

ROCKY CREEK DAM CATCHMENT PROTECTING THE RAINFOREST...

Rainforests from an Ancient Volcano

The water catchment for Rocky Creek Dam is a healthy rainforest ecosystem, with spectacular hills and gullies, and clear flowing creeks.

Rocky Creek Dam catchment is in the upper reaches, or the headwaters, of the larger catchment of the Richmond River. It is on the southern rim of the caldera of the ancient Mount Warning shield volcano. Basalt and rhyolite lava flows from the volcano have influenced its vegetation communities.

Warm temperate rainforest is found in the catchment on brown soils (which come from rhyolite lava flows). Sub-tropical rainforest grows on the nutrient rich red soils (from basalt lava flows).

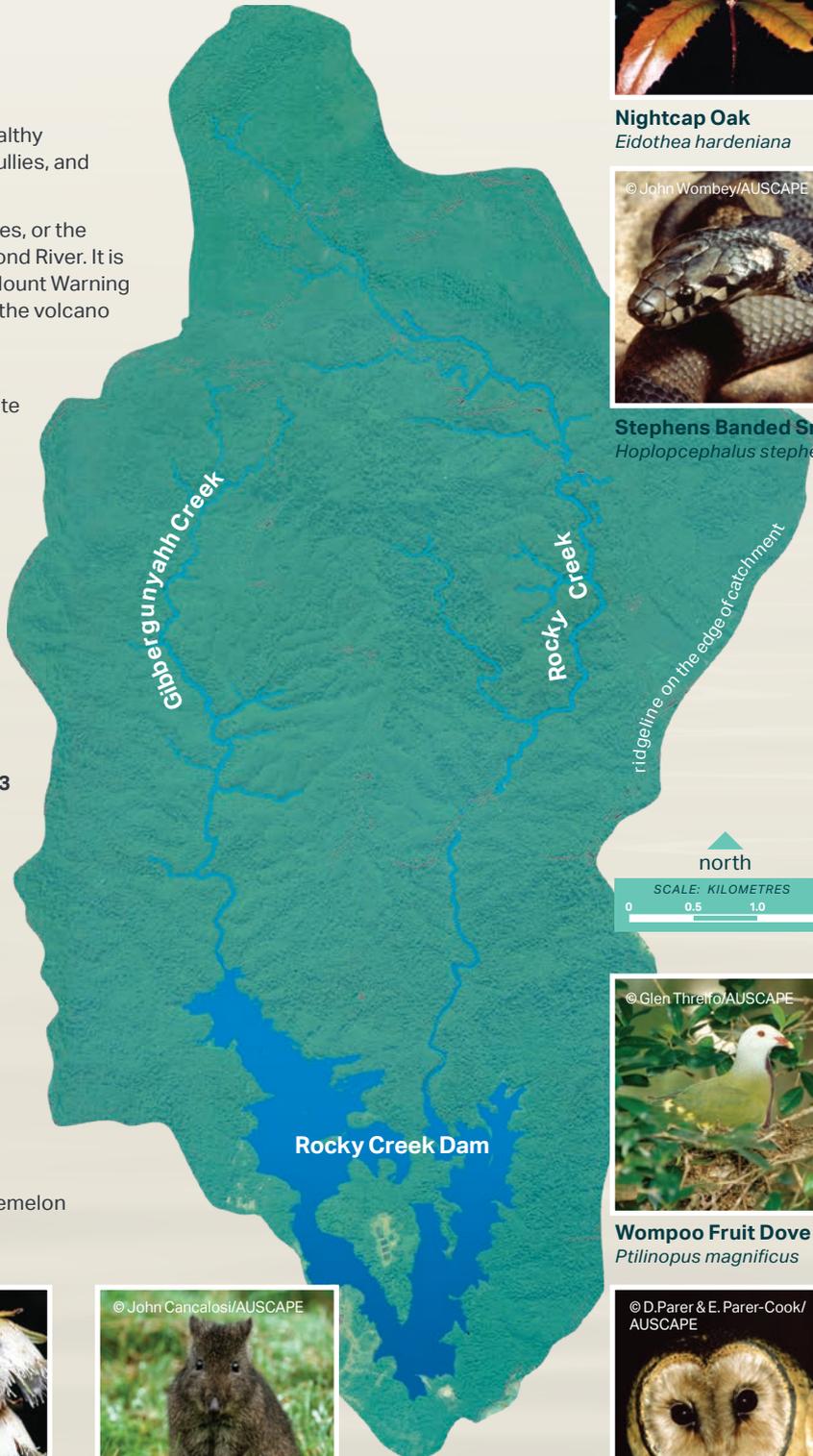
There are 26 species of plants in the catchment that are classed as endangered, rare or threatened. These include the Minyon Quandong (*Elaeocarpus sp. Rocky Creek*), Peach Myrtle (*Uromyrtus australis*) and Tall Hibertia (*Hibbertia hexandra*). In the Nightcap Range a recent discovery has been made of an archaic rainforest tree, the Nightcap Oak (*Eidothea hardeniana*). This species is new to science and is also an endangered species.

These ecosystems provide habitat for at least 33 threatened species of animals.

Threatened amphibians and reptiles include the Giant Barred Frog (*Mixophyes iteratus*), the Three-toed Snake-tooth Skink (*Coeranoscincus reticulatus*) and Stephen's Banded-snake (*Hoplocephalus stephensii*).

Threatened birds include the Wompoo Fruitdove (*Ptilinopus magnificus*), Double-eyed Fig-parrot (*Cyclopsitta diophthalma*), the Sooty Owl (*Tyto tenebricosa*), and the Masked Owl (*Tyto novaehollandiae*).

Threatened mammals include the Little Bentwinged Bat (*Miniopterus australis*), the Koala (*Phascolarctos cinereus*) and the Red-legged Pademelon (*Thylogale stigmatica*).



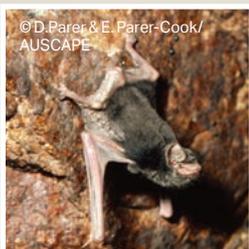
Nightcap Oak
Eidothea hardeniana



Stephens Banded Snake
Hoplocephalus stephensii



Wompoo Fruit Dove
Ptilinopus magnificus



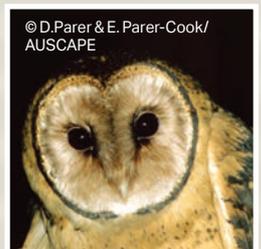
Little Bent-winged Bat
Miniopterus australis



Minyon Quandong
Elaeocarpus sp Rocky Creek



Long-nosed Potoroo
Potorous tridactylus



Masked Owl
Tyto novaehollandiae

World Heritage Area

Most of the catchment area of Rocky Creek Dam consists of Nightcap National Park and Whian Whian State Conservation Area. The catchment area contains:

- A high concentration of species threatened with extinction
- A high number of endemic species (local species with restricted distributions)
- A remarkable representation of archaic (Gondwanic) rainforest species (flora and fauna) and ecosystem types
- A remarkable concentration of biodiversity in a relatively small area of forest.

It is due to these characteristics that parts of Nightcap National Park have been World Heritage listed, forming part of the Central Eastern Rainforest Reserves of Australia. This includes some areas in the upper part of the water catchment area of the dam, where Rocky Creek first starts its journey.



The National Parks and Wildlife Service manages these special areas that form part of the catchment. They ensure that the rainforest and other ecosystems are protected.

Rules and regulations they set for people using the area are:

- leave your pets at home
- be careful with fires and only use the fireplaces provided
- do not interfere with native plants and animals (don't pick flowers or plants, or feed the animals)
- take home all your rubbish
- drive and ride motor-bikes only on the roads provided; and
- walk only on formed tracks (stay on the track even if it's muddy; please do not cut corners or create new tracks).

Catchment Management and the Role of Rous County Council

Catchment management involves caring for ecosystems. National Parks & Wildlife Service play an important role in this and so do Rous County Council.

Rous County Council works to protect existing healthy ecosystems by encouraging visitors to abide by the National Parks rules, and by making sure that motor vehicles, including motor-bikes, are not permitted in sensitive areas of the catchment.

Rous County Council also undertakes rainforest regeneration, restoring rainforest on cleared areas of the catchment.

These management activities are good for the ecosystems of the catchment, and all the animals and plants that live in them. They are also very important for water quality.

This is because: Healthy ecosystems = healthy catchments = healthy water

As Anthony Acret of Rous County Council says "I see my job as a catchment manager to promote and restore the effective functioning of natural ecosystem processes. Ecosystem processes – terrestrial, riparian and in-stream - work in so many ways to promote good water quality."

Rous County Council works together with NPWS to ensure that risks to water quality are identified and controlled.

(Sources: Nightcap National Park brochure produced by NSW National Parks & Wildlife Service; Minimal Impact Bushwalking website; Rob Kooyman (2002) Assessment of Ecological & Conservation Values of Whian Whian State Forest)



TRY THIS!

Learn with your...



"Can you explain why a healthy natural ecosystem produces water of a very high quality?" (Hint: Remember what you learned from the Water Cycle fact sheet.)



"Look into the rainforest beside you. Close your eyes and take a deep breath. Smell the rainforest air. Know that the whole area around the dam is filled with mature rainforest, even older and more beautiful than this. This rainforest is filled with special plants and animals, some of which are very rare and are found nowhere else. How do you feel when you imagine all of this?"



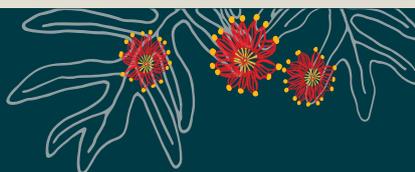
"Look into the rainforest beside you. How many different types of trees can you see? (Hint: Look for different leaves or bark) Can you see or hear any animals or birds? (Hint: Be still and quiet. Look and listen.) Can you find any insects? (Hint: carefully pick up a handful of leaf-litter and have a look through it, or have a look in some of the vegetation.)"

Learning objective: To understand Rocky Creek Dam catchment in general; its terrestrial ecosystems; and some of the catchment management activities which protect these terrestrial ecosystems.

For further information contact:

Rous County Council

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These information sheets were originally prepared for Rous County Council by Sustainable Futures Australia in liaison with Widjabul elders. © Rous County Council and Sustainable Futures Australia 2004. This is an educational project for the protection of water land, and for reconciliation.

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