moving and easy-to-catch creature, introduced cats, dogs and foxes, have hunted them easily and the Numbat is too defenseless not to protect itself.

Due to these threats, the Numbats Population has now dropped to less than 1000 living individuals. Before Europeans' came to Australia Numbats had inhabited southwest Western Australia, north South Australia and even into western New South Wales. However now they are located in southwest Western Australia (Dryanda Woodland and Perup nature reserve), a captive breeding location in Yookamurra in South Australia, and a Scotia Sanctuary in New South Wales.

How is Science helping to protect the Numbat?

1.The Australian Wildlife Conservation (the AWC) has had a huge role in protecting the Numbat from extinction. The AWS protects almost 30% of the Numbat population and this 30% is the only population that isn't decreasing. The AWC are in charge of two large, self-sustained populations numbats. These populations are in Yookamurra, South Australia and Scotia in western New South Wales. What the ACW has done is that they have put the Numbats in protected natural forests that hold no threats to the Numbat; therefore the Numbat is able to breed and grow their populations. Another colony of Numbats are protected in Wanneroo, Western Australia, that are trying to reduce threats of the Numbat so that the numbat is able to reproduce and increase in population.

2. Finally, Scientists are also restricting/banning agriculture and the act of chopping down and destroying their environment so that the Numbat and other suffering species do not decrease in population, or in the long run go extinct. Scientists/people are also controlling and moving feral cats and dogs to other areas so that these Australian species are not attacked or harmed to point that they die.

Environmental

Advantages	Disadvantages
The environmental advantages of populating the Numbat species include: • There will be an end to trees being cut down for communal and agricultural reasons • In the regions of where the Numbat species are, humans will be unable to hunt and disrupt the environment • Some animals (foxes, stray cats, stray dogs etc.) will be taken so that the Numbat can grow in population, this will also make it more safe for other animals (they wont get hunted)	The environmental disadvantages include: • Food chains may be effected from the environmental changes and some other species may get threatened or b=may be unable to live in that environment. • Numbats may become over populated and may become a pest/ make its prey go extinct

To summaries this topic, even though Numbats are endangered there is a lot being done for them and due to the many environmental changes and organizations assisting this issue the Numbats are rising in population and should not face extinction or a further decrease in numbers. Since the dingo and the red fox are being taking away from the Numbats, the Numbats is becoming less of a prey on the food chain is now able to populate.

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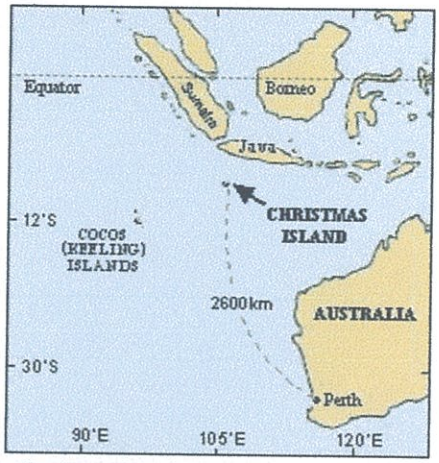
(Pinterest,2017)

The Christmas Island Frigate Bird

Somerset College
Kade Reynoldson 7.2
Science
Mrs Walker
Date of Submission:
8/3/17

Christmas Island Frigate bird

Somerset College, Science, Mrs Walker by Kade Reynoldson

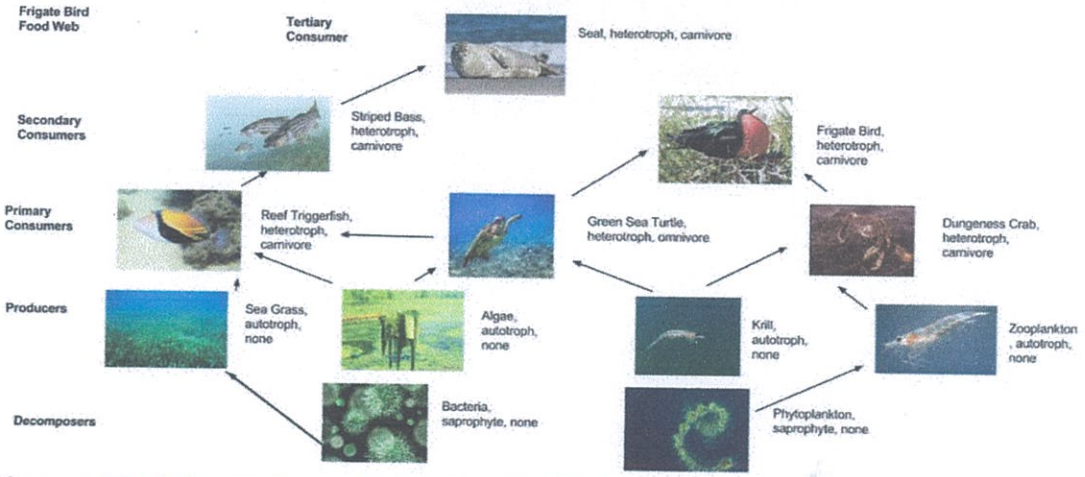


The Christmas Island Frigate bird:
Kingdom: Anamalia
Phylum: Chordata
Class: Aves
Order: Pelecaniformes
Family: Fregatae
Genus: Fregata
Species: Andrewesi

Frigate Bird: ***Fregata andrewsi***

http://www.seabirdproject.cx/index.php/en/christmas-island

The Christmas Frigate bird is a native animal to Australia as it lives on Christmas Island. Here is a food chain of the Christmas Island Frigate bird:



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Why are the Frigate birds endangered:

In 1688 the Britts made a competition to see who could collect 'the most boobies'(the most Frigate birds). They were the first to start the hunting of the Frigate Birds. The island was introduced to new plants and animals that helped decline the population because of infection and threats. They were not only hunted by people they were hunted by rats, cats, ants and even some plants entangle them to death. Also they only breed every two years making it harder for them to regrow their population as their breeding is very slow. Also they only live on Christmas Island so they can't repopulate somewhere else that is better for the growth of the species. The Christmas Frigate birds breeding spot is effected by the invasive species known as the yellow crazy ant. Having threats of habitat loss and the ongoing phosphate mining makes it difficuilt for the Frigate Bird to reproduce and keep a sustainable species existance. Almost 25% of the nesting area was cleared for phosphate mining in the early 1900s. One tenth of the frigate bird population breeds in unprotected areas outside the national park. The Christmas Frigate Bird usually hunts over the sea water hunting for fish but due to the increases in marine pollution and decreasing fish stocks has made hunting and

Christmas Island Frigate bird

Somerset College, Science, Mrs Walker by Kade Reynoldson

feeding their families extremely hard. Due to these harsh factors the Christmas Island Frigate Bird status is Critically Endangered species.

What is science doing to help the Frigate bird:

To protect these amazing birds they are now on a nature preserve list, meaning you can not harm them. 'A Recovery Plan was developed in 2004, but has been little implemented, and the ongoing decline attests to its failure. From the recovery plan, there has been some research, mostly by David James and Janos Hennicke, and some recent funding support from Australian Geographic'. Although there are still boundaries the Frigate bird is still decreasing because of natural causes and physical threats that lead to death. Now the population is decreasing a lot slower as there are more safety rules in place now. The AG Society is operating with Birdlife Australia's Australasian Seabird Group (ASG) to study the hunting behaviour of the species through satellite and geo-location tagging, helping to focus on conservation efforts towards the endangered bird.

Advantages of social	Disadvantages of social
People are becoming aware of the status of the bird and it grows the knowledge on the bird of the people so that they can help.	It could cause some people to harm the birds.
Rehabilitations for the birds have been placed by the locals of the area. Which also supplies jobs for the locals.	Extends the boundaries, so that some people can't even see them.
It gets bird watches to the island which also spreads the word of the amazing bird.	Too many people could scare and or maybe effect the rebirth of the birds.

Advantages of Economic	Disadvantages of economic
Allows people to be hired and earn money	Building on Christmas Island makes the islands space decrease
Cheap rehabilitations to help aid the birds in repopulating the island to its fullest	Expensive development on Christmas Island

The Frigate Birds are decreasing in population but scientists and enviromentalists that care for the big and special birds, want to remove it from the endangered list. These birds are essential to the island as they make Christmas Island. They add a touch of colour and life to the island. There are many positive and negative reasons that construction of buildings and rehabilitations are good for the island and the birds. The birds won't be able to become fully populated as they were before they were hunted. Because their breeding takes too long, and animals and plants feed of them to survive. These birds are an amazing feature to the island that does attract bird watches and tourists that want to look at it and take photos of the beautiful bird. Overall scientists are doing the most that they can to help protect these birds and it is working. But they will never be fully reserved to their full population but at least they are getting somewhere with their growth in number of birds. To conclude, these birds need to be protected as they play a big part in the animals that inhabit Christmas Island. Thanks to science these birds are now protected and are slowly growing in size again. In the near future there might be some more Frigate Birds on Christmas Island.

Christmas Island Frigate bird

Somerset College, Science, Mrs Walker by Kade Reynoldson

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Jude Taylor 7.2

Numbat

Scientific name - Myrmecobius fasciatus

Kingdom- Animalia

Phylum – Chordata

Class- Mammalia

Order- Dasyurorphia

Family- Myrmecobiidae

Genus- Myrmecobius

Species-

Where does the Numbat live?

The Numbat is found at the bottom of western Australia, south Australia and Victoria. The Numbat has a burrow mostly in a base of a tree or occasionally a log.

Why is the Numbat endangered ?

The Numbat is in endangered because of the serval threats like the red foxes and cats. Another threat to the Numbat is habitat lost due to the collection of fire wood and clearings of dead trees.

What do Numbats eat?

The Numbat eats many types of termites but does not eat ants. They do not have to drink water because they get it from over 20,000 termites they eat each day.

Red Fox

Numbat

Termites

What can we do to help?

We can donate to many charities willing to help the numbat population increase again such as Project Numbat.

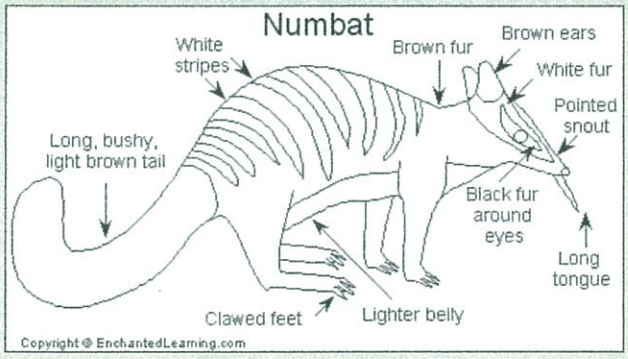
NUMBAT - *Myrmecobius fasciatus*

By Charlyse Class: 7.2 Subject: Science Teacher: Mrs Walker Due by: 8/03/17

The numbat is an Australian marsupial the is found in Western and South Australia. This animal is on the endangered list with less 1500 left in the wild.

Features:

It has pale fur below and coarse reddish-brown fur above which gets darkest on the bottom of the back. There are white stripes found on the back or the numbat which create an effective camouflage helping it hide from predators such as foxes, feral cats. The head is narrow with a pointed snout and large ears that stand high on the head. It also has a dark stripe over its eyes that goes from the nose to the ears with a white eyebrow on top of it and a white stripe right underneath it. It has a long ail which gives the 'bottle brush' effect. The numbat has a long tongue and a pointed snout for catching termites. The underbelly of the numbat is a lighter brown than the fur on the back. It has clawed feet which are quite small.



Facts on the Numbat:

The numbat is a native endangered marsupial of Australia. They are found in Western Australia and have a diet mostly consisting of termites. They are known as the Australia Anteater.

Unlike most Australian marsupials, the numbats are only active during the day and when they are looking for food they have their snout down sniffing the ground, usually turning over rocks in search for hidden termite nests.

Threats to the numbat are feral cats, foxes, loss of habitat and bushfires. These is what is making the Numbat endangered. Scientists believe that before Europeans the bushfires were created by the Aboriginals and were small and controlled. Now when bushfires start they become huge and wipe

NUMBAT - *Myrmecobius fasciatus*

By Charlyse Class: 7.2 Subject: Science Teacher: Mrs Walker Due by: 8/03/17

out a lot of the resources for the Numbats to survive. Habitat loss gets rid of dead fallen trees for the numbats to sleep in and gets rid of food for the termites so they move away or die getting rid of the food source for the numbats.

Numbats are closely related to the Thylacine, dunnarts, wambengers and the quoll but closest to the Thylacine. (This is just my opinion) I believe the stripes on the numbat have come from the Thylacine and the features on the numbat closely resemble the Thylacine.

What is science doing to save them?

Scientists at zoo's in Western Australia are breeding the numbats in captive, however this will most likely not solve the problem of the numbats rapid decline because the numbats reproduce slowly and there are not enough in captivity. There is a project called Project Numbat that is devoting itself to saving and breeding numbats as a charity.

Positives and Negatives of saving the Numbat:

Positives of Saving the numbat	Negatives of saving the numbat
-Helps keep termites under control	-Costs too much money
-Beautiful and unique creature	-Will not make a difference to the ecosystem
	-We should be focusing on more important things that will affect humans

Saving the numbat may be saving a unique and beautiful Australian Marsupial but trying to save them is super expensive and losing this creature will not exactly change the ecosystem except helping termite colonies grow.

projectnumbat

The food Chain:

The sun

Organic matter

Ants

Numbats

Feral cats and foxes

Wild dogs

NUMBAT - *Myrmecobius fasciatus*

By Charlyse Class: 7.2 Subject: Science Teacher: Mrs Walker Due by: 8/03/17

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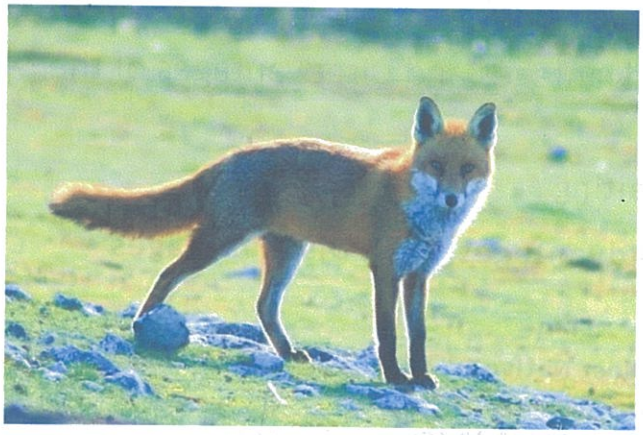
Lilah Thurbon, 7.2, Tuesday 7th March, 2017, Sciences, C. Walker

The Red Fox *(Vulpes vulpes)*

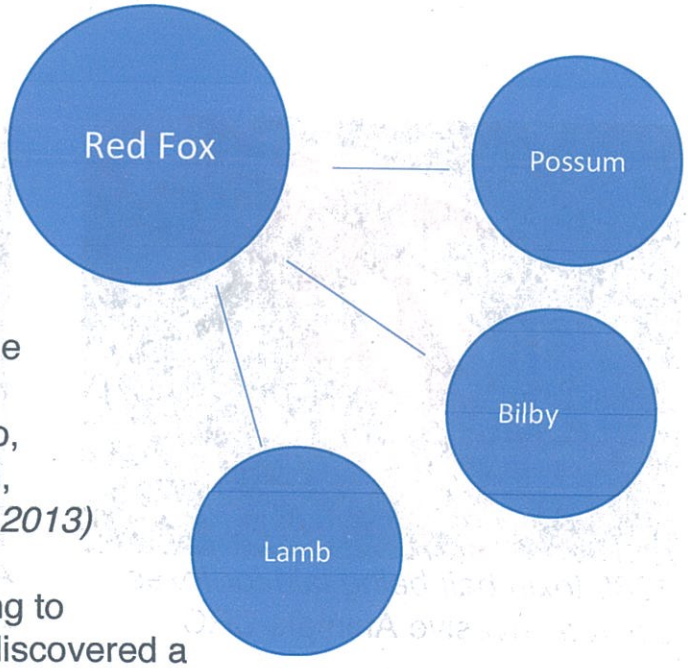
Kingdom:	Animalia
Phylum:	Chordate
Class:	Mammal
Order:	Carnivores
Family:	Canidae
Genus:	Vulpes
Species	vulpes



Source: D. Panther. Victorian Wildlife Management

The red fox is an invasive pest species that was introduced to Australia in 1871 for recreational hunting in southern Victoria and South Australia. *(FeralScan 2017)* Twenty-two years later, the animal was given the pest rating, and by the early 1970s it's numbers matched those of wild rabbits. *(Coman, B.J 1973)* Today, the red fox poses a number of problems to both native species and small livestock. After being successfully integrated into the wild, the red fox disrupted the food chain, asserting itself as one of the top predators. The red fox is primarily accountable for the extinction of 20 species on the mainland. *(Kinnear, J R, Sumner N.R., Onus, M.L., 2002)*

The red fox's diet mainly consists of small Livestock and wild rabbits, but seasonally contains different amounts of native animals such as possum and bilby. *(Coman, B.J 1973)*



The red fox doesn't have any predators in the wild, so its ascent to the top of the food chain wasn't difficult. One of its main competitors for food and habitat is the dingo, and in environments with a high dingo population, the fox population is less. *(Christopher Johnson, 2013)*

There are many ways in which scientists are trying to Reduce the wild fox population. Scientists have discovered a Toxin, toxin 1080, which foxes are highly susceptible to, but native animals less so, because in some cases the toxin is found in native flora. Foxes are likely to take baits, more so than native animals. One down side to this solution is that where the fox population is smaller, feral cats can pose just as much as a threat to native species as the fox. *(Christopher Johnson, 2013)* Farmers have been known for decades now to shoot foxes that may pose as a threat to their livestock or crops, which is effective in the short term, but does very little in the big picture.

Advantages and Disadvantages of the Methods used to Reduce the Fox Population

Baiting

Advantages	Disadvantages
Most Native species aren't susceptible to the toxin	Some native species are susceptible to the toxin
Foxes are highly susceptible to the toxin and are likely to take baits	When the fox population decreases, the feral cats take their place at the top of the food chain
Its economical to make	

Shooting

Advantages	Disadvantages
Immediately effective	Little difference made long-term
economical	Disrupts the the animals inhabiting the land
	Creates noise pollution

1080 toxin bait being laid for foxes Source: Invasive Animals CRC

A hunting expedition set up by farmers. Source: John Lane, CRC.

The direct effects the red fox has on Australia

The annual cost of the red fox is an estimated $225.7 million per annum. All of this money is to do with direct livestock poaching, baiting, shooting and research. Foxes' excrement has a diverse range of seed in it, so foxes are considered a legitimate seed disperser. Urban foxes can carry diseases that are transmittable to cats and dogs, and can cause pollution and distress throughout urban establishments. *(Victorian Government, 2016)*

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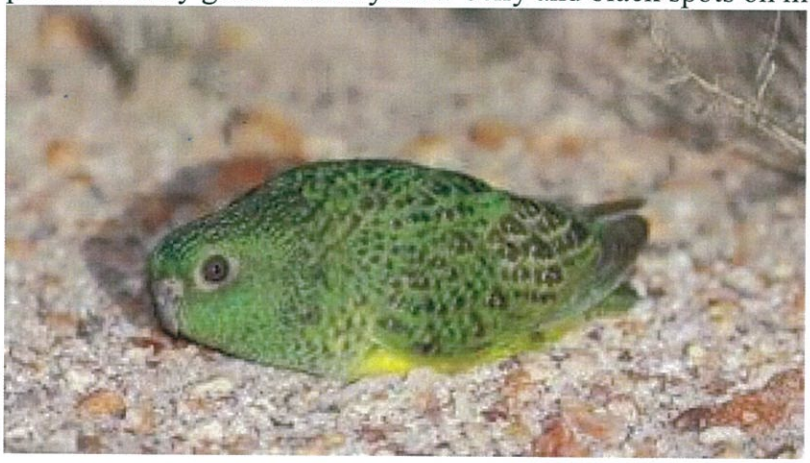
The Night Parrot, back from the dead?

7/3/17 Somerset college,. Ben Trueman 7.2, Sciences, Mrs Walker

Australia's rarest bird, the Night parrot (pezoporus occidentalis) has been thought to be extinct for over 70 years. Until recently rediscovered by John Young, who managed to record a video of this mysterious bird. Apart from various unconfirmed sightings and dead specimens found between 1975 and 2012, John Young's sighting has been the only definitive report of the night parrot being found alive. Now, scientists and bird watchers alike are racing to save this elusive species from extinction.

Appearance

The night parrot is a relatively small bird, best known for looking similar to the common pet budgerigar. It is distinguishable from other similar species by its short tail. The Night Parrot is predominantly green with a yellow belly and black spots on most parts of its body.



left: night parrot source:smh.com

Diet

The Night Parrots primary diet consists of grass seeds.

Kingdom: Animalia
Phylum: Chordata
Class: Aves
Order: Psittaciformes
Family: Psittaculidae
Genus: Pezoporus
Species: Pezoporus Occidentalis (Australian Antarctic Data Centre, 2017)

Known as the Pullen Pullen bird by the Malawari people (bush heritage australia, 2016)

Thought to be extinct for over 70 years, the night parrot is a very mysterious creature, it has even been ranked the world's most mysterious bird species by the Smithsonian magazine (stromberg, 2012). After the night parrot was rediscovered its location was kept secret, until recently when the government feared the location had been

Compromised, an exclusion zone was placed around the Pullen Pullen nature reserve to keep poachers away from this rare and elusive species. In Fact this species is so mysterious researchers believe population could be anywhere from 20 to 259 (Birdlife International, 2017). The fact that night parrot is nocturnal only adds to the challenge of finding one, as they hide in the spinifex during the day.

Threats

The Night Parrot was once very common, but in the late 1800's and early 1900's its population dramatically decreased. in 1912 the last living specimen was collected and the species declared extinct. One of the key factors in its disappearance is the feral cat. The feral cat carry's infectious diseases which can be transmitted to the bird as well as destroying habitat and hunting the species. When Dr Steve murphy Found a night parrot he observed that it was very timid and that it froze in the face of danger, in hope the predator will not see it (ABC news, n.d.). This does not work, of course, making the night parrot an easy target for predators. Under harsh conditions the Night Parrot must fly long distances for water. In addition to this, fire causes debilitating effects to the habitat of the Night Parrot, forcing the species into marginal areas and even trapping them amongst the flames. In addition to cats and foxes it is feared that humans may well be one of the biggest threats to the night parrot, with organisations such as bush heritage Australia doing as much as they can to protect the parrot from poachers and collectors.
The fact that night parrot is nocturnal only adds to the challenge of finding one, as they hide in the spinifex during the day.

Conservation

Bush heritage Australia is currently seeking funds to buy and protect property were the Night Parrot is believed to live (Bush heritage australia, 2017). While this may not be very economical, people from many different areas, even overseas are contributing to this cause, even though the night parrot is endemic to Australia. There have been many policies put in place to protect the night parrot from poachers and bird watchers. any unauthorized persons found on site of the Pullen Pullen nature reserve will be charged with heavy fines to ensure the location is kept secure (ABC news, n.d.). to protect the Night parrot from cats and foxes motion sensors are being placed around night parrot habitat to monitor animal activity. On top of this they are frequently using cat-sniffing dogs to track any feral cats. (bush heritage australia, 2016) the dingo population is being encouraged as they are prime predators of the feral cat and fox but don't predate on the night parrot. (bush heritage australia, 2016) Bush heritage Australia has recognised the cultural significance of the night parrot and the area it inhabits, and in collaboration with the Malawari people, have named the known area of the night parrot after the indigenous name for the parrot: Pullen Pullen. (bush heritage australia, 2016) fire break*s* are also being constructed to help protect the night parrot from wildfires. However, there Is another standpoint to this, bushfires can be beneficial to the regeneration of some native flora species.

The night parrot is an extremely endangered species and has shocked many bird enthusiasts in its reappearance. It is very important that the wider community supports the development and health of the known population. Organisations such as bush heritage Australia have made a tremendous effort to conserve the population and have been a major factor in the survival of the species. More technological advancements in the system for trapping or poisoning cats To limit the deaths of night parrots is needed. But overall the conservation of the species is set to improve.

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Great white shark

Carcharodon carcharias

By Sophie Vitte 7.2 Somerset College sciences Mrs Walker

Due Wednesday 8/03/2017

This topic will be about the great white shark (Carcharodon carcharias) and how it has become endangered and ways to prevent this species from becoming extinct.

the great white shark is grey, big and dangerous species that is known as the most dangerous shark in the world and one of the most endangered species aswell, this might sound strange but because this animal has been attacking humans that has lead people to kill this species.

Scientists have been protecting this animal by creating laws to which will hopefully stop extinction, one law is that we will have to stop culling them,
'it is time to stop fearing sharks and time to start fearing a life without them' quoted 'nature.org'.

The solution to humans losing their lives is shark nets this is very economical because it costs around $1.4 million per year which spans from Wollongong to Newcastle only. This is environmentally unfriendly as approximately 100 billion sharks get caught and die along with other marine life every year. Shark nests are also political because some parties want shark nets because they prevent shark attacks on humans but the Australian greens want all shark nets around Australia removed.

There are around 50-70 shark attacks all around the world every year, but there is only three that have been classified as more dangerous compared to other sharks, this includes the tiger shark, the great white shark and the bull shark. There is over 375 shark species in the world. 20 to 100 million sharks get culled every year.

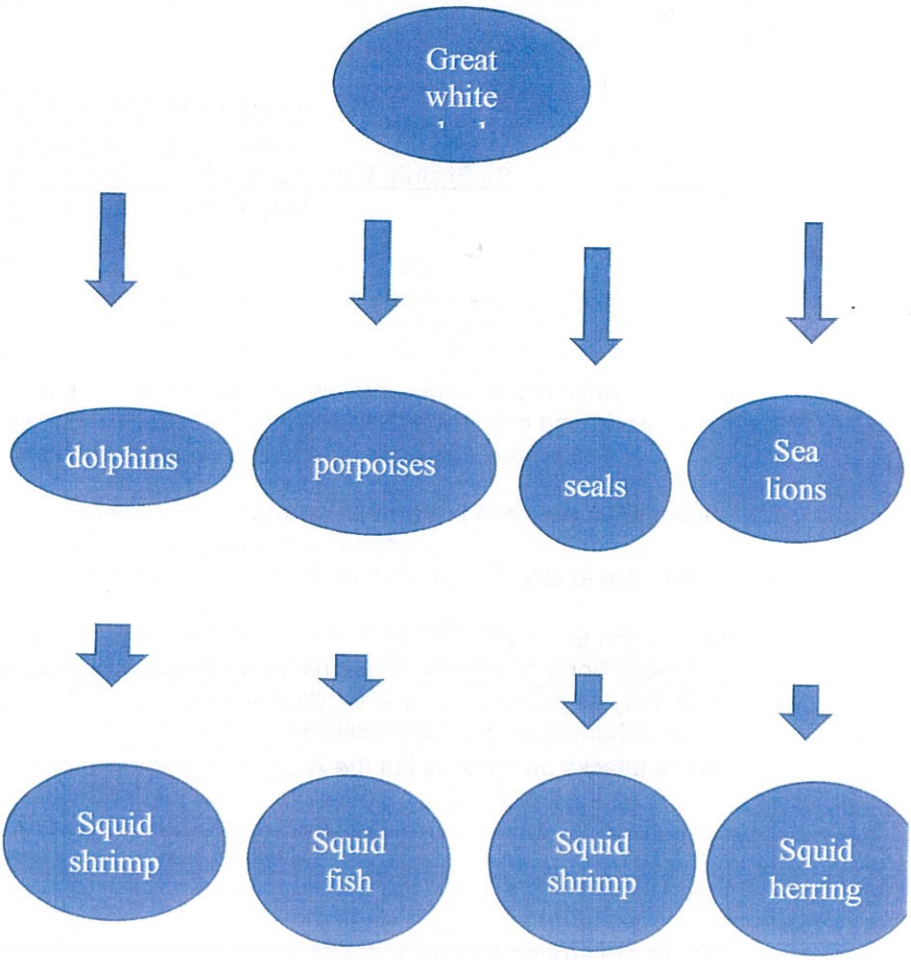
Many people believe that this animal should be killed and many others believe that we should save these animals. Some people believe that there should be shark nets and some others believe that there should not be any shark nets.

http://pcwallart.com/great-white-shark-attack-seal-

http://www.express.co.uk/travel/articles/724849/Great-White-Sharks-never-seen-in-aquarium-die-captivity

https://hsi.org.au/blog/2016/12/08/shark-nets-death-traps-for-marine-animals/

Kingdom:	Animalia
Phylum:	Chordata
Class:	Chondrichthyes
Order:	Lamniformes
Family:	Lamnidae
Genus:	*Carcharodon*
Species:	*carcharias*



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By: Xiaoxiao Wang, 7.2{ Somerset College, Sciences, Mrs Walker} 2nd of March 2017

TASMANIAN DEVIL

What is the Tasmanian Devil?

Tasmanian Devils are small, dog sized animals with black fur and makes extremely loud and disturbing noises. It has a keen sense of smell and has a large head and neck which allows the strongest bites among it's preys.

Scientifically known as Sarcophilus Harrisii, the Tassie devil was listed as vulnerable in 1996 after the appearance of the disease, but now has wiped out 70% of the population. The Tasmanian Devil could possibly go extinct in 20 years time if the situation still don't get help. It is so important to keep the food chain going and the extinction of this animal will wreck everything.

Scientist have researched deeply for a way to stop the disease/cancer from keep on passing around to each animal, but still haven't found the solution to this problem.

The seven levels of classification~

Kingdom	**Animalia**
Phylum	Chordata
Class	Mammalia
Order	Dasyuromorphia
Family	Dasyuridae
Genus	Sarcophilus
Species	Sarcophilus Harrisii

Food Chain~

CONSUMER	1ST CONSUMER	2ND CONSUMER	3RD CONSUMER
GRASS	MOUSE	TASMANIAN DEVIL	DINGO

Why the Tasmanian Devils are endangered~

The Tasmanian Devils are disappearing so rapidly because of a devil cancer known as the Devil Facial Tumor Disease {DFTD}. This type of disease only spreads across Tasmanian devils, not humans.

It's the only one out of three cancers that spreads like a contagious disease. It's passed on by one biting another which spreads like a cold or flu and causes large tumors that develops around the devil's mouth and neck, and sometimes on other parts of their body.

Most Tasmanian devils die from starvation because of the tumors which stops them from eating or swallowing food. This disease/cancer kills each devil in six months time of infection.

The population dropped from around 150,000 in the mid-1990's to between 20,000-50,000 at the end of 2006. Many scientist are trying to solve this problem but are still on their way to stopping it.

What science are we using to protect Tasmanian Devils?~

- Capturing disease-free devils into breeding programs, already more than 490 disease-free in more than 20 institutions both on the Australia mainland and Tasmania has been kept
- Trying to remove diseased devils from the affected population
- Many scientists are putting a lot of effort into researching and many people have also made kind donations to the process of the research.
- They have also created charities, websites and many other ways to solve the problem
- Scientist are removing and relocating devils that are not affected by the disease to an island called the Maria island. Maria island is a national park where no cars are allowed on that island so it can only be reached by boat.
- 14 cancer-free devils have been carefully selected from captive breeding programs from across Australia. It will unlikely to have a big impact on the island since the devils are scavengers. If the move have been proven successful, they plan to increase the population to 50 devils on the Maria island in the next two years.
- "The Maria Island translocation is designed to establish a self-sustaining population of healthy wild devils in a safe haven where they are protected from interaction with the deadly facial tumour disease," Tasmania's Environment Minister Brian Wightman told Phys.org. "It will strengthen the insurance population of disease-free Tasmanian devils, help preserve wild traits in the insurance population and provide genetic stock for future reintroductions."

What solution to the problem have been made?~

People are already donating money and creating institutions for raising money for deeper research into this contagious cancer. That's one of the moral solutions the community has come up with.

They have also created many websites and charity jobs to help scientists into more helpful answers to this major problem. The society is really trying hard to help and scientists are also trying their best to put a end to this fight against DFTD.

Scientists have also came up with an environmental solution. As above, scientist are already shifting non-diseased devils to Maria island, stopping the cancer to keep on spreading. If the plan works, they'll shift more and more devils to that island each year

ADVANTAGES	DISADVANTAGES
• **SCIENTIST HAVE ALREADY CAME UP WITH GOOD IDEAS AND IS PROCCESING WHATS IN THEIR HEAD TO ACTUALLY DOING IT** • **IT'S ALREADY TO START WORKING** • **IT DOESN'T HAVE A BIG IMPACT TO THE SOCIETY/COMUNNITY** • **USING WEBSITES THE ADVERTISE WILL CAUSE MANY PEOPLE TO READ IT AND IS AREALLY GOOD WAY TO LET EVERYONE KNOW ABOUT THE SITUATION**	• WE'RE NOT EXACTLY SURE YET ABOUT THE PLAN • THE PLAN MIGHT NOT WORK OUT SINCE THERE'S ONLY 14 DEVILS ON THE ISLAND • THERE MIGHT BE NOT ENOUGH PEOPLE DONATING MONEY FOR DEEPER RESEARCH INTO THE CANCER

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Yellow chat Dawson

Somerset College
Mrs Walker 7.2
Cindy Xue

Scientific name: Epthianura crocea macgregori

Kingdom: Animalia

Phylum: Chordata

Class: Aves

Order: Passeriformes

Family: Meliphagidae

Genus: Epthiaunura

Species: E. crocea macgregori

, https://en.wikipedia.org/wiki/Yellow_chat

http://bie.ala.org.au/species/urn:lsid:biodiversity.org.au:afd.taxon:9558469e-fc58-475c-9b53-5cd3c04e1cae#tab_gallery

General Description

The yellow chat Dawson is currently Endangered in Queensland and Critically Endangered nationally. Its length is approximately 11cm in and weighs about 9g. The plumage of a breeding male is mainly yellow with yellow-olive on the back and a bright golden-yellow head and a blackish band on its upper chest. The blackish band fades if the male is not breeding. Adult females are duller and lack the distinctive chest band of the breeding males.

General Distribution and Habitat

The Yellow Chat (Dawson) is said to be restricted to the coastal areas of central Queensland but also occurs in other localities. It is also known to occur in breeding population on the Torilla Plain and Fitzroy River Delta. A third breeding population was present on Curtis Island in 2002, but in early 2007, an extensive survey failed to detect any birds at this location. It's habitat mainly include rush or grass vegetation between 0.4-2m tall along the drainage lines and a more open vegetation types nearby for foraging.

Life History and Behaviour

The Yellow Chat (Dawson) breed in summer and spring with clutch sizes from 2 to 3 eggs. It's incubation period is approximately 14 days and nestlings remain in the nest for another 14 days. It

frequents freshwater and saline wetlands on marine plains and it nest or/and raises its young in samphire shrubland and saltwater couch grassland in the latter.

Population

The total population size of the Yellow Chat (Dawson) is estimated at approximately 240 birds. Although the estimated population of this species is 240 birds, if the extinction of the population on Curtis Island is confirmed, it would reduce this estimate to approximately 200 birds.

Threats

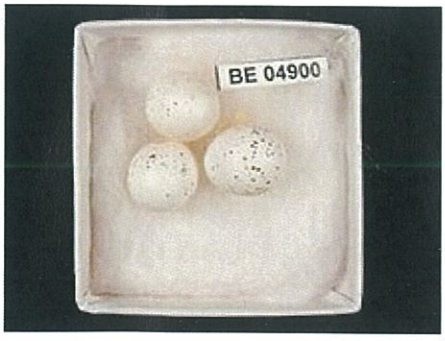
The cause to degradation or loss of the Yellow chat (Dawson)'s habitat are mainly grazing, invasive pasture grasses to the species and the modification to the hydrological regimes through flow reductions and construction of barriers. Grazing and associated trampling and/or digging by feral pigs is damaging Yellow chat (Dawson) habitats on Cutis Island and, to a more less degree, also on Torilla Plain and Fitzroy River Delta. Habitats of this bird is at a risk of being invaded by exotic pasture grasses such as the Brachiaria mutica and Hymenachne amplexicaulis. Potential for industrial expansions may also lead to habitat loss in the Fitzroy Delta.

Diet

The yellow chat (Dawson) is predominantly insectivorous and feeds within low vegetation or on the ground at the base of shrubs. Due to it has a brush-like tip on its tongue like the characteristic of honeyeaters, it suggests that it could also feed on nectar. It searches invertebrates from the ground, surface of shallow water, the basal stems of rushed, grasses and Samphire plants, and occasionally from low shrubs. It also sorties for flying insect from perches in tall rushes.

Recovery actions

Scientists are currently conducting surveys on the Yellow chat Capricorn species, studying the ecology of the subspecies on Curtis Island, locating additional, secure existing populations, controlling feral pig numbers at Curtis Island and developing a fire management strategy for the Curtis Island marine plain to try to recover the Yellow chat (Dawson) due to they are Critically Endangered nationally and Endangered in Queensland. The Curtis Island Conservation and National Parks are also establishing management strategies for the conservation and enhancement of the yellow chat habitat.



Yellow Chat eggs

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By Cindy Xue

Why the Threatened Species Scientific Committee (TSSC) should list the Dinosaur Ant (*Nothomyrmecia macrops*) under the Environment Protection and Biodiversity Conservation (EPBC) Act.

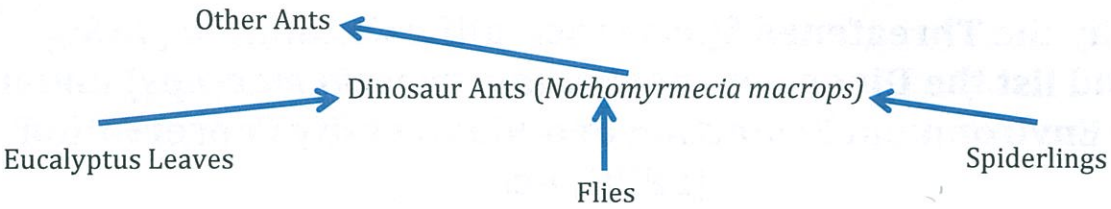
School: Somerset College
Name & Class: Ruben Yam 7.2
Subject: Sciences
Teacher: Mrs Walker
Date of Submission: Wednesday, 8 March 2017

Dinosaur Ants (*Nothomyrmecia macrops*). (Source: Australian Geographic. Image by Taylor)

Kingdom *Animalia*
Phylum *Arthropoda*
Class *Insecta*
Order *Hymenoptera*
Family *Formicidae*
Genus *Nothomyrmecia*
Species *macrops*

The Dinosaur Ant (*Nothomyrmecia macrops*) is a very interesting creature. The Dinosaur Ant is hailed as the Holy Grail of Myrmecology (the study of ants) because it is a "living fossil" of what ants looked and behaved like 100 million years ago (Taylor, 2014, p. 2). However, this little known creature was regarded by the International Union for Conservation of Nature (IUCN) Red List in 1996 as critically endangered. Despite this world listing, the Dinosaur Ant is not eligible on the Australian Conservation Status due to insufficient data against its Environment Protection and Biodiversity Conservation Act criteria (Anon, www.environment.gov.au, p. 2).

According to the Australian Department of the Environment and Energy, "*There is little information on the number and size of individual populations or the rates of change of the Dinosaur Ants. Although surveys have been conducted in some areas of suitable habitat in both Western Australia and South Australia where it is thought likely to occur, the full geographical distribution of this species has not been determined*" (2017, p. 2). However, what is known, is that colonies of this species nests under eucalyptus trees (Anon, www.arkive.org, p. 3). Worker ants forage in eucalyptus trees for liquid or soluble food and hunt insects for their carnivorous larvae. Unlike other species of ants, Dinosaur Ants hunt individually with no form of communication or cooperation. Dinosaur Ants forage from dusk to dawn and will only forage if it is under 5°C. Taylor (2014, p. 3) notes that one theory as to why these ants prefer cold nights is to avoid competition for food and attacks from other ants.



A simple Dinosaur Ant (*Nothomyrmecia macrops*) food web.

The discovery of Dinosaur Ants was first found in 1931 in Western Australia (Nadge, 2015, p. 2). Surprisingly, the colony was never again found despite many surveys and expeditions. In 1977, the National Insect Collection serendipitously discovered a large population of Dinosaur Ants around South Australia during an overnight stay while on their way to an expedition in Western Australia. Since then, other colonies have been found in 18 locations within South Australia along the Eyre Peninsula.

The climate along the Eyre Peninsula is a key factor in the survival of the Dinosaur Ant (Taylor, 2014, p. 2). Dinosaur Ants only forage under 5°C, therefore the cool sea breeze along the peninsular aids in keeping their nests at optimal temperature. Climate change is the number 1 threat to the Dinosaur Ants as a difference in just a few degrees in their habitat could immensely effect the colony. Warmer temperatures leads to other ants, for example ants of the *Iridomyrmex* genus, that are active in the day and warm nights, to savagely attack Dinosaur Ants. If the nights remain cold, these hostile ants would not exit their nests, leaving *Nothomyrmecia* safe to forage.

The second major threat to Dinosaur Ants is bushfires (Nadge, 2015, p. 2 and Taylor, 2014, p. 2). A bushfire may destroy their habitat amongst the eucalyptus trees, exterminate up to 50% of worker ants as well as decrease food sources.

Scientists suggest that the best way to protect *Nothomyrmecia*'s chance of survival is to conduct more surveys, maintain known populations through habitat protection and action against climate change (Taylor, 2014, p. 2). Surveys would generate more data to support the enlisting of the Dinosaur Ant on the Environment Protection and Biodiversity Conservation (EPBC) Act. This data would encourage habitat protection of known Dinosaur Ant populations. Actioning against climate change will raise awareness amongst the general public to be carbon neutral and reduce greenhouse gas emissions.

Actioning against climate change has many environmental benefits (Anon, www.environment.gov.au, p. 2). A major benefit is supporting habitat maintenance for native animals such as the Dinosaur Ant. Habitat maintenance can be achieved by reducing greenhouse emissions. Because of the greenhouse effect, the Earth's temperature is rising. Thus, Dinosaur Ants are at risk of extinction due increased habitat temperatures. Scientists acknowledge that there is no disadvantages against climate change action as the Earth's ecological health would increase and every endangered species', plants and animals, chance of survival would also increase.

The Dinosaur Ant (*Nothomyrmecia macrops*) is a rare and fascinating species. It is an important animal, native only to Australia, and gives myrmecologists a unique opportunity to see what ants were like 100 million years ago. In order to protect this species from extinction, it is extremely vital to advocate against climate change and to lobby for the Threatened Species Scientific Committee (TSCC) to list the Dinosaur Ant (*Nothomyrmecia macrops*) under the Environment Protection and Biodiversity Conservation (EPBC) Act.

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