

# Why is rainforest important?



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## FACT SHEET 13

**Before anything else** rainforests are important because they exist. They serve the earth by being part of the beauty and diversity of plant and animal communities on our planet.

*'The wilderness holds answers to more questions than we have yet learned to ask.'*

Nancy Newhall

We do not yet know all the reasons why they are important and so we should also value them for their potential to provide answers to our future questions.

### Aboriginal significance

Aboriginal people retain a strong spiritual and cultural connection to their country. Land, water, animal and plant communities are of great significance to indigenous people. Archaeological sites show Aboriginal occupation of regions where rainforest exists for at least 9000 years. Rainforests were used as a source of food, medicine and raw materials and contain sites of significance, many of which are associated with geological features.

### Contribution to climate

It has been discovered that bacteria released into the air in huge quantities above broadleaf rainforests (aerobacter) actually 'seed' clouds, providing the minute nucleus required for a raindrop to form.

Water vapour transpiring from the leaves of rainforest trees creates a cloud canopy which acts like an umbrella, cooling and shading the earth and reflecting some of the sun's heat back into space. Together with the ocean and air currents rainforests function as a global air-conditioning system.

Rainforests also trap moisture and preserve soil by slowing rain run-off, they soak up carbon dioxide and pump out oxygen.

*'Tree ... he watching you. You look at tree, he listen to you. He got no finger, he can't speak. But that leaf ... he puŪing, growing, growing in the night. While you sleeping you dream something. Tree and grass same thing. They grow with your body, with your feeling ... You feel because your body in that tree or earth. Nobody can tell you, you got to feel it for yourself.'*

Bill Neidjie, 1985

### World Heritage significance

#### Gondwana Rainforests of Australia World Heritage area

World Heritage areas are places which are so important that they have been set aside for all people for all time. These areas include some which are monuments of human culture such as the Pyramids of Giza and the Taj Mahal. Others are natural wonders such as the Grand Canyon.

Areas of rainforest in New South Wales and Queensland were added to the World Heritage list in 1986 because:

1. They are outstanding examples representing the major stages of earth's evolutionary history,
2. They are outstanding examples representing significant ongoing geological processes, geological evolution and human interaction with the natural environment,
3. They contain unique, rare or superlative natural phenomena, formations or features, or areas of exceptional natural beauty,
4. They are places where populations of rare or endangered species of plants and animals still survive.



The lyrebird is a primitive member of the Corvida – one of the two major groups of true songbirds which evolved in the Late Cretaceous.

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### Evolutionary links

Rainforest is the most ancient type of vegetation in Australia, with links to a time when continents as we know them did not exist separately but were joined at the hip with others and floated as great mega rafts of land surrounded by the earth's ancient seas.

Gondwana (Land of the Gonds) is the name given to one of these great ancient continents and derives from a region in India associated with the Gonds, an early cultural group. Fossil plants were found in that region which were subsequently found in many other continents and became known as the Gondwana assemblage, which provided some of the evidence for continental drift and collision, and the existence of ancient supercontinents.

Australian rainforest plants and animals are the surviving residue of primitive stock from the forests of Gondwana. Few places on earth contain so many plants and animals which remain relatively unchanged from their ancestors in the fossil record. Three major stages in the earth's evolutionary record – the eras of ferns, of conifers and of flowering plants – are evident in the flora of our rainforests.



*Rainforest land snails (top) and cycads (above) both have their origins in Gondwana.*

These rainforests, despite their gradual shrinkage and retreat to moist refuges on the east coast have provided the stock from which the bulk of Australia's unique modern dryland flora and fauna have evolved.

### Biodiversity

Australian rainforests contain half of all Australian plant families and about one third of Australia's mammal and bird species. They provide habitat for hundreds of rare or threatened plant and animal species.

Many of human society's useful products have derived from rainforest, including commercial plant and animal foods, chemical substances for medical and industrial use and raw materials such as wood and rubber.

Australian rainforests are continuing to provide scientists with many new discoveries, ranging from useful substances secreted by frogs or found in plants, to symbiotic links between bacteria, fungi and plants, which illuminate ecological processes.

### Recreation and inspiration

As well as a place to learn, rainforests are a place for leisure and refreshment, where people can find peace, rejuvenation, and joy in experiencing one of earth's special environments. Rainforests are a source of inspiration to creative people in all forms of the arts and crafts, including literature, music, architecture, sculpture, visual arts, textile art, pottery and glassmaking.



**Gondwana Rainforests of Australia World Heritage area** can be easily visited at many of its separate reserves.

When you visit remember this is priceless and irreplaceable natural heritage. It's everyone's responsibility

to preserve these outstanding natural areas – observe park signs, take your rubbish home with you and don't damage or remove any vegetation. Be a minimal impact visitor, taking only memories and leaving only footprints.

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### PROTECTING RAINFOREST

#### Conservation strategies

The three crucial elements are:

- preservation of genetic resources
- maintenance of essential ecological processes
- sustainable use of species and ecosystems

**The world's heritage is what we inherit from the past, live with today and pass on to future generations.**

#### Australia's contribution

The rainforests of Australia are the only ones in the world under the control of a western-style, industrialised democracy. Australia can make a contribution to worldwide rainforest conservation and management in a number of ways:

- by preserving most of the tropical rainforest that remains in northern Australia particularly that unaltered by humans.

- by becoming a world leader in biological and ecological studies of tropical forests
- by providing a study and training venue for overseas scientists and forestry practitioners so that they return home and better manage their own rainforest
- by developing means of artificial regeneration of rainforest, particularly ways in which former rainforest sites could be revegetated with rainforest species mixtures
- if the Australian rainforest is kept intact amongst the last remnants of the world's tropical forests, the genetic resources therein could be used to artificially re-establish tropical forest in the future in those countries that have lost them through poor management in the past.

John Davidson, 1990

*'The way to love anything is to realize that it might be lost.'*

Gilbert Keith Chesterton