

TASMANIA

March 2014



Tasmania also known as "Tas" or "Tassie" is an island state in the Commonwealth of Australia about the same size of Ireland. It is not only very scenic but also of exceptional biological & geological interest with many unusual if not unique animal & plant



The state of Tasmania is named in 1856 after its discoverer Abel Tasman & comprises of 335 islands with Tasmania being the largest. It is one of the most unpolluted places in the world and also called the "Natural State" as 45% of its land lies in Reserves, National Parks & World Heritage Sites

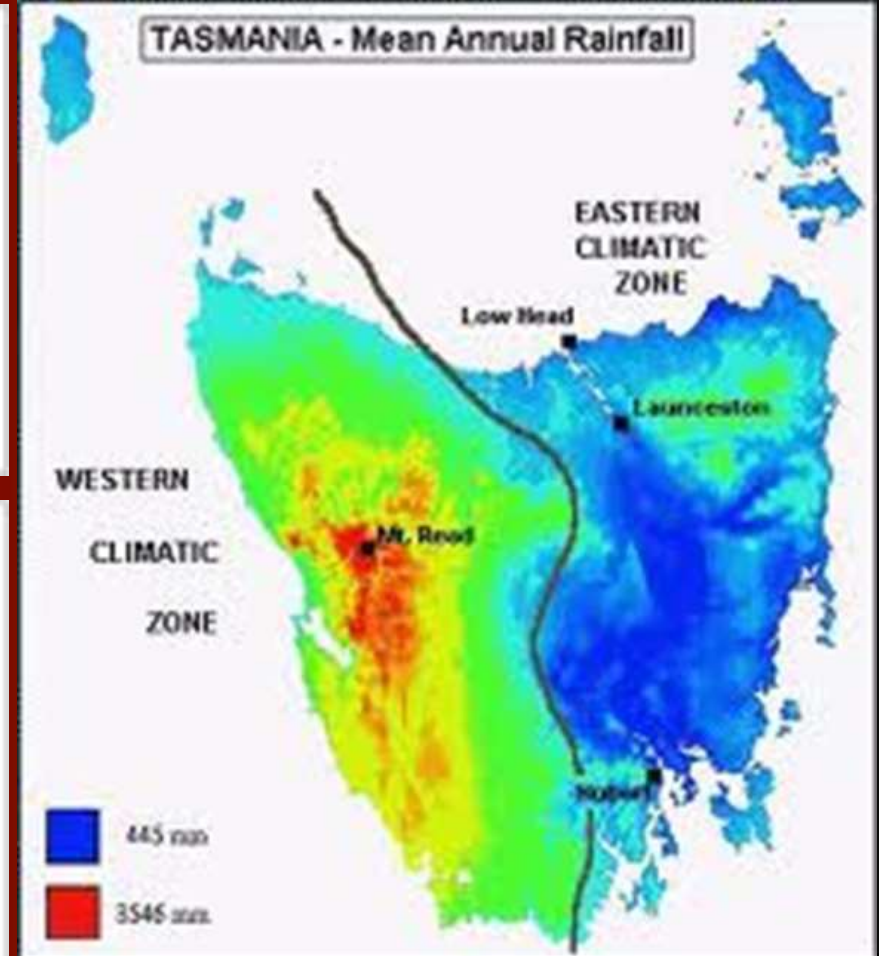
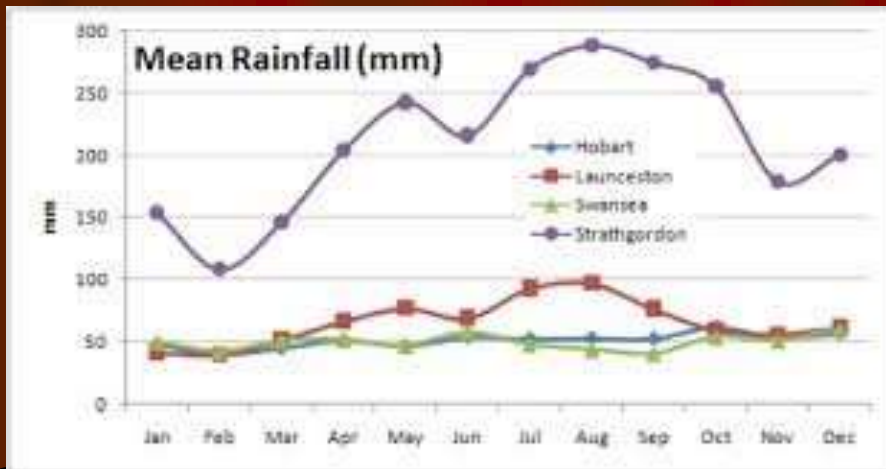
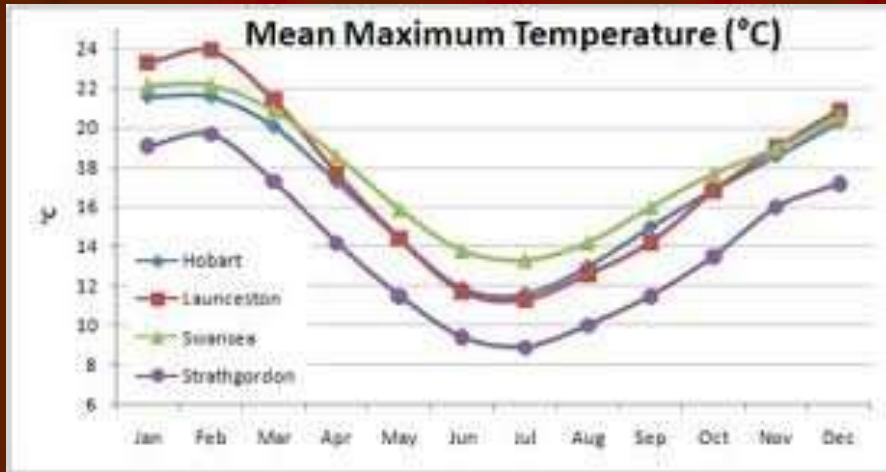


Fresh air, blue sky, clear water are Tassie's trademarks



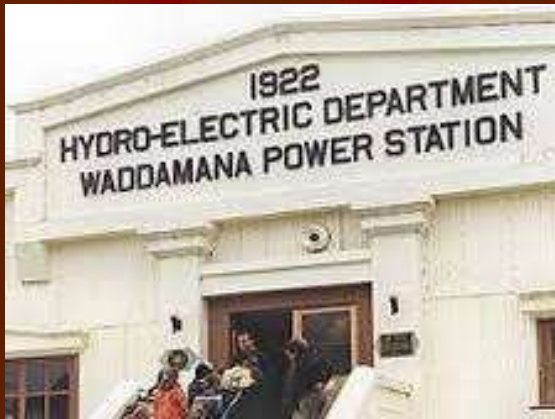
Tasmania Climate

Cool temperate climate with distinct seasons. March is the beginning of Autumn with monthly average Temp at 20 C & lowest at 10 C

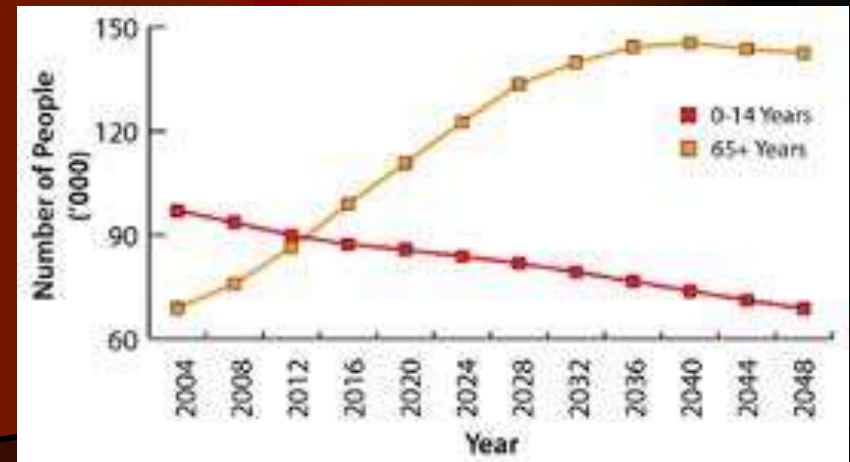
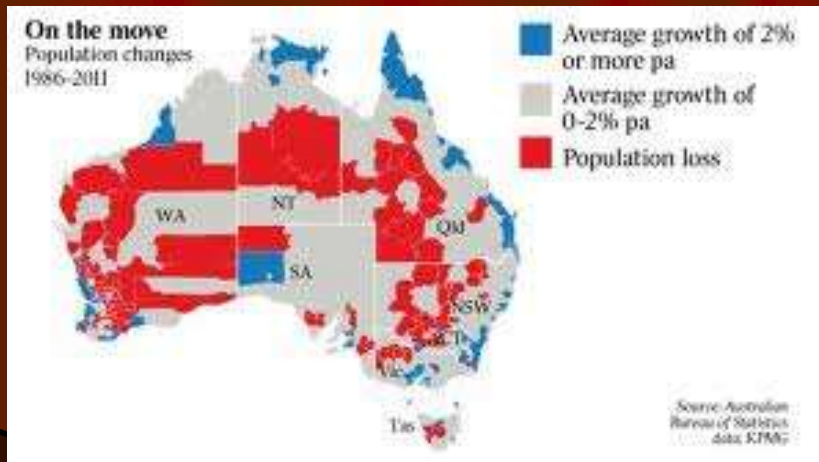


Capital : Hobart (population 211,000)

Power Supply : mainly hydroelectric



Population : 512,400. With growth rate of 0.1% it is the lowest in Australia & rapidly aging as well



Tasmania Aboriginals

- Aboriginals are the indigenous people of continental Australia who were descendants from the first humans to migrate out of Africa to Asia & subsequently arrived Australia 50,000 years ago & developed into 400 distinct groups. They were living in Tasmania at least 35,000 years ago arriving through a land bridge & were then isolated for 8,000 years after the Bass Strait was formed



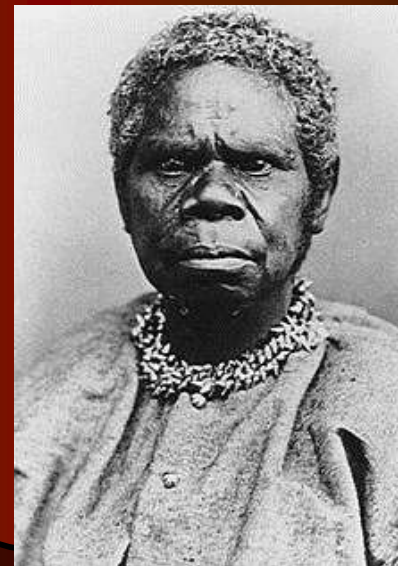
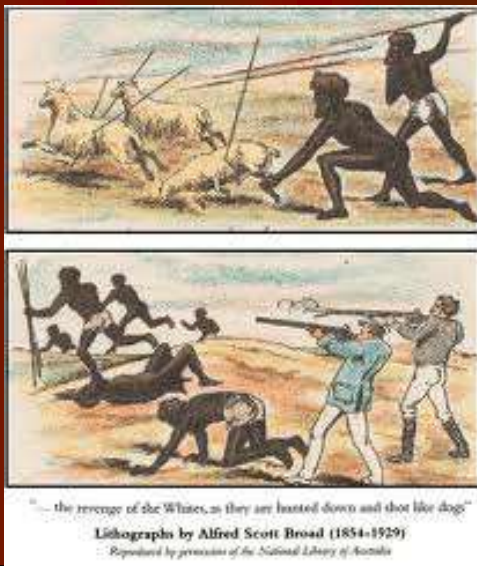
- Map of the Tasmania tribes and the tools they used



Pictures of Tasmania aboriginals



- At the time of British settlement in 1800 there were 5,000 to 10,000 people living on the Island
- Number dwindled to 300 by 1833 due to diseases, war and persecution. The so called "Black War" between the British & the aboriginals in the early 19th century is considered to be one of the earliest recorded GENOCIDE. All remaining population was then relocated to Flinders Island. Ms Truganini who died in 1905 was the last full blood Tasmania aboriginal



Convict sites

In the 18th & 19th Centuries over 165,000 convicts were sent to Australia from England for having committed very minor crimes like stealing a piece of bread & Tasmania was one of the final destinations. The first batch of 21 men & 3 women arrived in 1803. All in all over 60,000 ended up in Tasmania. Five of the 11 Australia convict sites recognized by UNESCO are in Tasmania. Note the picture of the "chain gang"



Port Arthur Prison

Built in 1850, the prison is famous for its notorious physical punishment including flogging and solitary confinement



Economy

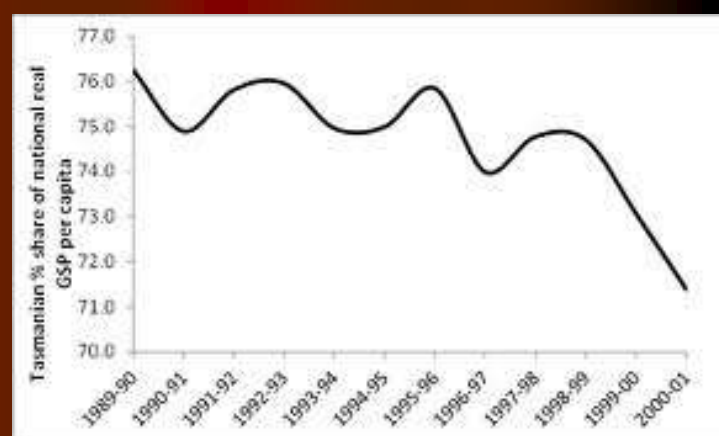
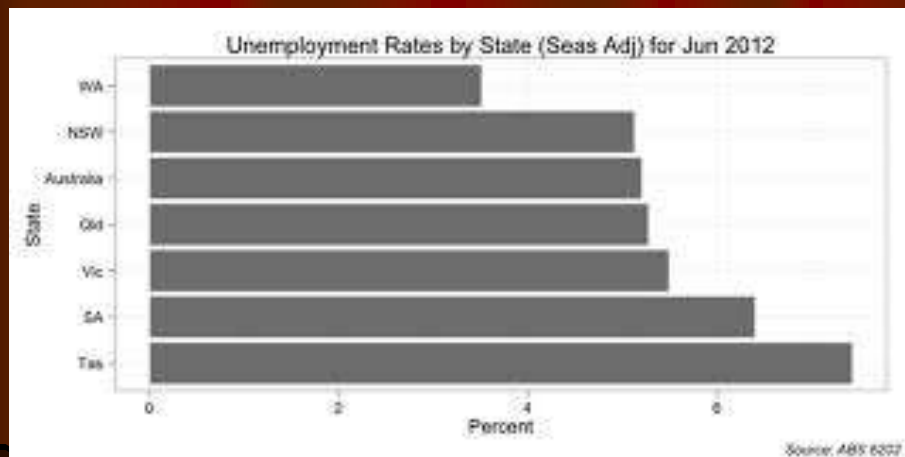
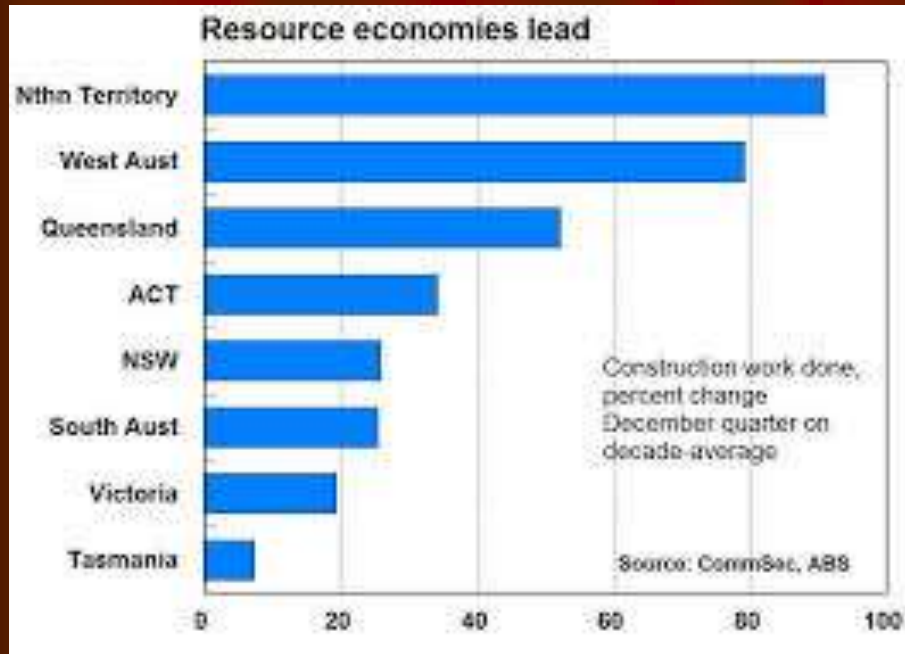
Main activities include mining, agriculture, forestry (wood chips & newsprint), tourism, food export (abalone, farmed Atlantic salmon, crayfish, oyster, wine, diary products) & ship building (aluminum catamaran)



AVERAGE TOTAL INCOMES	
Hobart	\$47,389
Inner Hobart	\$46,051
West Coast	\$43,377
Inner Launceston	\$40,026
Kingborough	\$39,786
State average	\$37,718

With unemployment rate at 8.4% & a fiscal deficit of A\$309 million, Tasmania has the worst economy in the whole country. A Coalition's Economic Growth Plan has been launched in August 2013 to boost the economy by stimulating tourism, farming & education (specialized Diving school & center for wooden boat building)

Economic Indices



- MINING



- INCAT (International Catamarans) : based in Hobart , now in use by the HK/Macau ferry companies



- AQUACULTURE : Atlantic salmon farming



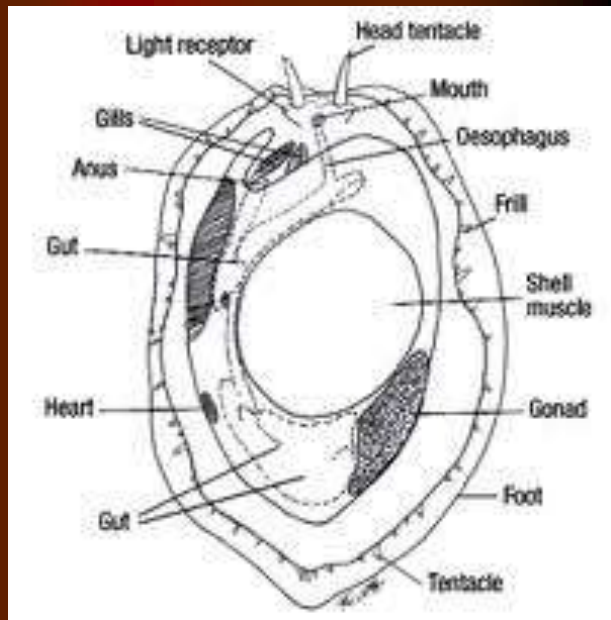
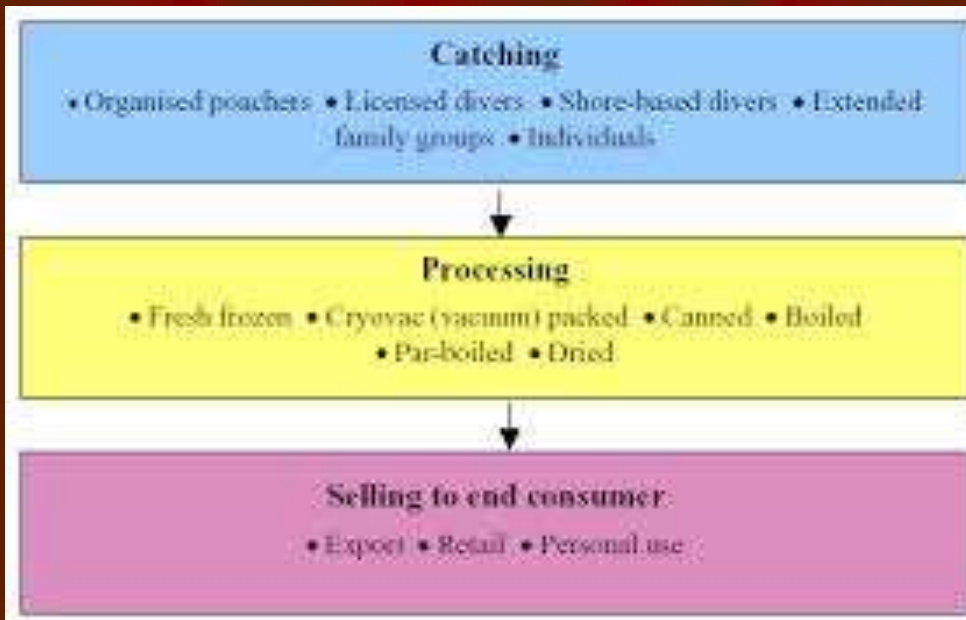
- Tasmania abalone : Tasmania has the largest wild harvest abalone fishery in Australia occupying 25% of world market share & increasing as Japan stock is decreasing due to the 2011 tsunami. Greenlip (*Haliotis laevis*) is less abundant than Blacklip (*Haliotis rubra*) and therefore more expensive



- Live Greenlip abalone (*haliotis laevigata*) at Tas Live Abalone Factory. The Factory is now owned by a Shanghai company !



- Wild Abalone harvesting is closely monitored by the authority to avoid overfishing. We were told that the 2014 quota for Greenlip already used up in March due to great demand from China !



- Oyster Farm at Freycinet – oysters are sold when they reach 2 years old



- Tourism has grown rapidly in recent years hitting over 900,000 visitors in 2012. Apart from the scenery many come for its fine food & wine visiting farms & vineyards to enjoy crayfish, oyster, abalone, fresh organic fruits & vegetables as well as a large variety of dairy produces



- Wine tasting at the Rosevears Estate Vineyard. Oyster tasting in the Freycinet Marine Farm & wonderful cooked seafood dishes !



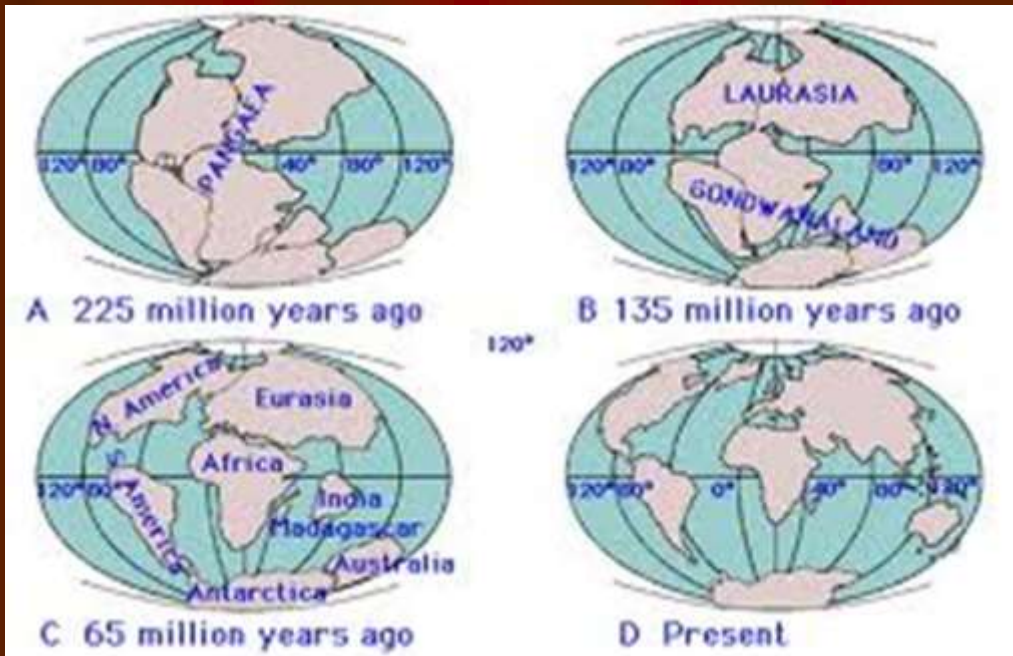
- Fruit farm in Sorell – “Pick your own”



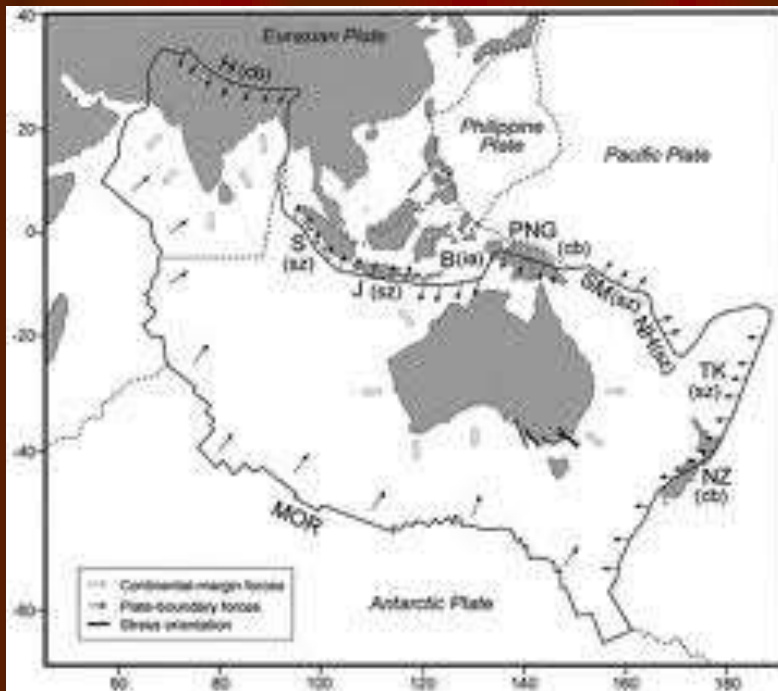
- Poppy is also grown under special license for making morphine for medical use (40% of world consumption)

Geology

The Island was part of Australia & still linked to Antarctica when Gondwanaland broke up at 135 Ma. Australia detached with Antarctica 45 Ma and Tasmania was only completely detached in its present form at the end of the last glacial period 10,000 years ago



Situated on the Indo-Australian Plate, Tasmania's geology is extremely complex. With rock records stretches from Precambrian (1270 Ma) all the way to the Cenozoic, the States geodiversity is a result of continental drift, ice ages, humid hot conditions & earthquakes occurring over many millions of years

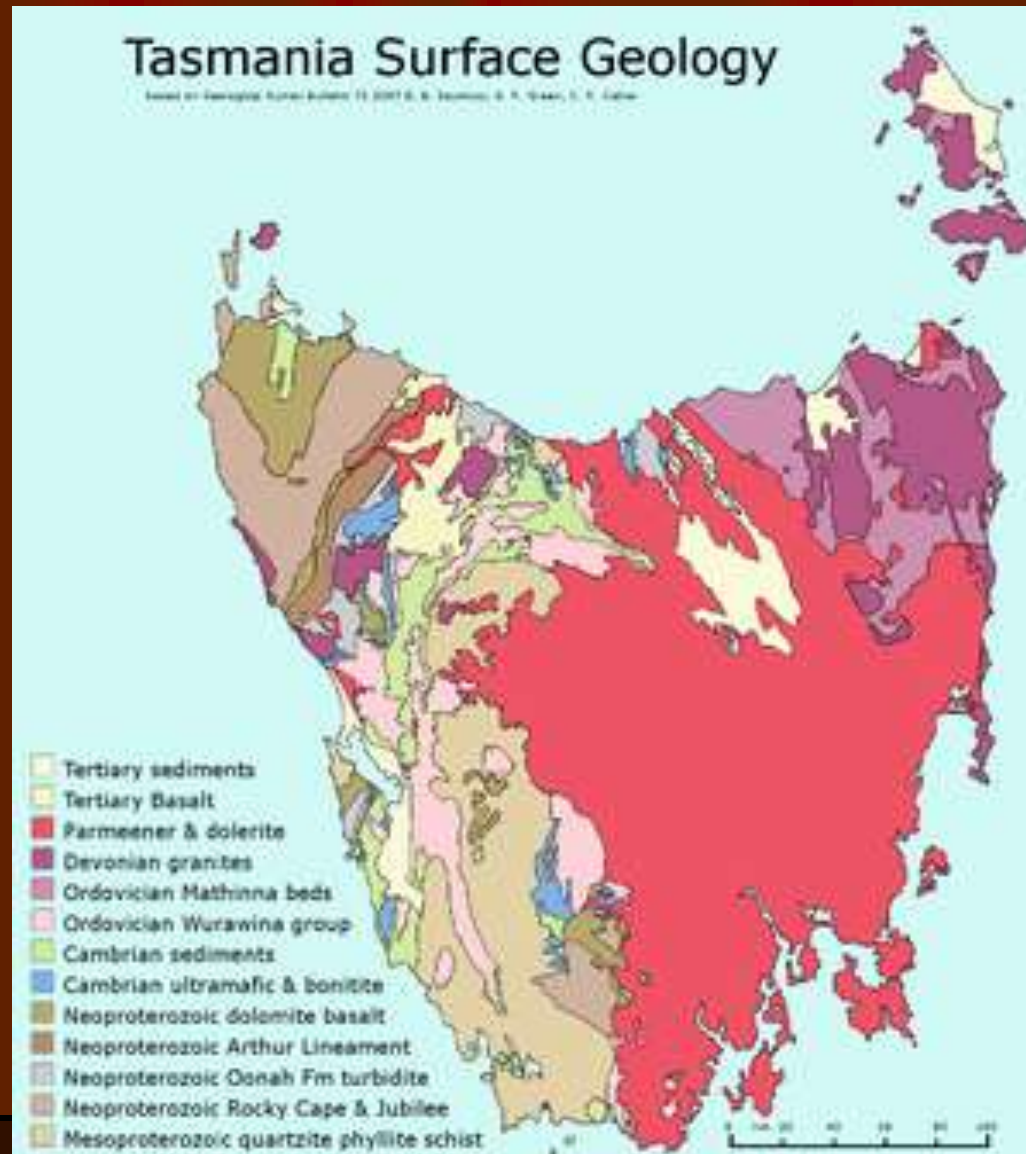


Tasmania Fossils

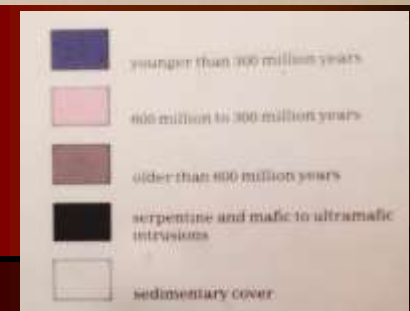
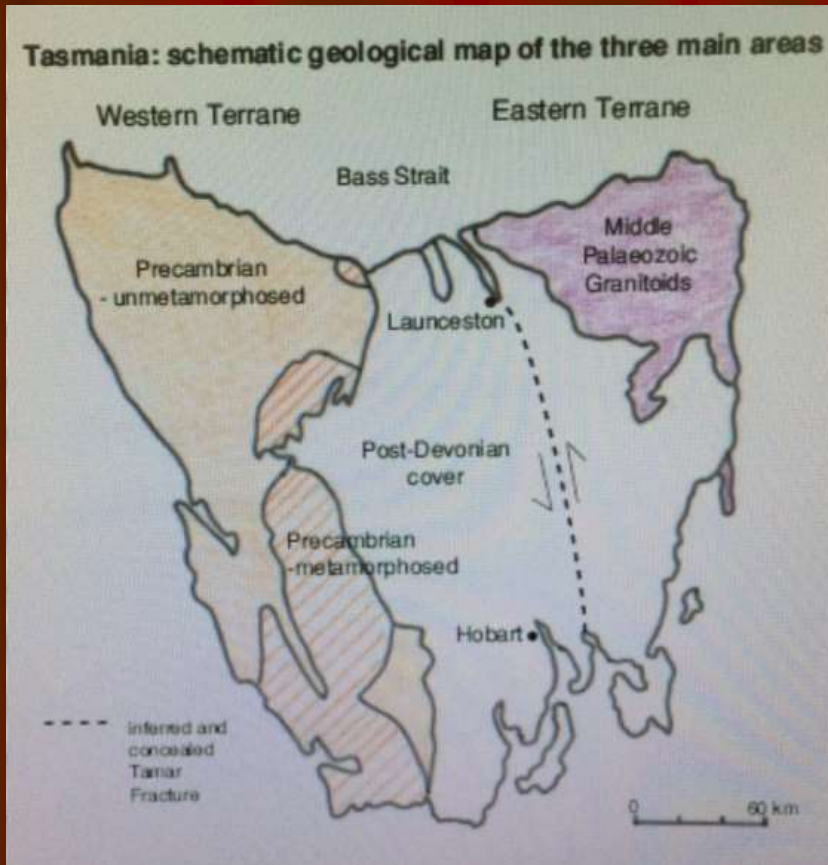
Trilobite, crinoid, scallop, plants & lystrosaurus



Geological maps



Geological maps



- Much of the Island is composed of Diabase or Dolerite 粗粒玄武岩 formed in the Jurassic by Mafic magma (>55% silicate). At 30,000 km² it is the world's greatest Dolerite exposure forming mountains, cliffs & sometimes columnar joints called "Organ Pipes" which were formed when the magma was cooled a few hundred meters below the earth's surface. Sample collected near Launceston



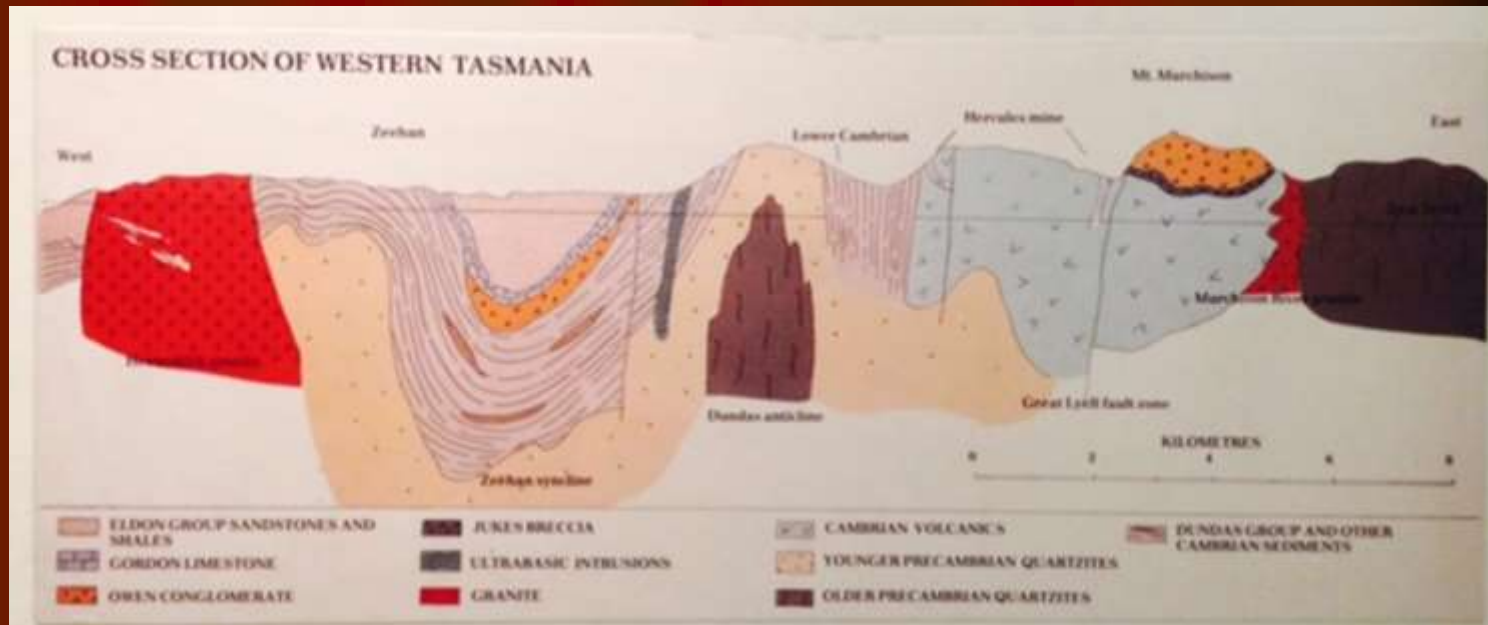
- In the far South West the geology is almost completely Quartzite 變質砂岩 which looks like snow in the distance. Quartzite is a hard non-foliated metamorphic rock which was originally pure quartz sandstone. The quartzite mountains in Tasmania were formed some 700 Ma in the Late Precambrian. Sample collected in Cradle Mountain



- Red granite at Cradle Mountain



- World class mineral & precious metal deposits are found on the west coast associated with metamorphism. Main ones include copper, zinc, tin, iron, gold, silver, sulphides & asbestos. The largest Tasmania gold nugget was discovered in 1883 weighing 243 ozs



- Crocoite 鉻酸鉛礦 : It is the State mineral of Tasmania consisting of lead chromium oxide ($PbCrO_4$) Best specimens are found in the Dundas district located on the west coast



Beautiful Crocoite 鉻酸鉛礦 (Victoria Museum/Australia Museum)



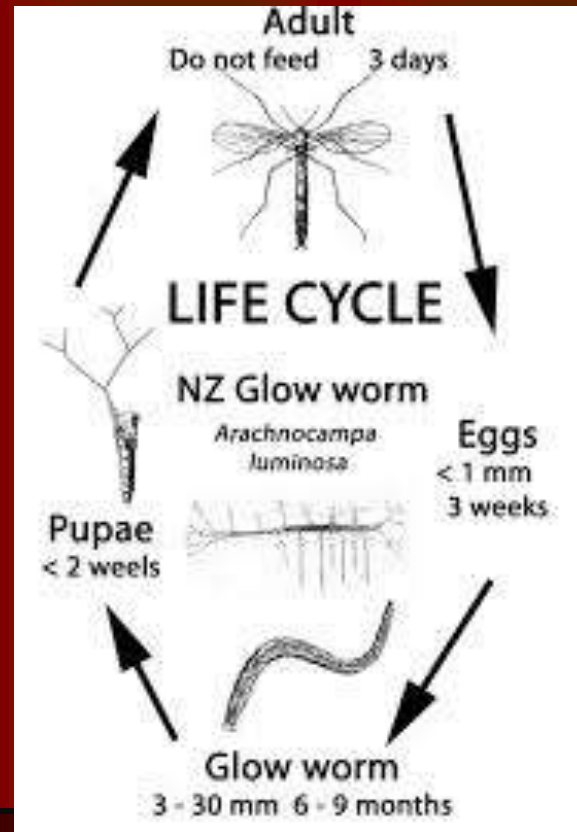
- Maracoopa Cave at the Molecreek Karst National Park

A “Wet Cave” in pristine condition with a constant temperature of 9 C.
The cave is also famous for its Glow-worms



- Grow worms (*Arachnocampa tasmaniensis*)

They are not really worms but the luminous larval stage of a fungus gnat. The chemical reaction in their abdomen produce a cold blue light for attracting & catching flying insects for food. They are able to switch the light on & off at will



Growing stalactites & stalagmites



Tufa pools in the Maracoopa Cave where we also found a blind cave spider similar to the one shown below



Marakoopa Cave - note the coral fossils which are over 300 million years old



Flora & Fauna

Tasmania separation from the mainland, diverse landscape & temperate climate have resulted in many species of plant & animal life prospering in the State with many only found here

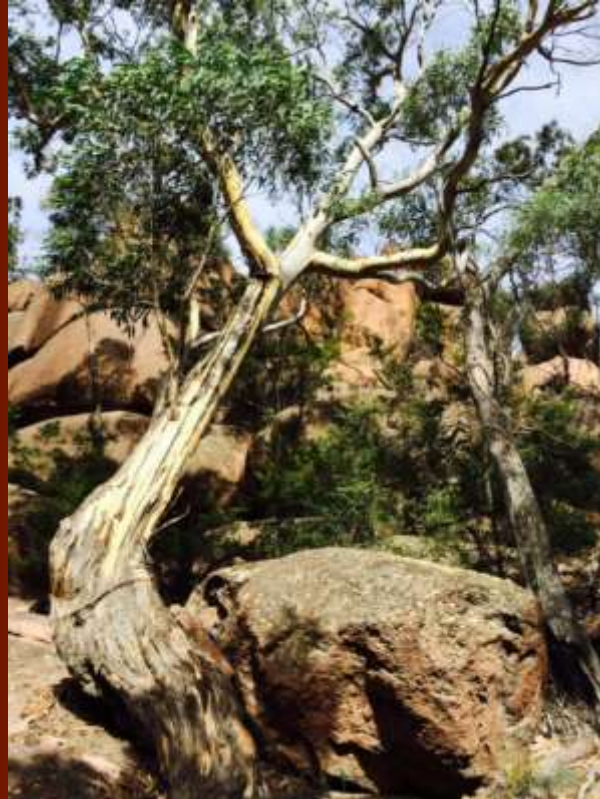


Flora

- 60% of the Alpine flora is endemic to the State
- Others include 2,000 years old Huon Pines in the southern rain forest & eucalyptus globulus which is the tallest tree in the southern hemisphere reaching 89m
- The North West has the largest temperate rainforest in Australia with many non vascular plants such as mosses liverworts & lichens
- Antarctica flora is found on the East Coast



- Eucalytus or gum trees, 29 species some reaching sky high. It is the most common plant which can be seen almost everywhere



- Tasmania Blue Gum : One of the eucalyptus species, can grow over 75 meters with its flower selected as the State flower of Tasmania



- Huon Pine (*Lagarostrobos franklinii*): Found only in Tasmania rain forest. The oldest can be over 2,000 years ! The plant has exquisite smell and touch & is one of the best boat building timber known to man because of its durability & strong oil which makes it very resistant to water



- Myrtle (*Nothofagus cunninghamii*) a predominant species in Tasmania's rain forest. Can reach a height of 30 to 40 m. Can grow to be up to 500 years old. Its timber is prized for furniture/paneling



- Sassafras (*Atherosperma moschatum*) a tree with antiseptic property but an overdose can be harmful



Black heart sassafras desk

- Leatherwood (*Eucryphia lucida*) Endemic to Tasmania. Can grow to 10 to 15m. The nectar from the flower is used by bees to produce Tasmania's famous leatherwood honey. Leatherwood timber is also used for furniture making



All the plants described above can be found at the AirWalk located in the Tahune Forest Reserve which is also platypus country



- Button grass (*Gymnoschoenus sphaerocephalus*)

Button grass grows in damp low nutrient soil & forms part of a unique habitat in Tasmania. We saw plenty of it in Cradle Mountain around Dove Lake



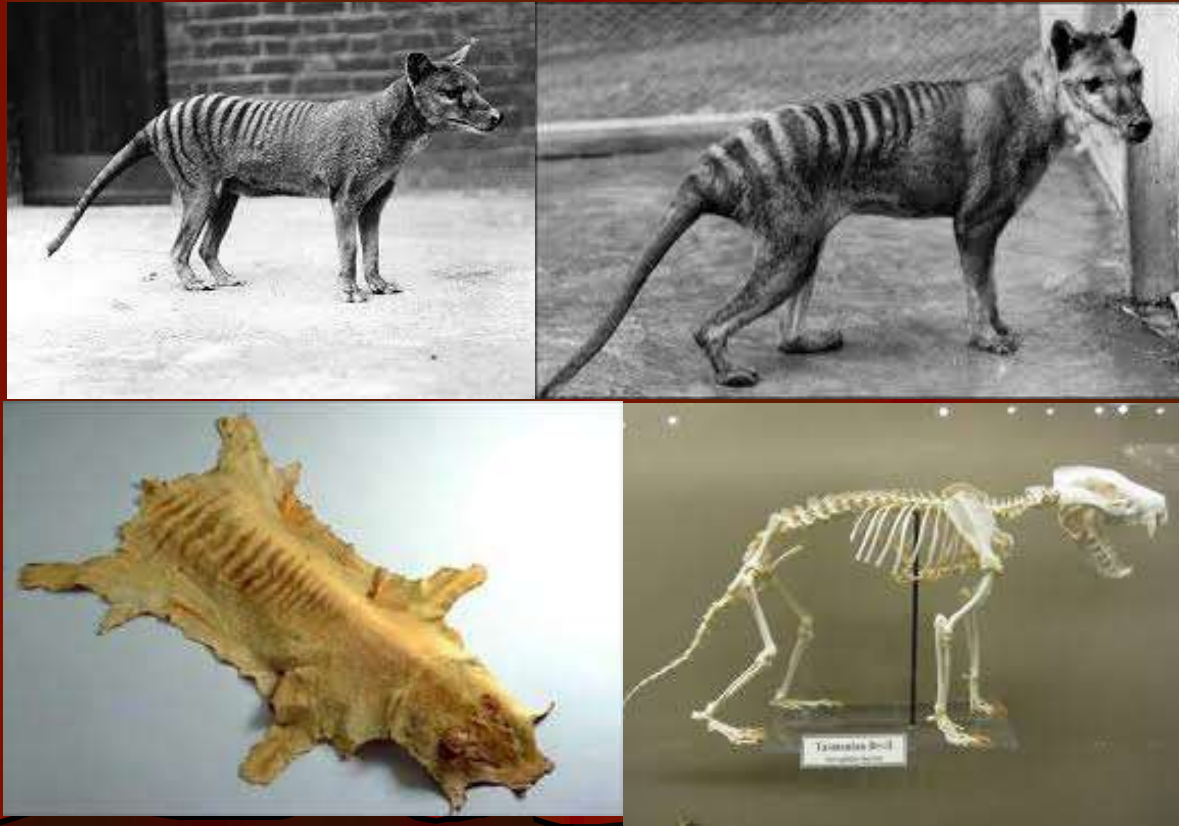
Fauna

Tasmania has one of the largest collection of marsupials 有袋哺乳類動物 in Australia including the now extinct Tasmania Tiger, the Tasmania Devil, Wombat, Quoll, Bandicoot, Kangaroo & Wallaby. Other interesting animals include the only two monotremes 卵生哺乳類動物 in the world namely the Platypuses & Echidna as well as Tasmania native-hen, fairy penguin, giant squid & the now extinct Tasmania Emu. We saw some of the above in the wild as well as when visiting the Bonorong Wildlife Park



Thylacine akin Tasmania Tiger or Tasmania wolf

Largest known carnivore marsupial of modern time. First appeared 4 million years ago, it went extinct when the last known specimen died in Hobart Zoo in Sept 1936 largely due to human persecution, the introduction of dingo as well as climate changes



The introduction of sheep farming in Tasmania led to conflict with human & government bounty was introduced in 1830 & between 1888 & 1909 for the eradication of the animal. Thousands were killed. There have been hundreds of sightings after it was declared to be extinct but all remained inconclusive



Tasmania Devil (*Sarcophilus harrisi*) 袋獾

It is the largest carnivore marsupial of modern time which was hunted down to almost extinction until being protected in 1941. Now only found in Tasmania. At 52-80 cm long plus a tail 23-30 cm, it has a life span of 5 years.



Tasmania devil distinctive red ears and spine- chilling screeches it has a undeserved reputation for savagery. Devils mostly only hunt insects, birds & small mammals & reptiles. In 2005 80% perished due to the spreading of a devil facial tumor disease which as yet cannot be cured



Eastern Quoll (*Dasyurus viverrinus*) 東澳袋鼬

At 28-45 cm long with a 17-28cm tail they are the second largest carnivore marsupial in Tasmania. Used to be more wide spread in other parts of Australia but now only found in Tasmania



Common Wombat (*Vombatus ursinus*) 袋熊

Weighing 17-40 kgs length 80-130 cm it is a herbivore marsupial closely related to koala & also the world's largest burrowing mammal digging tunnels from 10m long 20 m deep. Its pouch opens at the bottom to avoid soil getting in while digging. Now mainly found in Tasmania, the animal is classed vulnerable



Eastern Barred Bandicoot (*Perameles gunnii*) 橫斑袋狸
Again much more widespread before but now only found in
Tasmania



Tasmania Bettong (*Bettongea gaimadi*)

Also known as small kangaroo now only found in Tasmania living in the warmer eastern half of the state. Weighing 2 kgs their main diet subterranean fungi that exist in a symbiotic relation with the roots of eucalyptus & acacia. Note the tail is as long as the animal's body



Kangaroo (They are Macropods meaning "Big Foot")

The Forester Kangaroo : also known as the grey kangaroo. At 2 m tall weighing 60 kgs it is the largest marsupial in Tasmania & second largest in the world. Now protected, the animal is restricted to northeastern Tasmania & small areas in central Tasmania



Wallaby 岩袋鼠

Two species. Benetts wallaby & Tasmanian pademelon.
Benetts wallaby which is also called the Red-necked wallaby is the most commonly seen weighing 25 kgs & stands up to 1.5 m



Platypuses 鴨嘴獸

A 40-60 cm monotreme egg laying mammal with trademark duck bill & webbed feet which is unique in Australia. The male has a spur on its high limb which is connected to a poisonous gland. They have no nipple. They are solitary & mostly nocturnal. When swimming their eyes are closed & they detect prey by picking up the electronic signals generated by the movement



Short nosed Echidna 短吻針鼹/刺食蟻獸

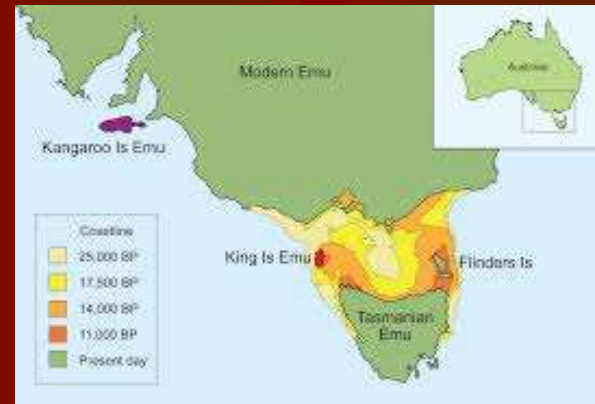
A 40 cm spiny ant eaters with a 17 cm tongue. They are also monotremes meaning "single hole" & they lay eggs despite being warm blooded. When under threat they can roll up like a ball. Life span 4/5 years. Now threatened



Tasmania Emu

(Dromaius novaehollandiae dimenensis)

It is an extinct subspecies of the flightless bird emu found only in Tasmania where it had become isolated during the late Pleistocene. Hunted by man as a pest it went extinct around 1850 !



Tasmania fairy penguins

(*Eudyptula minor*)

Also called Little Penguins. Living on the East coast, they are the smallest of all penguins. Mature height 40 cm weighing 1 kg with average life span of 6 years. Total population estimated to be around 5,000 breeding pairs. Can dive down to 10-30 m. Main diet fish, squid, seahorse & krill. Most nest in burrows



Tasmania native-hen (*Gallinula mortieni*)

It is a stocky flightless rail & one of 12 species of bird endemic to Tasmania, practice polygamy



Tasmania birds

Of the 262 species found 12 species are unique

- Yellow Wattlebird (*Anthochaera paradoxa*): this Australia's largest honeyeater is endemic to Tasmania



- Tasmania rainbow lorikeets : They are a serious pests to the orchards & native biodiversity



- Unidentified parrot

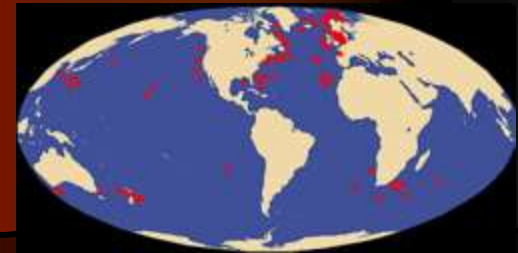


- Tasmania snakes : 3 species all venomous namely the Tiger Snake which is most common; the Lowland copperhead & the White Lipped Snake. Although the last kill in the bush is in 1966 it is important to avoid them



Giant squid (*Architeuthidae architeuthis*) 大王魷

10-14m long, the bodies of this sperm whales favorite food are occasionally swashed onto the Tasmania shores



THE END