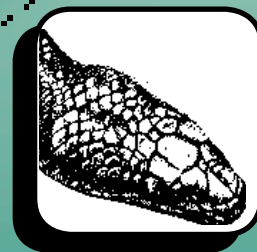
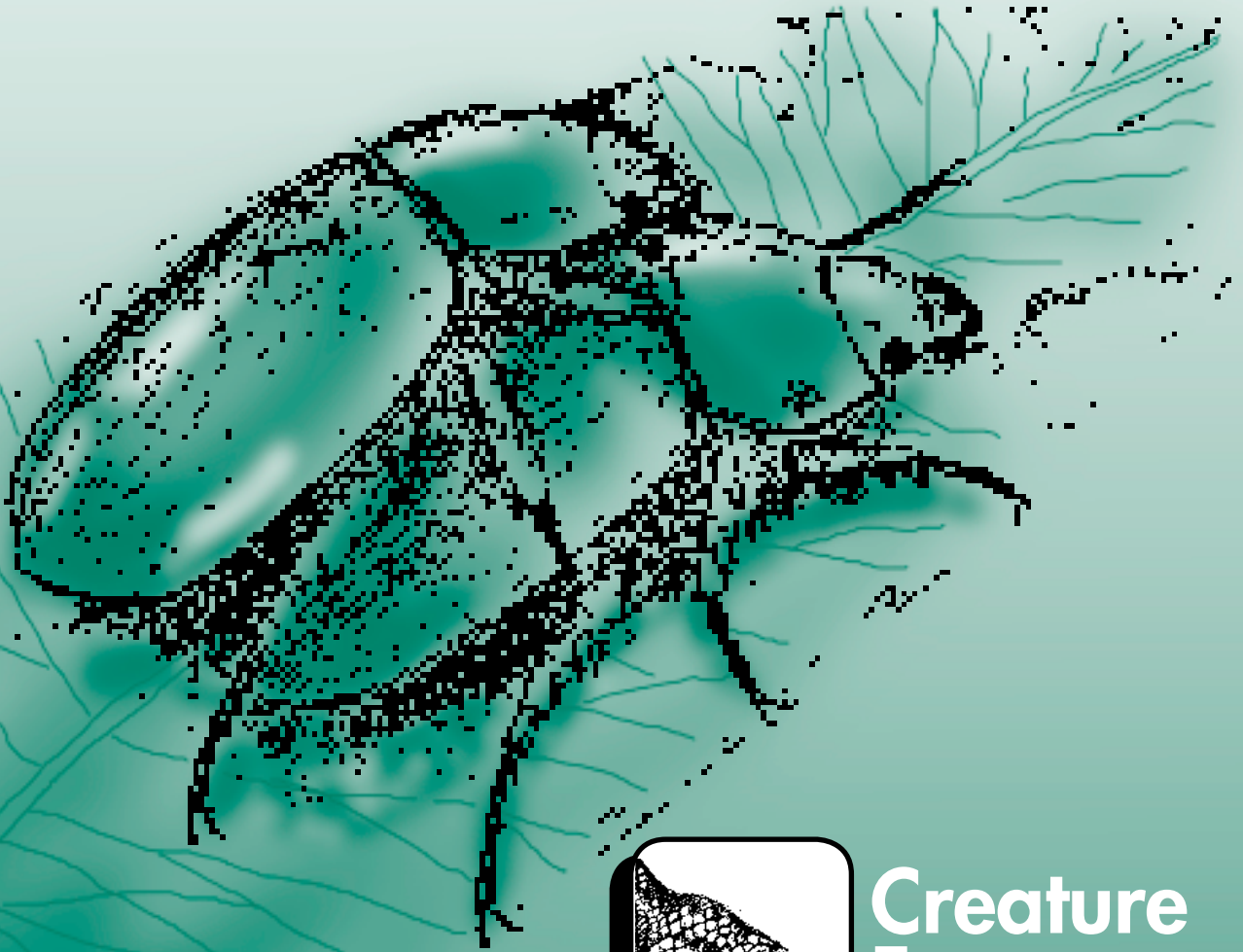


# Junior Ranger

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## Review

Issue 4, 2001



**Creature  
Feature**  
Oenpelli Python



**On the Brink**  
Masked Owl

# Christmas Beetles

# Nature Quiz

The last week of October each year is National Bird Week.

How good is your knowledge of our feathered friends? You'll find the answers on page 11.

**1.**

Can you match these silhouettes with the correct name from the list?

kingfisher

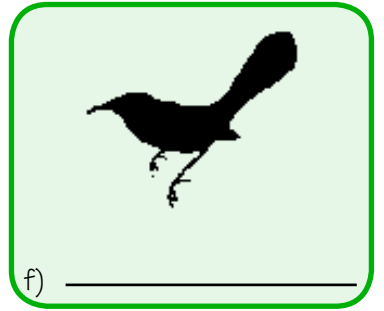
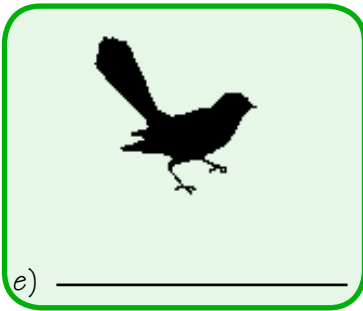
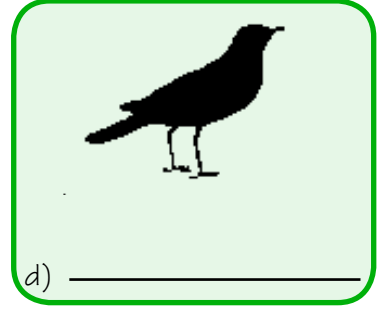
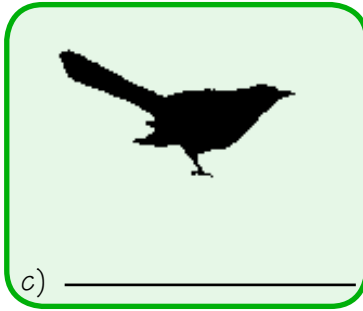
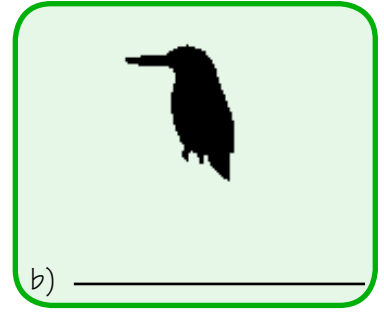
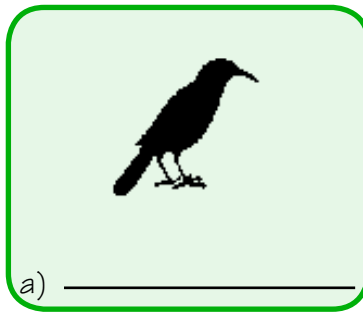
babbler

honeyeater

wagtail

cuckoo

magpielark



**2.**

Can you match these nests with the correct owners?

babbler

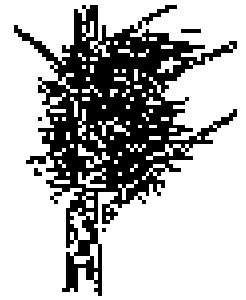
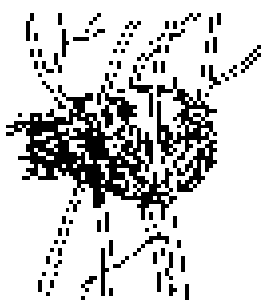
bee-eater

mistletoebird

honeyeater

finch

magpielark



# The Masked Owl

The rare Masked Owl *Tyto novaehollandiae* is similar to the Barn Owl but bigger in size and darker in colour. Unlike the Barn Owl, it doesn't roost inside buildings. It is a bird of forests near the sea.

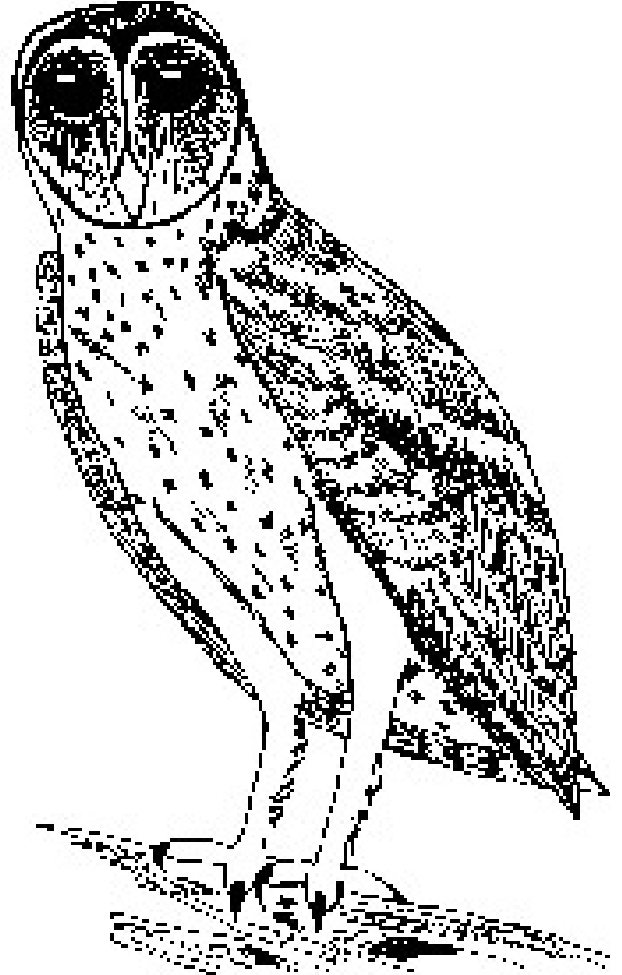
Scientists believe it is being affected by the dry season fires that are now a feature of the tropical woodland.

Masked Owls hunt in the darkness and silence of the night. They have large eyes that face forwards, keen hearing, silent flight feathers and strong feet. All these characteristics make them very efficient nocturnal hunters.

Why are they rare?

Masked Owls roost in tree hollows during the daytime. Suitable hollows only occur in big, old trees eaten out by termites. However, these trees have become scarce because of the big fires that often sweep through the tropical woodland late in the dry season.

Burning patterns have changed in the Top End. What happens now is different to what happened 100 years ago. Traditionally, Aboriginal people lit grass fires early in the dry season when the ground was still moist. These fires were small, clearing out the speargrass but minimising extensive damage to trees or wildlife. Big fires, late in the dry season, were less common than they are today.



## Hunting in Total Darkness

The Masked Owl's hearing is so sharp that it can capture a mouse in total darkness. Can you crack the code and unlock its secret?

(Clue: 26 = S; 5 = X) See page 11 for the answer.

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# Plant Profile



wattle and daub hut



Straight sticks, called wattles, are tied in position and daubed with wet clay.



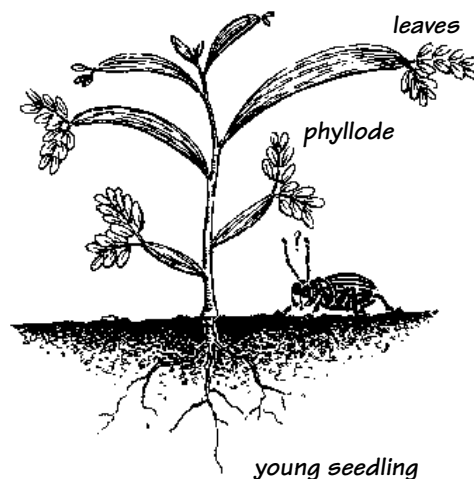
Our national colours, green and gold, are the colours of the wattle. Wattle flowers are quite small and grow in clusters that are either finger-shaped or round like a ball.

# Wattles

When the First Fleet arrived in Sydney in 1788 the new settlers used an old English technique, called wattle and daub, to build the walls of their mud huts. The technique involved making a framework with straight sticks (called wattles) and then covering (or daubing) the sticks with wet clay.



The shrub they used had pale yellow flowers and people referred to it as the wattle bush. Since then all shrubs with similar flowers have been called wattles in Australia. The scientific name for wattles is *Acacia* and there are more than 700 species of them in Australia.



young seedling

Did you realise that most wattles don't have any leaves? They fall off when the plants are young. What remain are large, flattened stalks which botanists call phyllodes.

Compared to true leaves, these don't have as many sweat glands and are covered with wax. Very little water evaporates from the phyllodes, even in the searing heat of an outback summer.

## An Endangered Wattle: *Acacia Undoolyana*

N'dhala Gorge is a small conservation reserve 90 kilometres east of Alice Springs. It contains a large number of very old, Aboriginal rock engravings. It is also home to a rare and endangered wattle named after nearby Undoolya Station, the NT's oldest cattle station.

*Acacia undoolyana* has distinctive, curved phyllodes with a silvery sheen.

The average height of a mature tree is 6 metres but some grow as high as 12 metres.

### Why is this tree endangered?

*Acacia undoolyana* is a slow-growing tree that can live for over 100 years. However, it does not cope well with fire and old trees are now rare. They have been wiped out by hot, summer bushfires in the decades since traditional Aboriginal fire management stopped in Central Australia.

The trees that survive are growing on steep, rocky slopes where bushfires are less frequent.

They flower regularly but will only produce seed after exceptionally wet seasons. These don't occur very often in Australia's dry heart.

If a lightning strike sets the nearby spinifex grass ablaze, then the trees may be destroyed before they have had a chance to drop a good supply of viable seed into the soil.

### Saving the remaining trees

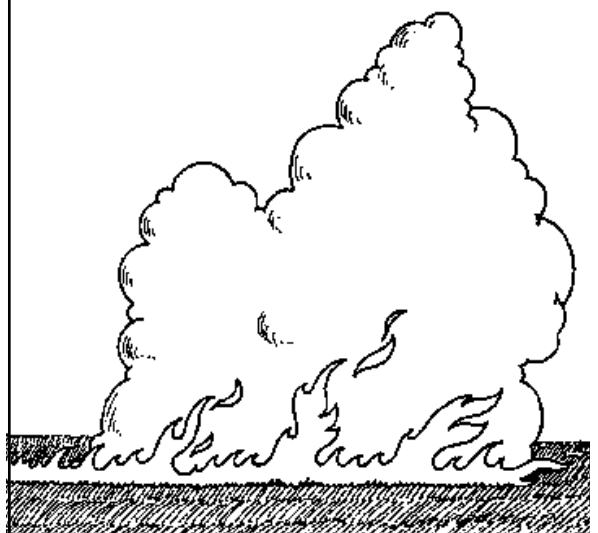
A recovery plan, to save this rare plant, was set up in 1997 involving:

- the Parks and Wildlife Commission
- local cattlemen
- the Central Land Council, representing Aboriginal custodians;
- the Australian Plants Society
- the Bushfires Council and
- the Threatened Species Network

The first step was to survey the area and map the spots where stands of *Acacia undoolyana* still survive. Then they set to work trying to reduce the amount of spinifex grass around the trees.

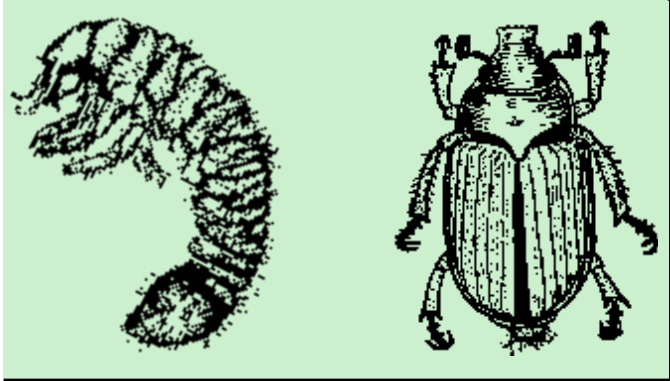
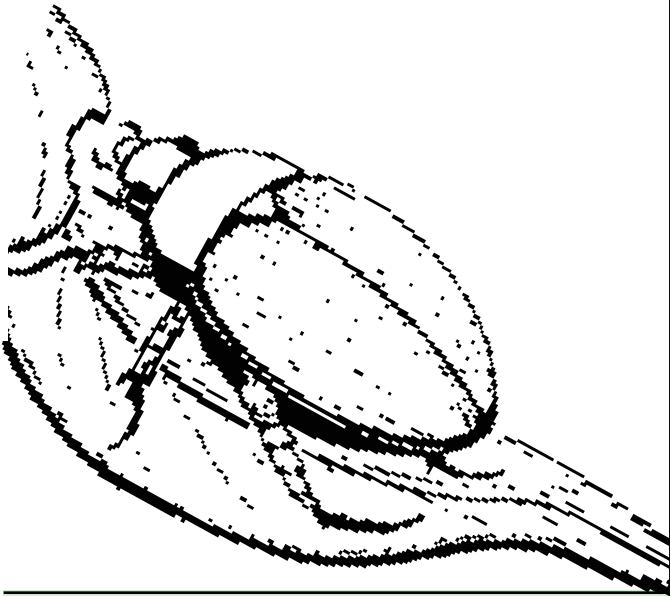
The aim is to create firebreaks, 100 metres wide, around the trees using small, controlled burns in the winter time. This should reduce the chance of a lightning strike setting off a destructive wildfire in the heat of summer.

Removing the threat of fire will give the trees the chance to grow and mature, and eventually produce a good crop of seeds when rain falls.





# Urban Encounters



## Christmas Beetles

Australia has some strikingly attractive beetles, with glorious colours and shapes. Among the best known are the handsome, golden-bronze Christmas beetles. Large numbers of them appear each year in summer to munch on the leaves of gum trees.

Next time one of these handsome creatures zooms into your house dark, take the time to examine the design of its body.

Have you ever noticed the prominent tuft of brown hairs at the end of its abdomen?

### Did you know....

These white curl grubs, frequently dug up in gardens, are young beetles. They feed on the roots of plants and may remain underground for a number of years.

### Dieback

Some summers, in the rich farming areas of eastern Australia, there are so many Christmas beetles that the gum trees are stripped bare of leaves and die. This occurs because we have upset the balance of nature.

Clearing the land and adding fertiliser to the soil produces good pasture for sheep and cattle. However, it also provides mobs of food for the curl grubs living in the soil. When they emerge as adult beetles, they defoliate the few gums trees that remain. (Clearing the land drives away the birds which normally feed on the beetles and keep their numbers under control.)

## What good are beetles?

Beetles have existed on the planet for over 260 million years. Some species are regarded as pests. Overall, however, they play a very important role in nature, helping replenish the rich soil so vital for sustaining a healthy environment. Both the adults and their larvae have powerful, chewing mouthparts like those of grasshoppers. They break down unhealthy or dead timber, consume animal remains and decaying vegetation, and aerate the soil as they dig.

# Urban Encounters

**Did you know there are more beetles on Earth than any other type of animal?**



The metallic green Stink beetles are carnivores that eat caterpillars.

**The names of 27 beetles are hidden in this puzzle. Can you find them?**

AUGER

BARK

BOMBARDIER

CLICK

DUNG

ELEPHANT

FIREFLY

FLOUR

FURNITURE

HERCULES

HIDE

HISTER

JEWEL

LADYBIRD

LONGICORN

OIL

PIE DISH

POD

RHINOCEROS

ROYE

SCARAB

SOLDIER

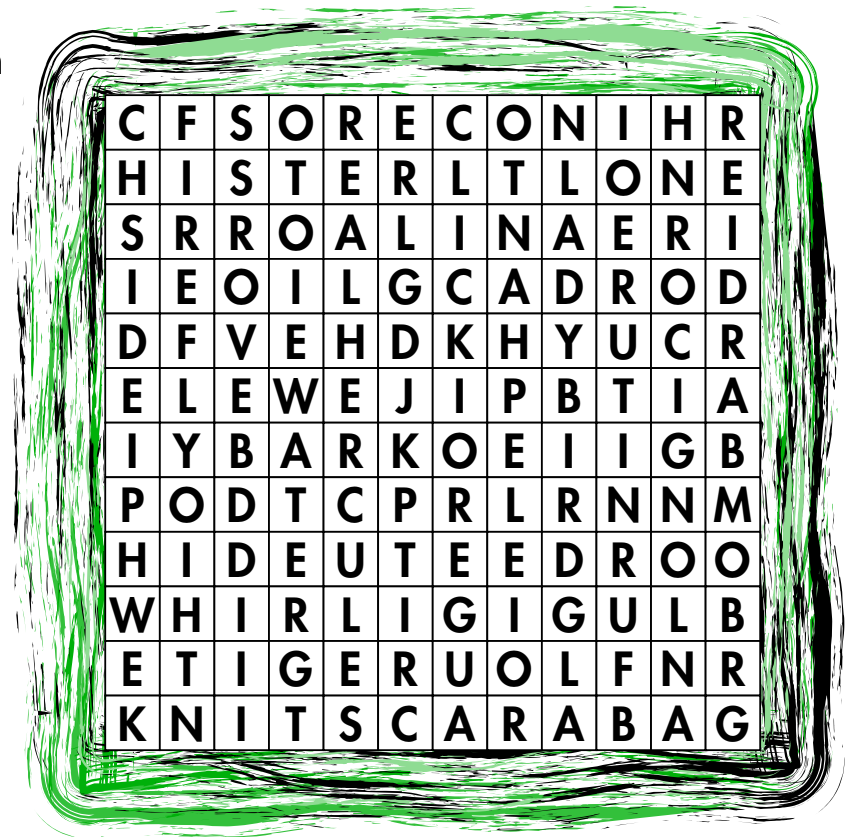
STAG

STINK

TIGER

WATER

WHIRLIGIG



You should have 10 letters left over. If you string them together, they should spell out the scientific order to which beetles and weevils belong.

**Scientists classify insects into different orders.**

**Moths and butterflies belong to the order Lepidoptera.**

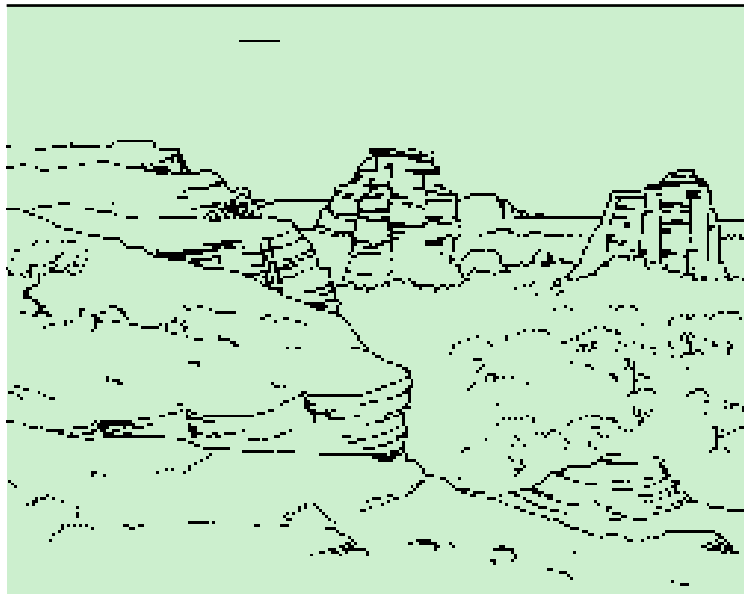
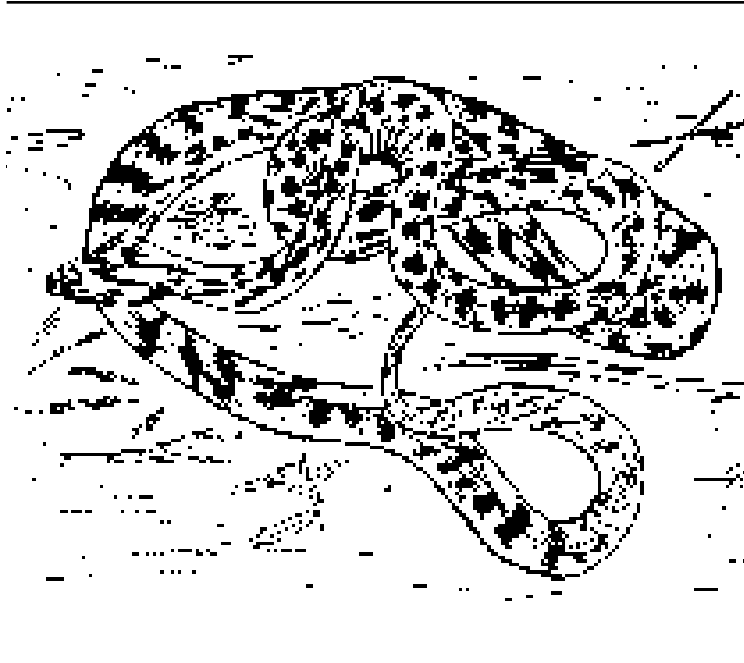
**Bees, wasps and ants belong to the order Hymenoptera.**

**Beetles and weevils are \_ \_ \_ \_ \_**

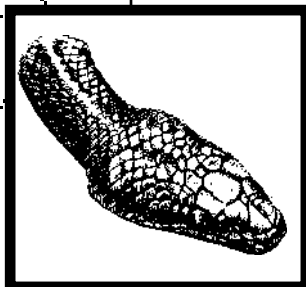
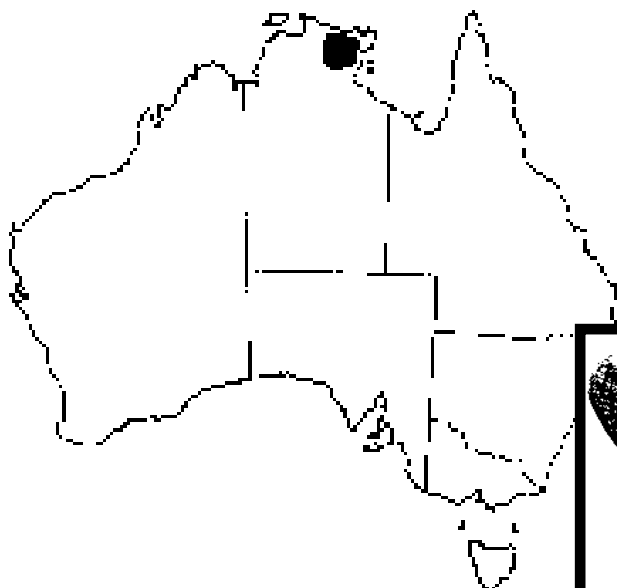
The name comes from two Greek words: koleos, which means 'sheath', and ptera, the word for 'wing'. It refers to the tough, protective covering over their wings.

This enables them to go places where other winged insects fear to tread. They have no problems burrowing into soil and timber, squeezing into rock crevices or under flaking bark.

# Creature Feature



Where the Oenpelli Python lives



## Australia's Longest Snake?

The Reticulated Python from Southeast Asia is the world's longest snake. One was measured and found to be 10 metres long. The Green Anacondas from South America are not as long but are heavier. At night they lie in water, waiting for animals that come for a drink.

North Queensland's Amethystine Python currently holds the record as Australia's longest snake at 7.6 metres. However, there is a snake from the Northern Territory that herpetologists believe may be longer. It's the Oenpelli Python *Morelia oenpelliensis*.

It wasn't 'discovered' by scientists until 1977, although Aboriginal people had known of its existence for thousands of years.

To date, no one has found one that is as long as an Amethystine Python. However, snake experts believe it is only a matter of time.

Aboriginal people tell stories of very long specimens. Also, the Oenpelli Python's eggs are almost twice the size of an Amethystine Python's.

Despite its great size, the Oenpelli Python is very placid by nature. None of the ones studied so far have displayed any aggression towards their handlers.

The Oenpelli Python is nocturnal and hides in caves, deep crevices and rock outcrops in isolated parts of Arnhem Land.

Most pythons have a broad head that is distinct from their neck. The exceptions are the Woma and its close relative, the Black-headed Python.

These two have a narrow head like the venomous snakes.



# Creature Feature

## Did you know....

Pythons don't crush their victims. They suffocate them. The python grabs its prey in its jaws and loops its body around it. Each time the victim breathes out, the python squeezes tighter. Soon the poor animal can't expand its chest to suck in air and it suffocates.

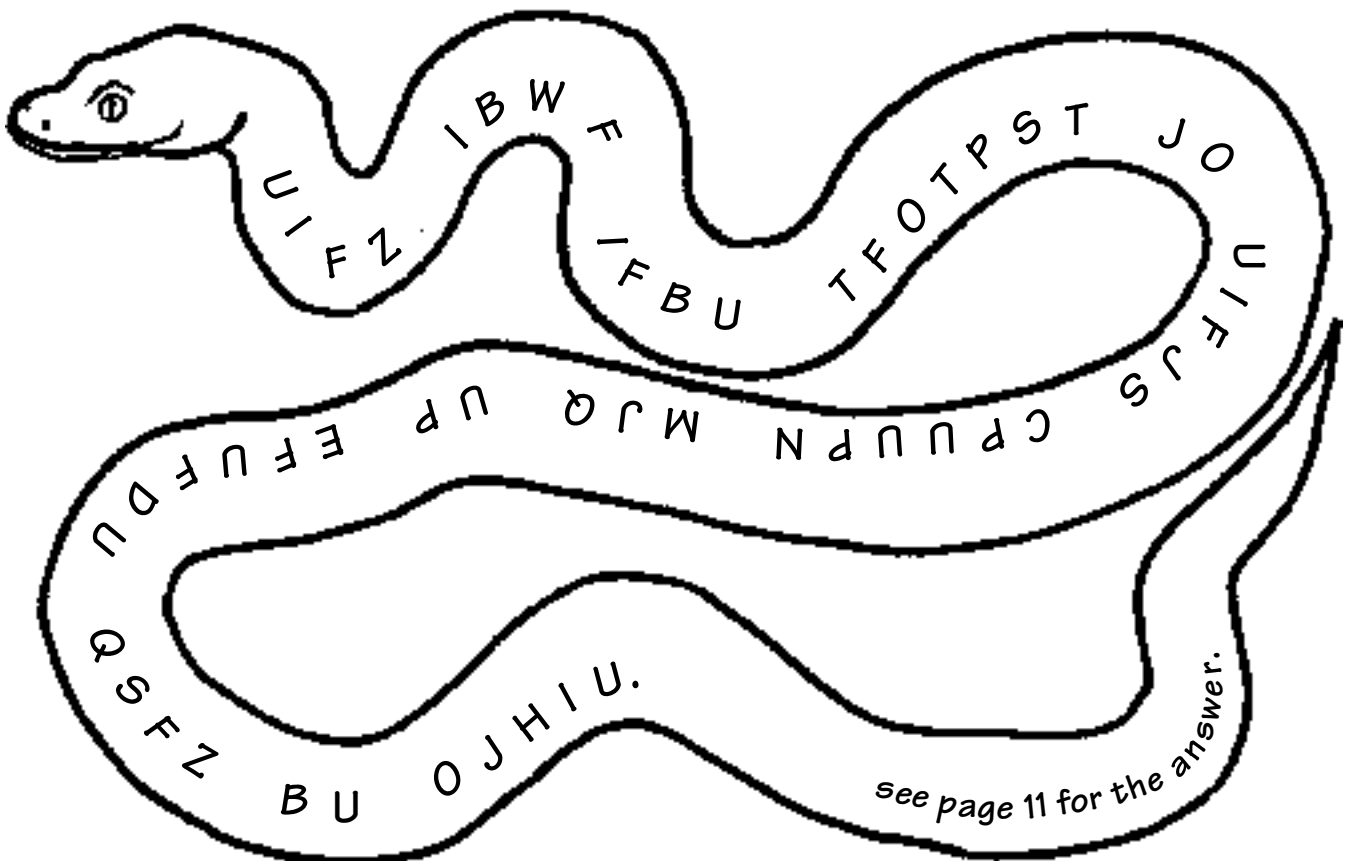
There are poisonous snakes in Tasmania but no pythons.

Pythons have no arms or legs but they can climb trees and swim.

It's not really true to say pythons are cold blooded. Their blood is just as warm as ours after they have laid in the sun for a while.

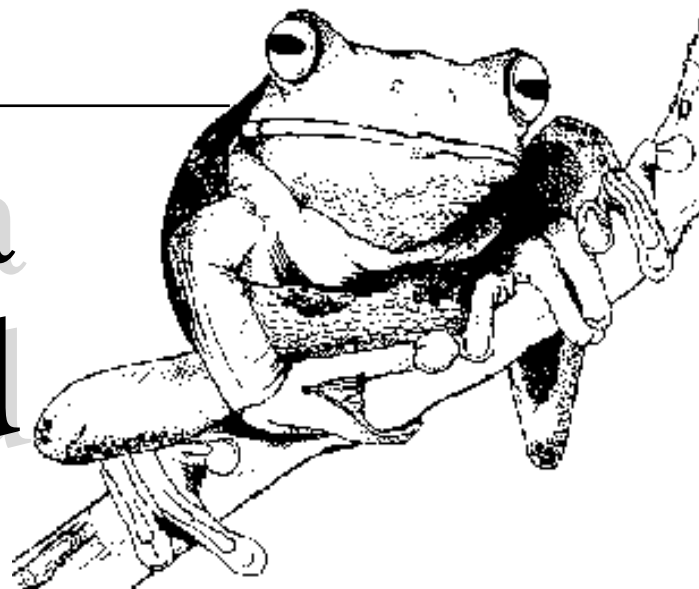
Pythons are the only snakes that display any maternal instincts. They coil around their eggs and stay with them until they hatch. Other snakes hide their eggs as best they can but then leave them.

Replace every letter with the one that comes before it in the alphabet to reveal another fact about pythons.



# Project Page

# Building a Frog Pond



Frogs are wonderful creatures that have been on earth for over 400 million years. However, they are now disappearing from the planet at an alarming rate. Scientists believe water pollution has a lot to do with it.

Another problem is loss of suitable habitat. We can help frogs survive by providing them with safe havens in our towns and gardens.

It is also great to have them around the place because they help to control insect numbers.

Here's a simple guide for building a frog pond in your garden.



## Step 1

Choose a location that will be in the sun for part of the day but shaded at other times. Don't locate it directly under a tree.

## Step 2

Dig a hole in the ground at least a metre and half across. The hole doesn't need to be more than 60 cm deep in the middle.

Make sure that the sides are gently sloping so the frogs can easily get in and out of the pond.

## Step 3

Wet the soil and cover it evenly with sand about 1cm thick.

## Step 4

Line the hole with heavy duty, black, UV-resistant PVC. (Your local nursery or a landscape supplier can advise what is the best stuff to use.) Shape it to the contours of the hole.

## Step 5

You can now begin filling your pond with water. Add it slowly, smoothing out the PVC as it fills. Anchor the edges of the liner with stones.

## Step 6

Now you can add plants such as water lilies. You'll also need suitable plants around the outside of the pond so that frogs have plenty of places to hide. (Your local nursery can advise what species are suitable for your area.)

In time, dead leaves will build up on the bottom. Leave them there. They will be good tucker for tadpoles.

## Step 8

It is best to wait 1 or 2 weeks before you put any frogs into the pond. This will allow time the sun to break down the chlorine which is added to our water at the pumping station.

Junior Ranger Review Issue 2, 2000 included an article on Raising Tadpoles. Contact your local Junior Ranger coordinator if you would like a copy.

For further information on ponds, frogs and Frogwatch programs, visit:

<http://www.nccnsw.org.au/member/cbn/projects/>

# Bushfires

## An important message from Ranger Kym

Destructive Bushfires in central Australia!

The last two years have seen exceptional rains fall in central Australia: the best rains since 1973/1974.

There has been an explosion in plant growth.

Lots of grasses have sprouted, turning the brown land to lush fields of green. Around Tennant Creek, Alice Springs and Uluru, Buffel Grass, an introduced plant, has taken off.

Now, as summer approaches, the grasses are drying out and turning brown. Central Australia is like a tinder box, waiting to blow up. There is constantly smoke on the horizon as the country starts to go up in flames.

The Bushfires Council people and local fire brigades are exhausted. They have had to fight many fires in recent weeks. Sadly, it appears that most of these fires were deliberately lit.



Our native wildlife is in trouble. Animals have little chance of escaping big wildfires. Even those that can burrow into the ground to escape small fires have trouble coping with the heat from wildfires sweeping through the bush. If they do escape, they may still face a grim future. If they can't find greener pastures, they might die of starvation.

Not only have animals suffered, but the fires threaten people's homes, machinery and livelihood.

Fire fighters put their lives at risk to save others, including those who start them. One firefighter has lost all the fingers on both hands from burns suffered while fighting a fire deliberately lit by thoughtless people.

### Junior Rangers.... We need your help!

We need to spread the message about the dangers facing our native plants and wildlife this summer.

Also we need to stop the people who are starting fires. If you see people acting suspiciously report it to the police.

Small fires, at the right time of year, can do a lot of good. They reduce fuel loads and help prevent big, destructive fires in summer.

When used in a controlled manner, burning can protect wildlife and their habitat, grazing land and livestock, homes and lives.

Used irresponsibly all this is lost.

### PUZZLE ANSWERS

Nature Quiz (page 2)

- a) honeyeater  
b) kingfisher  
c) cuckoo  
d) magpie lark  
e) wagtail  
f) babbler
- a) mistletoe bird  
b) bee-eater  
c) honeyeater  
d) finch  
e) magpie lark  
f) babbler

On the Brink (page 3)

Its face is shaped like a satellite dish to catch sound waves.

Urban Encounters (page 7)

Coleoptera

Creature Feature (page 9)

They have heat sensors in their bottom lip to detect prey at night.

# Around the

## G'day from Ranger Bill

Hello readers, this is the last issue of the Junior Ranger Review, for 2001. We have included a huge range of projects to keep you busy, including information on Christmas Beetles and masked owls, and instructions on how to build your own terrarium!

We've had fun this year sharing with you our knowledge on Territory fauna and flora. However, if there is any information or a story that you want to tell us about, write them down and send them to the address on this page. The best stories will be included in future editions of the Junior Ranger Review.

Also, if there is anything you would like

to know more about, write to us and we will do our best to include these topics in the Junior Ranger Review.

If you would like to continue reading the Junior Ranger Review, don't forget to return the form from the last issue. The Review is also available on the Internet, at <http://www.nt.gov.au/paw>

Next year we will bring you another four issues of the Review, and we look forward to receiving your letters.

All of us here at the Parks and Wildlife Commission wish you a safe and happy Christmas and terrific New Year, full of environmental discovery!

Cheers

## Darwin

Well hasn't Junior Rangers in Katherine had a eventful time over these last few months. Ranger Andrew would like to congratulate all the Junior Rangers that assisted and participated in the Flying Fox Festival street parade. All our hard work paid off with Junior Rangers winning first prize. We will be able to make use of the Gouldian Finch models and banners for quite a few years at other Junior Ranger activities.

Some Junior Rangers have also been lucky enough to have their photographs entered into the local Katherine Times Newspaper carrying out some of our yearly environmental activities such as maintenance of the Junior Ranger lily ponds.

Some of us also had great fun being involved in a short theatre that was run at Wardingdingmarn (Red lilies site) which was very successful. For those of you that participated you all deserve a big thank you because the rousing cheer we received from the audience meant that we had shown everyone how we felt about the environment as well as being quite funny.

The year has not quite finished for Junior

Rangers as the program has been extended into the month of November. Even though November is getting a little bit damp it is a great time to experience the bush returning to life after the long dry. This wet season Katherine is expected to experience the intrusion of more Cane Toads. Junior Rangers will be finding out what impacts they may have on some of our native wildlife during National Frog Week and also during our Frog Watch activities, which occur early in 2002.

The rains are also a good time to plant trees. Arbor Week is part of our November program and each year Junior Rangers plant rainforest trees at the Katherine Low Level Reserve. For six years Junior Rangers have been growing a monsoon forest which is now looking great. Everyone should come along to see what we have done and help out by adding some more precious rainforest plants to the site.

To wrap up the program Junior Rangers will have an end of year party, which everyone should attend for your awards and certificates. I hope to see you all there.

Bye from Ranger Andrew

## Katherine

It's been another busy year for the Darwin Junior Rangers. 136 members have taken part in learning about the weather, ethnobotany, coastlines, cultural heritage, local fauna, bush planning and navigation and fire.

In the final month of the Program members learnt about the formation of clouds, made their own cloud chart, participated in a fun experiment and made their own 'cloud in a bottle'. They also learnt about how tropical cyclones form, discovered how to track a cyclone using a cyclone tracking map and found out what you should put into your emergency cyclone kit. Then members looked at Australia's first weather map, found out how to read weather maps and did some weather forecasting of their own. Finally they learnt about the atmosphere and gases such as ozone in some fun experiments involving eggs and bottles!

The Junior Ranger Program will take a break over the wet season and will commence again next April where a variety of new topics and activities will be on offer for members to choose from.

Don't forget that you can visit our website over the wet season and throughout the year to get involved in our Nature Network activities. Activities are submitted from each region in the Territory and in the past have included projects on dissecting owl pellets, making your own herbarium, designing your own naturalist's bush kit, fire projects, identifying animal tracks, making your own bird field guide and more! Visit the Nature Network at <http://www.nt.gov.au/paw>

See you all next year!

The Junior Ranger Review is produced 4 times a year by the Parks and Wildlife Commission of the Northern Territory. This edition was written by Stuart Traynor and Emily Findlay, design and layout are by Big Picture Graphic Art. The front cover was drawn by Robbie Henderson. Illustrations in this edition are by Kaye Kessing, Emily Ward, Bob Whiteford and Dianne Martin.

**Contributions are welcome  
and should be sent to:  
The Editor, Junior Ranger Review  
PO Box 496  
Palmerston NT 0831**

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