

# Unit 6 lecture concepts

- thylacine story:
  - characteristics and issues causing their extinction
- sixth mass extinction:
  - define
  - The Anthropocene
- Endangered animals:
  - common characteristics
  - solutions
- Walton Ford & John Audubon
  - compare artwork and ideologies

# Unit 6 Activities

- **Artist summaries:**
  - **John Audubon**
  - **Walton Ford**
- **research notes on your species**
- **Concept map-**  
endangered animal group work
- **Write up Saving your species !**
- **Earth map update**

# Unit 6 terms

- thylacine
- Tasmania
- Marsupial
- Anthropocene
- 6th mass extinction

# Industrial Revolution: 1700's



## **Technological advancement:**

- expansion of Western ideology to every corner of the globe
  - increased population exponentially
    - lengthened lifespan
- Increase in need for natural resources- extractive industries
  - Height of resource exploitation

# Historic vs. Contemporary Humans

## Historic - 300 years

- Nature = survival  
hunting, gathering,  
herding or growing
- Muscle power (animal etc.)
- Control of our food supply
- Abundance of resources
- Localized impact
- Human superiority

## Last 300 years

- Nature = profit and commodity later also aesthetic and healing
- Dependence on extractive resources (oil & gas)
- Leisure and recreation
- Stewardship position
- Top of food chain
- Extraction of finite resources with global impact

# Extinction

Pleistocene extinctions

During the age of exploration, a few species went extinct as early as the 1600 and 1700's as explorers and colonists arrived:

- Dodo bird-1598-1662
- Auroch- 1627
- Stellar's sea cow 1741-1768





# Unit 6: Extinction



Since 1900, just in the last 100 years, it is estimated that 3,125 species of plants and animals have gone extinct as a direct result of human actions.

# Gone but not forgotten



*Thylacinus cynocephalus*

Tasmanian tiger or zebra wolf

Last member of Thylacinidae family

4 million years old



# THE THYLACINE



Parallel evolution --- canine ?

Sexual size dimorphism

# THE THYLACINE

*Thylacinus*

*cynocephalus*,

Carnivorous marsupial

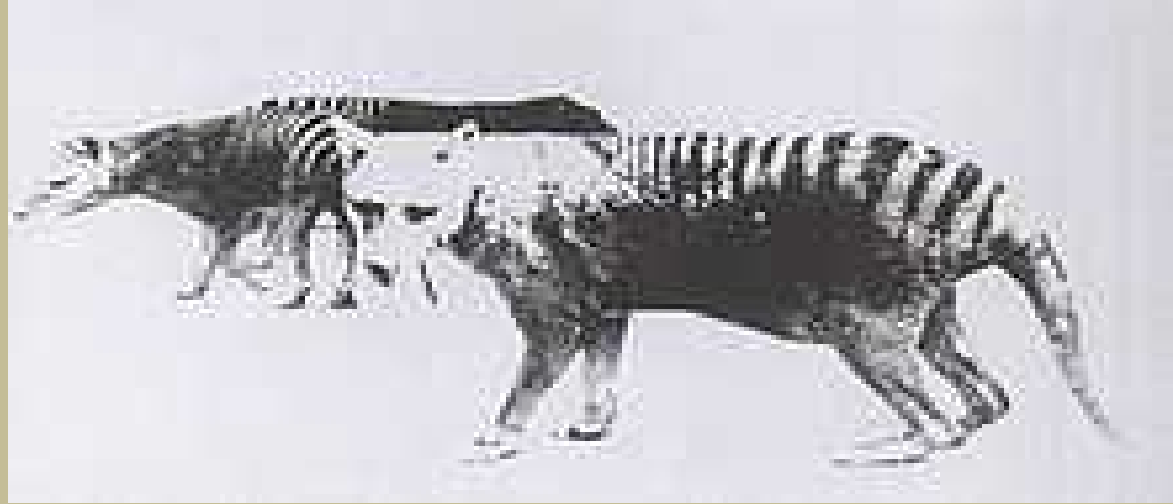
Sub group of mammals

2-4 Atricial young

In pouch, attached to  
mother for few weeks

In pouch for 3 months

Nursed for 9 months



# THE THYLACINE

## Natural History:

Powerful jaws

Body size 5 to 6 feet long

Habitat – coastal forests,  
savannah and wetlands.

Camouflage

15 – 31 sq. miles

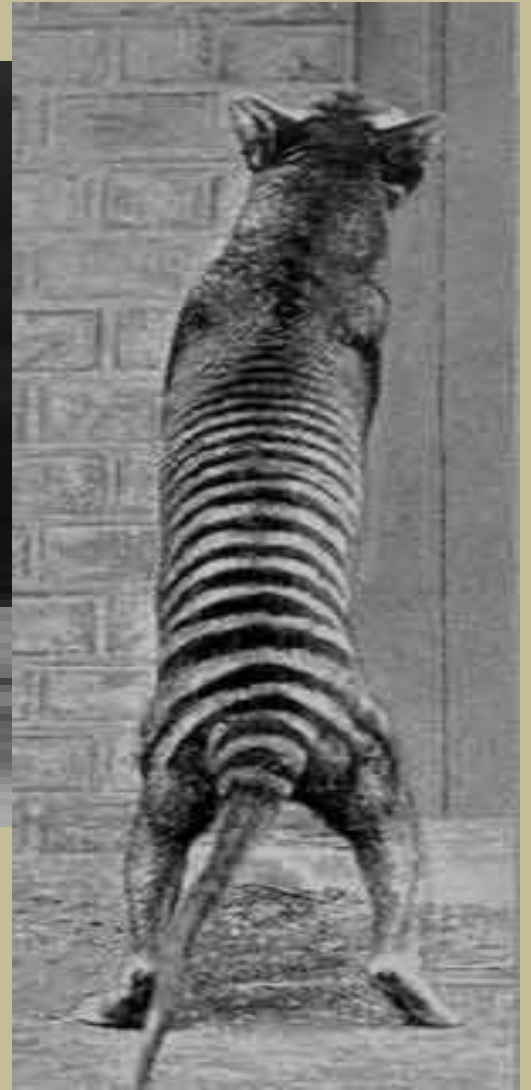
Little is known

Shy and hunting habits

Eat only freshly killed prey

Nocturnal or crepuscular

Opportunistic hunters



# THE THYLACINE



This is a sketch by George Harris, 1806  
First drawing of a thylacine

Historic range:

New Guinea, Australia  
and **Tasmania**,

The thylacine vanished  
from mainland Australia  
and New Guinea  
approximately 2000-3000  
years ago.

Dingo was introduced from  
Asia 4,000 ya

# THE THYLACINE

## Dingo vs Thylacine

Thylacine powerfully built, could have stood it's ground against a dingo

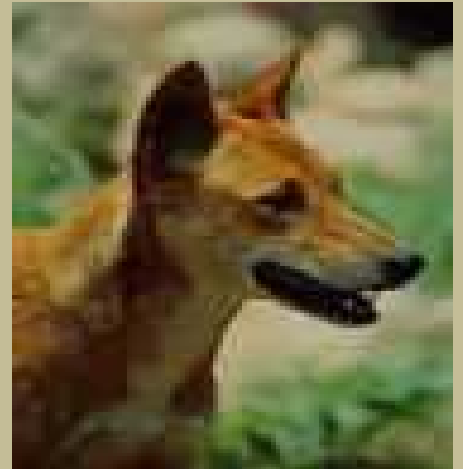
## Outcompeted by the dingo

Dingos are semi domestic, having supplementary food source.

Dingos diurnal pack hunters

Life expectancy thylacine 5-7 yr.  
dingo 20 years

Thylacine went extinct in Australia and New Guinea about 3,000 years ago.



The dingo

# THE THYLACINE

## Tasmania:

The dingo didn't make it to the island

became the thylacines' (and other marsupial species') last refuge

By 1788 when Europeans colonized Australia the thylacine was already restricted to Tasmania





# GONE BUT NOT FORGOTTEN: THE THYLACINE



Rock art of northern Australia depicts the thylacine, documenting the species' tenure on that continent.



Top: Kakadu National Park, NE Australia

Bottom: Ubirr, N. Australia

# THE THYLACINE

The art dates from about 5,000 years ago.



# GONE BUT NOT FORGOTTEN: THE THYLACINE



# GONE BUT NOT FORGOTTEN: THE THYLACINE



Also from Australia is this naturally mummified thylacine head, found within a cave.

# GONE BUT NOT FORGOTTEN: THE THYLACINE

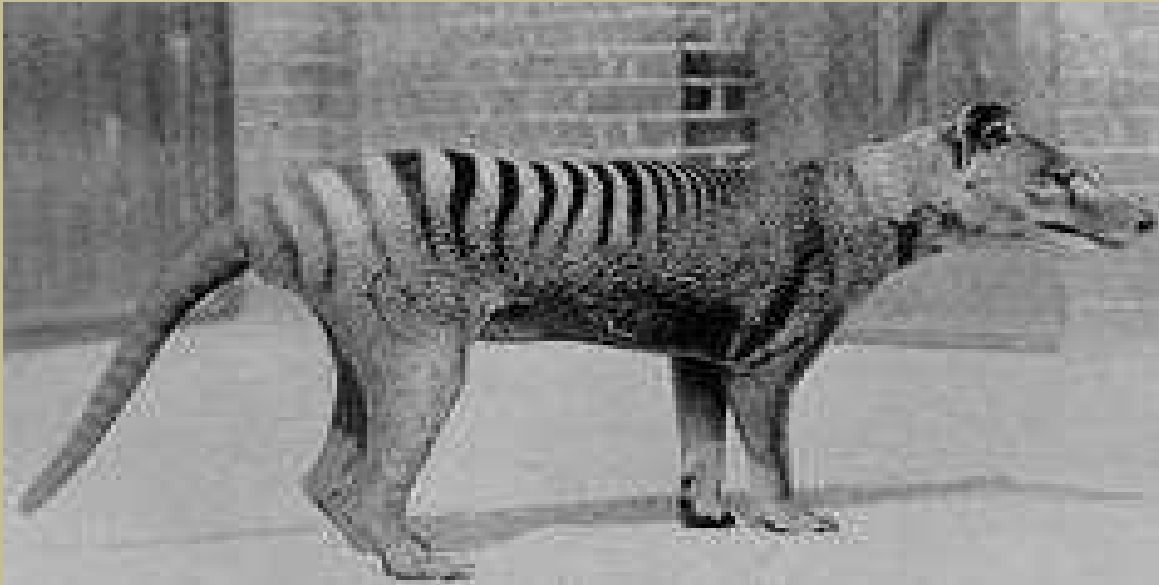
Another thylacine mum  
3,300 years old



# THE THYLACINE



Protected in its island home of Tasmania, the extraordinary thylacine flourished until the early 1800's.





# GONE BUT NOT FORGOTTEN: THE THYLACINE



no natural predators,  
although white-tailed  
eagles and Tasmanian  
devils preyed on their  
young.

Tasmanian devils are the  
largest remaining  
carnivorous marsupial.

High birth rate  
opportunistic

# THE THYLACINE

In 1802, European settlers  
in Tasmania brought  
sheep

Thylacine perceived to be  
vicious sheep and  
chicken killers

They were forced into  
higher elevations

Until sheep populations  
increased.

“vampires of the night...”  
building of myth



# THE THYLACINE



Predator extermination program  
Habitat loss due to forest  
clearing also began to take its  
toll on the thylacine.

The final decline of this superb  
marsupial proceeded quickly,  
abetted by a public campaign  
of extermination.

# GONE BUT NOT FORGOTTEN: THE THYLACINE

“When the comparatively small island of Tasmania becomes more densely populated, and its primitive forests are intersected with roads . . . the numbers of this singular animal will speedily diminish, extermination will have its full sway, and it will then, like the Wolf in England and Scotland, be recorded as an animal of the past.”

(Naturalist John Gould, 1863)

# THE THYLACINE

In 1888 the Tasmanian government placed a bounty

£1 per adult and 10 shillings per pup.

Didn't have flexibility to adapt

Rarely left their territories

Made tracking them and killing them easy.



# THE THYLACINE



1850's est. 150 individuals in zoos throughout the world  
Brought attention to this unique species and its plight.  
Only one successful litter was produced in captivity



# GONE BUT NOT FORGOTTEN: THE THYLACINE



# THE THYLACINE



Between 1888 and 1908, 2,184 bounties were paid.

People began to voice their opposition

A noted decline in population

But it was too little too late

Population bottleneck

Bounties plus distemper decimated the populations

The last to be killed in the wild was shot in 1932.

# GONE BUT NOT FORGOTTEN: THE THYLACINE

1935 expeditions were sent into remote areas to document population

Benjamin

On September 7, 1936, the last thylacine in captivity died at the Hobart Zoo, Tasmania.

Fifty years later, in 1986, the thylacine was declared extinct.



# GONE BUT NOT FORGOTTEN: THE THYLACINE



# GONE BUT NOT FORGOTTEN: THE THYLACINE

. . . and there was hope, that some still remain in the high wild mountains of Tasmania.

But this hope is fading as the years pass with no sightings.



# GONE BUT NOT FORGOTTEN: THE THYLACINE

## Tassie tiger alert after reported bush sighting

**By LARRY SAYER**  
ONE of the world's most endangered tiger species, the Tasmanian tiger, has been reported to have been sighted in a bush near the town of Deloraine, Tasmania, after a sighting in the same area in 1975.

The Tasmanian tiger, also known as the thylacine, is a marsupial that once roamed the island of Tasmania. It is now extinct, but sightings are reported from time to time. In 1975, a tiger was reported to have been seen in the bush near the town of Deloraine. This sighting was reported to the Tasmanian government, which has since been searching for the tiger.

The Tasmanian tiger is a large, striped marsupial that is thought to have been hunted to extinction by European settlers. It is now listed as an endangered species, and its rediscovery would be a major scientific breakthrough.



**WILMINGTON, N.J.**  
A tiger was reported to have been seen in the bush near the town of Deloraine, Tasmania, after a sighting in the same area in 1975.

**'Tigers could still exist in the wilds of Tasmania today'**

## In quest of the tiger

**... living proof worth a fortune!**

The Tasmanian tiger is a large, striped marsupial that is thought to have been hunted to extinction by European settlers. It is now listed as an endangered species, and its rediscovery would be a major scientific breakthrough.

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Claims made in the latest issue of Ecological Economics after Dutch and US environmental economists used computer modelling to reach the conclusion that thylacines might still be with us.

## Tigers can be flushed out: MP

**By WENDIE PAINE**  
A LEGION of people searching for the Tasmanian tiger could be able to flush out the animals, says a Tasmanian Member of Parliament (MP).

The MP, Wendy Paine, has said that the tiger could be flushed out of its hiding places by using a technique known as 'flushing'. This involves using a large number of people to surround the tiger and force it to reveal its location.

Paine has said that this technique could be used to find the tiger in the bush near the town of Deloraine. She has also said that the tiger could be flushed out of its hiding places by using a technique known as 'flushing'.



## TIGER LIVES

**They're out there, boffins tip**

They're out there, boffins tip. A group of scientists has said that the Tasmanian tiger is still alive in the wilds of Tasmania.

The scientists, who are part of a team from the University of Tasmania, have said that they believe the tiger is still alive in the wilds of Tasmania. They have said that they believe the tiger is still alive in the wilds of Tasmania.

## Credible sightings keep hopes alive

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## New \$100,000 quest for the Tassie tiger

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# GONE BUT NOT FORGOTTEN: THE THYLACINE



# GONE BUT NOT FORGOTTEN: THE THYLACINE

(TASMANIA'S GOVT. LOGO)





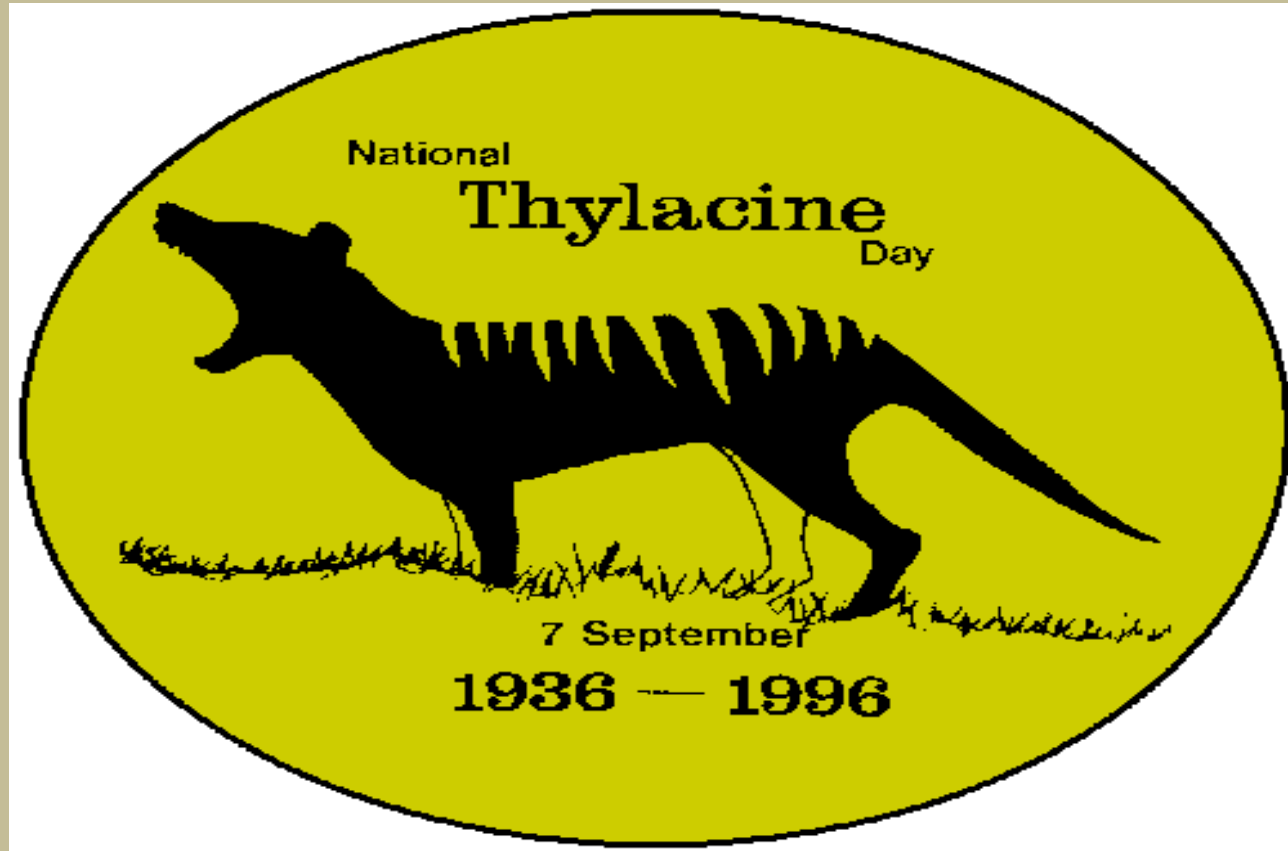
# GONE BUT NOT FORGOTTEN: THE THYLACINE

## Australia 24c

Thylacine (Tasmanian Tiger)  
Endangered Species



# GONE BUT NOT FORGOTTEN: THE THYLACINE

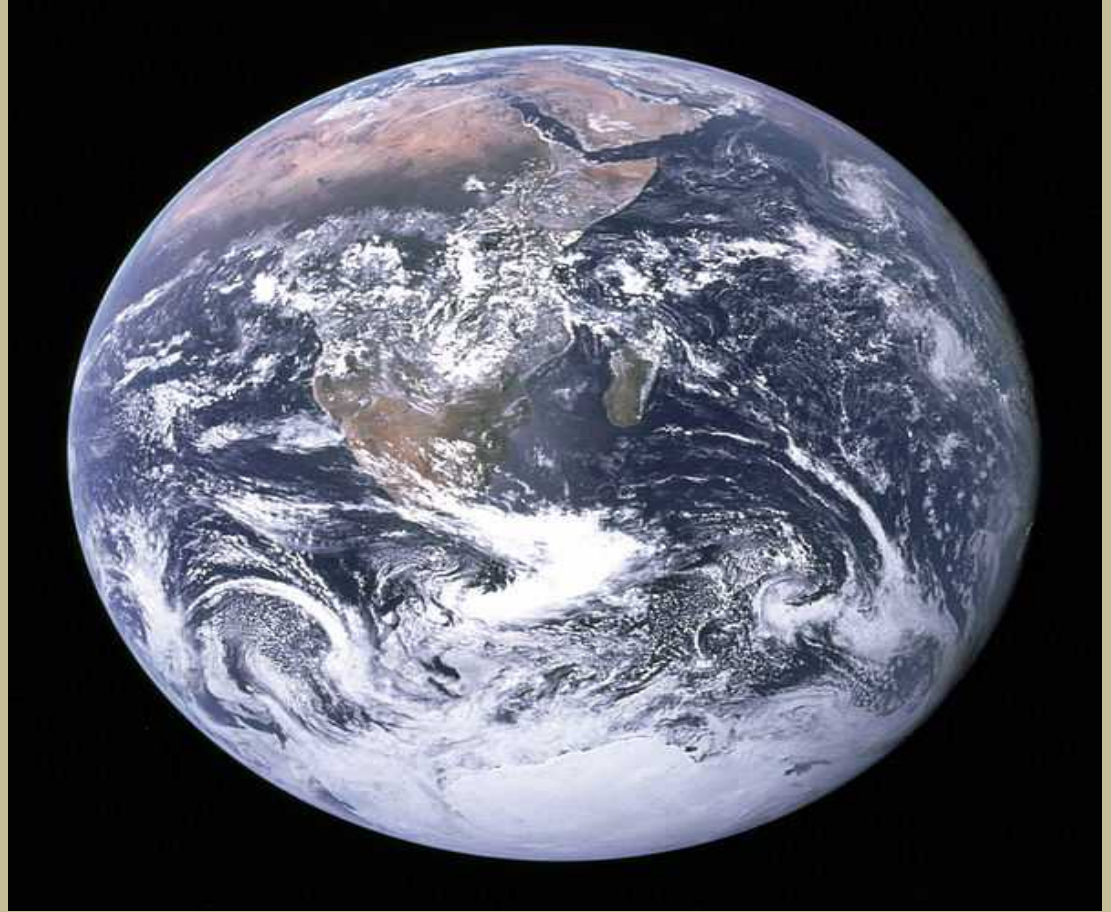


# GONE BUT NOT FORGOTTEN: THE THYLACINE



# Extinction

- Extinction is a natural occurrence on earth- an important part of evolution
- More than 90% of all the organisms that have ever lived on Earth are extinct.
- 5 major mass extinctions in the fossil record



# Life on Earth

- It is estimated that 8.7 million species exist on earth today
- There are 1.7 million or 20% of the total that we have named and identified.
- 13,000 species are added to that list every year.
- $\frac{3}{4}$ 's of species are on land (insects),  $\frac{1}{4}$  in the sea have yet to be identified, described and cataloged.





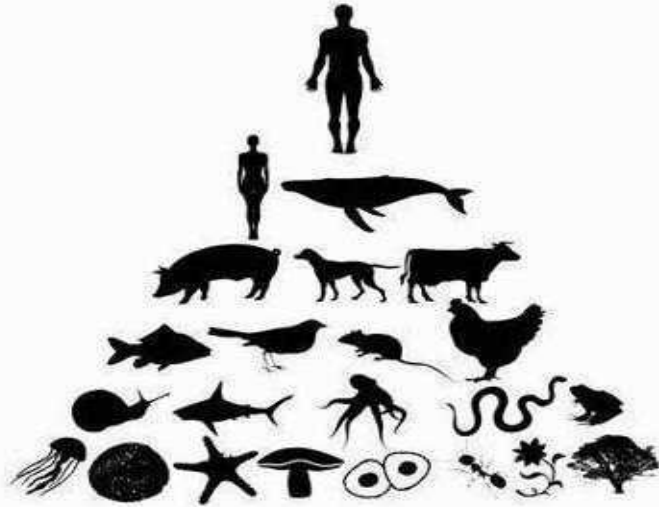
# Anthropocene Epoch

Actual time line is debatable

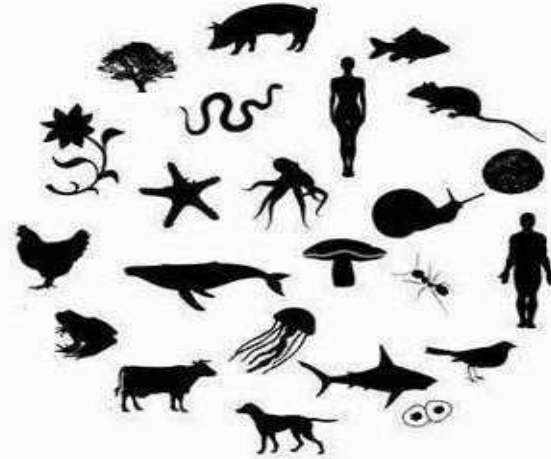
- 11,700 years ago beginning of agriculture
- 300 years ago industrial revolution
- Through mining activities alone, humans move more sediment than all the world's rivers combined
- warming the planet,
- raised sea levels,
- eroding the ozone layer
- acidified the oceans.
- Pollution
- Development/habitat loss



# EGO



# ECO



*"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."*

*— Aldo Leopold*

# the 6th mass extinction

- 1<sup>st</sup> mass extinction resulting from the actions of one species.
- Oct. 28<sup>th</sup>, 2016 –  
Latest WWF and the United Nations estimates, by 2030, 50% of individual organisms will become extinct in the wild.
- We will lose 5,742,000 organisms in the next 10 years - most of which we will never know about.
- Climate change, habitat loss, pollution and illegal wildlife trade





# common characteristics of most vulnerable endangered species

- narrow home range
- narrow food base
- limited reproductive cycle or behavior
- combination of the above factors plus they have a high economic, social or cultural value to humans.

