

## FAQs for Primary School students

With contributions from the Year 6 and Year 7 classes,  
Albany Hills Primary School, Queensland



<http://kangaroo.genomics.org.au>

## KOALAS



Photo courtesy of Assoc. Prof.  
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### (1) Why are koalas only in Australia?

The answer to this question relates to the information given in the answer to question 1, on our **Marsupials FAQ Sheet** that can also be found on this website. Koalas probably first evolved on the Australian continent during the period when Australia began to drift slowly northward, gradually separating from the Antarctic land mass some 45 million years ago. Fossil remains of koala-like animals have been found dating back to 25 million years ago. As the continents separated and the climate changed, Australia became drier. This would have resulted in a change in the plant life in Australia, until what we now know as eucalyptus, or gum trees, evolved and koalas became dependent on them for food.

### (2) In which parts of Australia are koalas endangered and in which parts of Australia are they not?

The Australian Federal Government's **Department of the Environment, Water, Heritage and the Arts** has a map on its website showing the current distribution of koalas across Australia:

[http://www.environment.gov.au/biodiversity/abrs/online-resources/fauna/afd/taxa/Phascolarctos\\_cinereus](http://www.environment.gov.au/biodiversity/abrs/online-resources/fauna/afd/taxa/Phascolarctos_cinereus)

Koalas can be found in open woodland and eucalyptus forests of eastern Australia: in Queensland, New South Wales, Victoria, and South Australia. Koalas can be found in fragmented populations throughout these states, although some populations are seriously at risk. Like many native animals, koalas can suffer from the effects of habitat destruction, domestic dog attacks, bushfires, and road accidents, however; they are not considered to be endangered. An authority on the conservation status of animal species, the International Union for the Conservation of Nature (IUCN) lists the koala under the category "Least Concern" on its 'Red List of Threatened Species'.

The IUCN reports on its website (<http://www.iucnredlist.org/details/16892>):

*"Koalas are uncommon and patchily distributed in most of their Queensland range, but are common in south-eastern Queensland. Queensland populations have persisted where habitat occurs, although fluctuating markedly in size .... They are widespread and common in Victoria. In New South Wales, they are known to be common in the Pilliga (the species' stronghold is along the north coast), but they are uncommon*

*elsewhere. All South Australian populations became extinct by 1920, and current populations have been introduced outside their original range with the exception of the extreme south-east of the state. The introduced populations have expanded and caused severe environmental damage on Kangaroo Island (current population estimates on Kangaroo Island are of 28,000 – these animals are highly inbred, resulting from a very small original source population of 10 animals). The Koala was listed in the 2001 State of the Environment report of the Commonwealth as one of the eight pest species of Australia” [Accessed 18th March 2009]*

### **(3) I've heard that koalas are not doing very well because of diseases and illness. What are some that affect koalas?**

Chlamydiosis (pronounced: cla-mid-ee-oh-sis, or using the phonetic alphabet: klə-mīd'ē-ō'sīs) is one of the major diseases affecting koalas and is caused by bacteria called Chlamydia. Koalas with this disease can die, or can develop a variety of other problems such as: blindness, sterility (they are unable to have babies), urinary tract infections, or pneumonia.

Scientists now believe that the Chlamydia bacteria has been occurring amongst koala populations for many years, and has acted as a natural population control in times of stress. The bacteria usually does not cause disease symptoms in populations with unlimited resources, but it can strike in times of stress, such as happens when habitats are reduced. Weaker animals succumb to the disease, become sick, infertile, or die, leaving the genetically stronger animals to continue breeding. In disease-free populations which have been moved to areas where they were not native or where there is not enough habitat to support them (such as on some islands off Victoria and on Kangaroo Island in South Australia), problems with overpopulation have arisen because of this unnatural situation. This is not the case though, in most mainland populations. Koalas can also suffer from a range of cancers like leukemia and skin cancers.

[Source: <http://www.thekoala.com/koala/> Accessed: 18<sup>th</sup> March 2009]

### **(4) What is being done to help koalas with such diseases and illnesses?**

Australia Zoo has an ongoing collaborative project with the University of Queensland examining the role of the koala retrovirus in leukaemia, immunodeficiency syndrome, and related diseases in koalas. The virus has been isolated and its DNA sequence has been determined, which provides a basis for further research into its role in koala diseases. The diseases caused by this virus are usually fatal, and are very common in both captive and wild koalas. The diseases represent key threatening processes affecting the long-term survival of koalas in the wild in Australia. Current research streams aim to determine the role that the koala retrovirus plays in chlamydial disease in koalas, and to determine the distribution of the virus across different koala populations in Australia.

[Source: <http://www.wildlifewarriors.org.au/research/koalas.html> Accessed: 18<sup>th</sup> March 2009]



For more educational information, go to 'Resources' at:  
<http://kangaroo.genomics.org.au>