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PARKS AND WILDLIFE COMMISSION NORTHERN TERRITORY

Junior Ranger Review

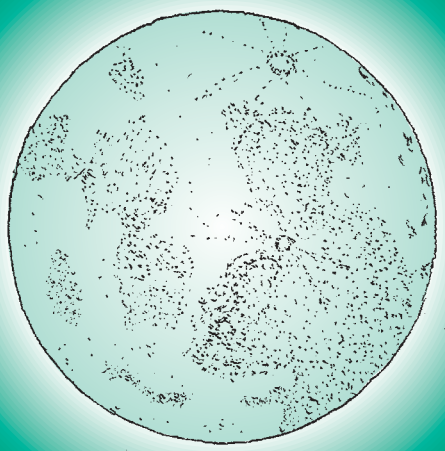
ISSUE 1, 2002

Creature Feature

Dragonflies

Urban Encounters

Ants



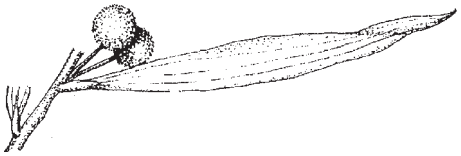
Plant Profile

Stink Wattle

For many years, prisoners at the old Alice Springs Gaol got double punishment for their crimes. Some Gidgee trees (*Acacia cambagei*) had been planted along the main road outside the prison walls. The leaves and flowers give off a very bad smell when they're wet or when rain is on the way.

Gidgee trees have rough, dark bark.

The wood is hard and used in the bush for fence posts.



Gidgees belong to the wattle family. Balls of pale yellow flowers appear in late summer.

***Acacia cambagei* is a good shade tree despite its smell. It grows nears creeks in the Alice Springs district.**

Can you crack the code to reveal the name of another tree that often grows with it?

24	12	12	15	18	25	26	19

(Clue: D = 23, L = 15, T = 7)

Hint: Write out each letter of the alphabet and place the known numbers next to them. Can you see the pattern to help you answer this puzzle?

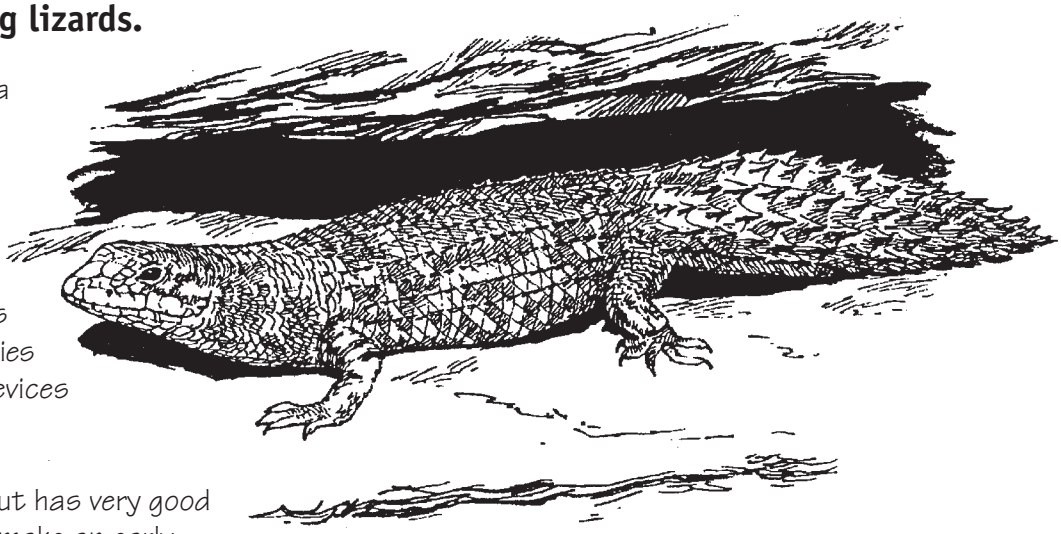
Poisonous Pods

There is another type of Gidgee which grows in the southwest corner of the Territory. (Its scientific name ***Acacia georginae*** refers to the Georgina River of northwest Queensland where it is very common).

Its leaves, seeds and pods contain fluoroacetic acid which is poisonous to cattle and sheep.

Gidgee Skinks

Gidgee Skinks (*Egernia stokesii*) live in colonies of up to 16 individuals. This behaviour is quite unusual among lizards.



It is 20 to 30 cm long and a reddish-brown colour.

It is a creature of rocky country but also shelters in hollows in old Gidgee trees. The spiny ridges on its tail make it hard for its enemies to dislodge it from rocky crevices and logs.

It's not a real quick mover but has very good eyesight. This enables it to make an early escape into the safety of a crevice or hollow.

The lizard eats spiders, grasshoppers, termites and other insects. It has a sticky tongue which helps it keep hold of insects it catches.

WOW!!

Gidgee Skinks live long lives: up to 25 years.

Mothers give birth to live young in February and March. There are usually 5 in a litter and each baby is about 6 mm long.

The Gidgee Skink has an interesting way of marking its territory. It chooses toilet sites and builds up little piles of scats near its basking areas.

Reptile Words

These hidden words go in all directions and some are written backwards. Colour the boxes as you find each letter.

BITE	FANG	SCALE
BLUE TONGUE	EGGS	SKINK
BURROWS	GECKO	SNAKE
CAMOUFLAGE	GOANNA	SWIM
CLIMB	KING BROWN	TAIPAN
DIG	LIZARD	TURTLE
DRAGONS	MONITOR	VENOM
DUGITE	OIL	WOMA

K	N	I	K	S	D	B	I	T	E	S
I	D	R	S	W	I	M	P	G	U	C
N	R	O	E	O	G	I	A	O	G	A
G	A	T	U	R	T	L	E	A	N	L
B	G	I	R	R	F	C	D	N	O	E
R	O	N	E	U	N	R	O	N	T	T
O	N	O	O	B	A	K	A	A	E	I
W	S	M	F	Z	C	M	I	G	U	G
N	A	A	I	E	O	P	G	T	L	U
C	N	L	G	W	A	S	I	I	B	D
G	E	K	A	N	S	M	O	N	E	V

You should have 7 letters left over. String them together and you'll get the name of Australia's biggest lizard.

_ _ _ _ _ _ _ E

Quiz Time ?

A Smelly Top Ender

What's my name?

I live in rainforests near the coast.

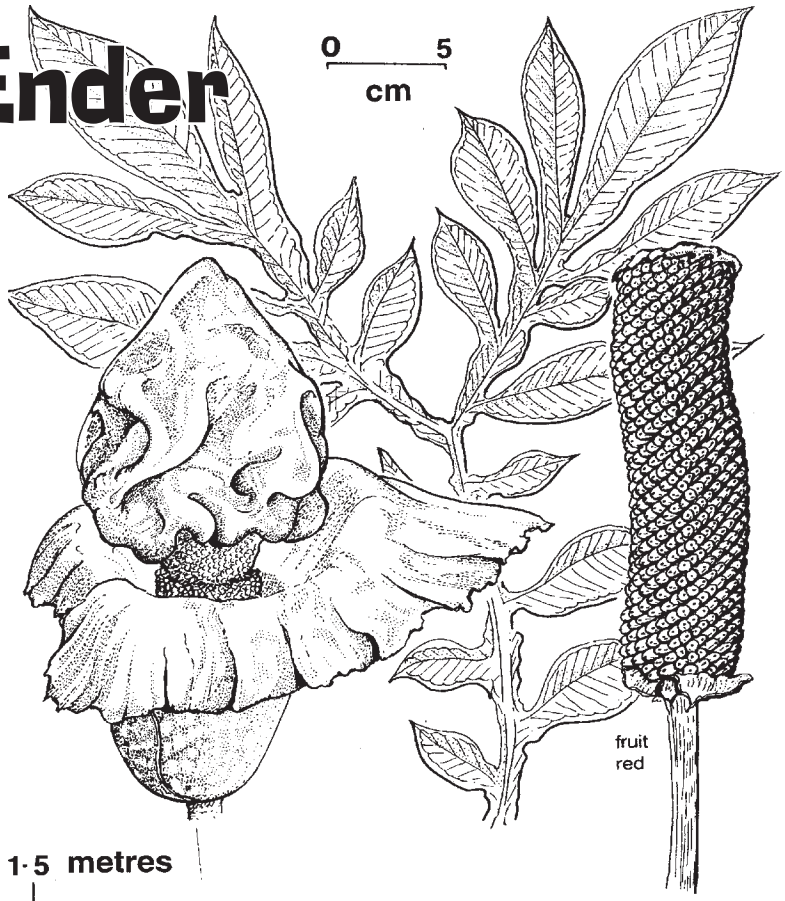
You never see me in the dry season.

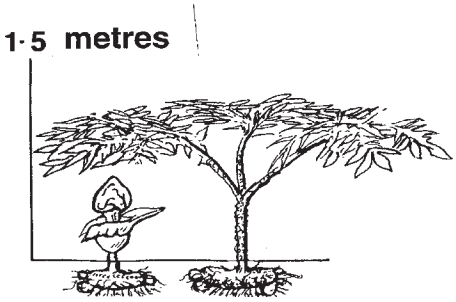
I produce new growth each wet season from a large, flattened underground tuber.

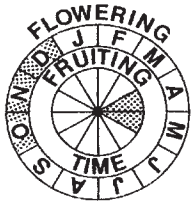
I flower after the first soaking rain of the new wet season. I produce the flowers before I grow new stems and leaves.

My flowers stink like rotten meat. This attracts flies which I need for pollination.

Aboriginal people eat my tuber. They slice it thinly, soak it in water for 24 hours and roast it.







Use this grid to work out my name.

	1	2	3	4	5
A	A	B	C	D	E
B	F	G	H	I	J
C	K	L	M	N	O
D	P	Q	R	S	T
E	U	V	W	X	Y

I'm called A1 C3 C5 D3 D1 B3 C5 D1 B3 A1 C2 C2 E1 D4

or A3 B3 A5 A5 C1 E5 E5 A1 C3

While the open woodlands of the Top End have learned to cope with dry season fires, the rainforests are fire-sensitive. Traditionally, Aboriginal burned firebreaks around them early in the dry season. They protected the rainforests because of the many types of bush tucker and bush medicine that grow there.

Use the grid to decode the name of another smelly plant which grows in coastal rainforests. (It's scientific name is *Morinda citrifolia*.)

D3 C5 D5 D5 A5 C4

A3 B3 A5 A5 D4 A5 B1 D3 E1 B4 D5

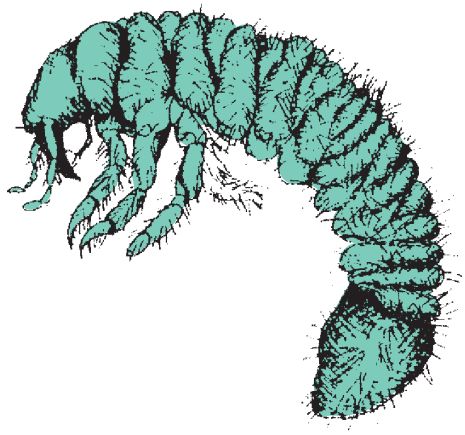
The fruit is the size of a mango and has a very strong odour. Aboriginal people collect it after it has become soft and fallen to the ground.

Nature Quiz

This is the first issue of the *Junior Ranger Review* for 2002. How much can you remember from last year's issues? (You'll find the answers on page 11.)

1. Australia's sports men and women wear green and gold because these are the colours of our national flower which is
   a) Sturt's Desert Rose?
   b) Wattle?
   c) Gum trees?

2. White curl grubs live in the ground and eat the roots of plants. Later they change into
   a) Christmas Beetles.
   b) Witchetty Grubs.
   c) Caper White Butterflies.

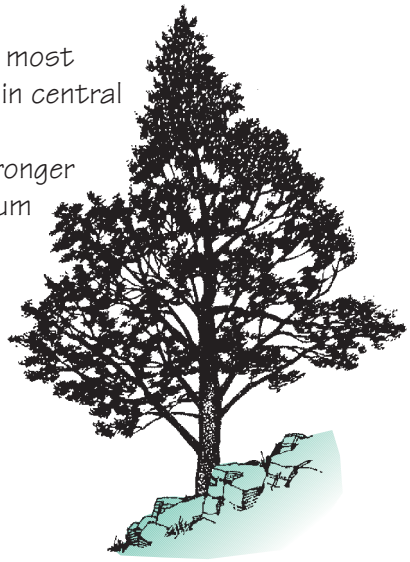


3. Which marine mammal gave rise to the mermaid myth?
   a) Dolphin.
   b) Whale.
   c) Dugong.

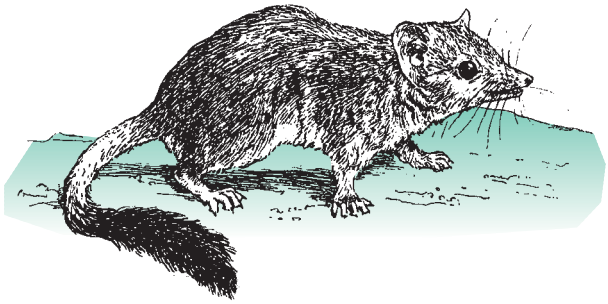
4. Where, in the dry season of 1993, did scientists rediscover the Golden Bandicoot, an animal thought to have disappeared from the Territory?
   a) Wessel Islands.
   b) Fannie Bay.
   c) Finke Gorge National Park.

5. Approximately, how many albatross are killed in the southern oceans each year because of longline fishing?
   a) 400
   b) 4 400
   c) 44 000

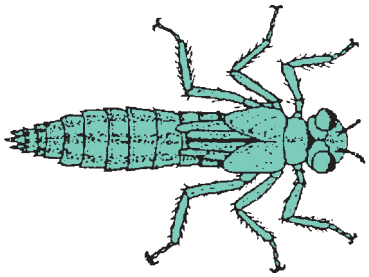
6. Cypress Pine was a common building material in the early days because
   a) it is one of the most common trees in central Australia.
   b) the wood is stronger than that of gum trees.
   c) it is resilient to termite attack.



7. The main visual difference between a Mulgara and a Kowari is that one has a bushy tail. Which one?



8. What does this aquatic insect change into when fully grown?



9. The world's longest snake is the
   a) Oenpelli Python.
   b) Anaconda of South America.
   c) Reticulated Python of Southeast Asia.

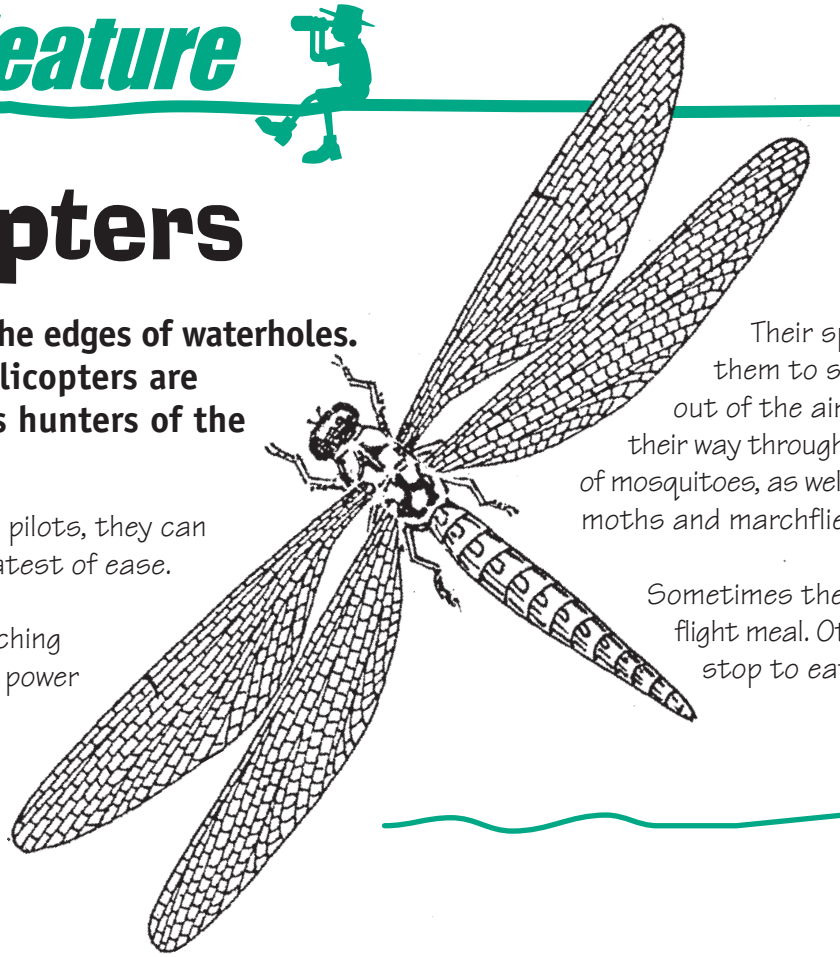
10. Which eight legged creature is one of the 12 constellations of the Zodiac and visible in the night sky in the middle of the year?

Killer-copters

Dragonflies hover around the edges of waterholes. These beautiful, dwarf helicopters are among the most ferocious hunters of the of the insect world.

As skillfully as the best airforce pilots, they can zip, twist and turn with the greatest of ease.

Some can reach speeds approaching 50kph. You can hear the hum of power as they fly by.



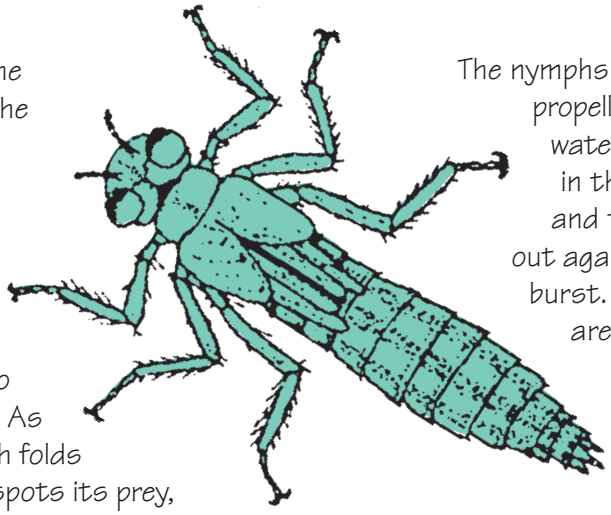
Their speed enables them to snatch a meal out of the air. They chomp their way through large numbers of mosquitoes, as well as butterflies, moths and marchflies.

Sometimes they have an in-flight meal. Other times they stop to eat their lunch.

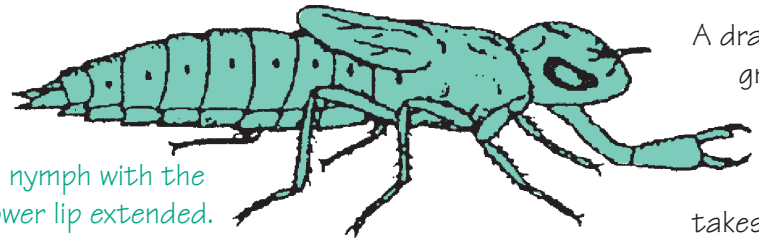
Nymphs

Dragonflies mate in mid air but the female lays the eggs on the water's surface. They sink slowly to the muddy bottom and hatch there. The nymphs look nothing like their parents.

The nymphs patrol the muddy bottom of waterholes for about a year before changing into an adult dragonfly. They eat almost anything they can get their hands on: bloodworms; mosquito and marchfly larvae; even small tadpoles and fish. As well as sharp claws, they have a huge lower lip which folds under the head when not in use. When the nymph spots its prey, it whips out the bottom lip and grabs it, quick as a flash.



The nymphs are rocket-propelled. They suck in water through a hole in their rear end and then blast it out again in one strong burst. Their enemies are big fish, frogs, turtles and water beetles.



A nymph with the lower lip extended.

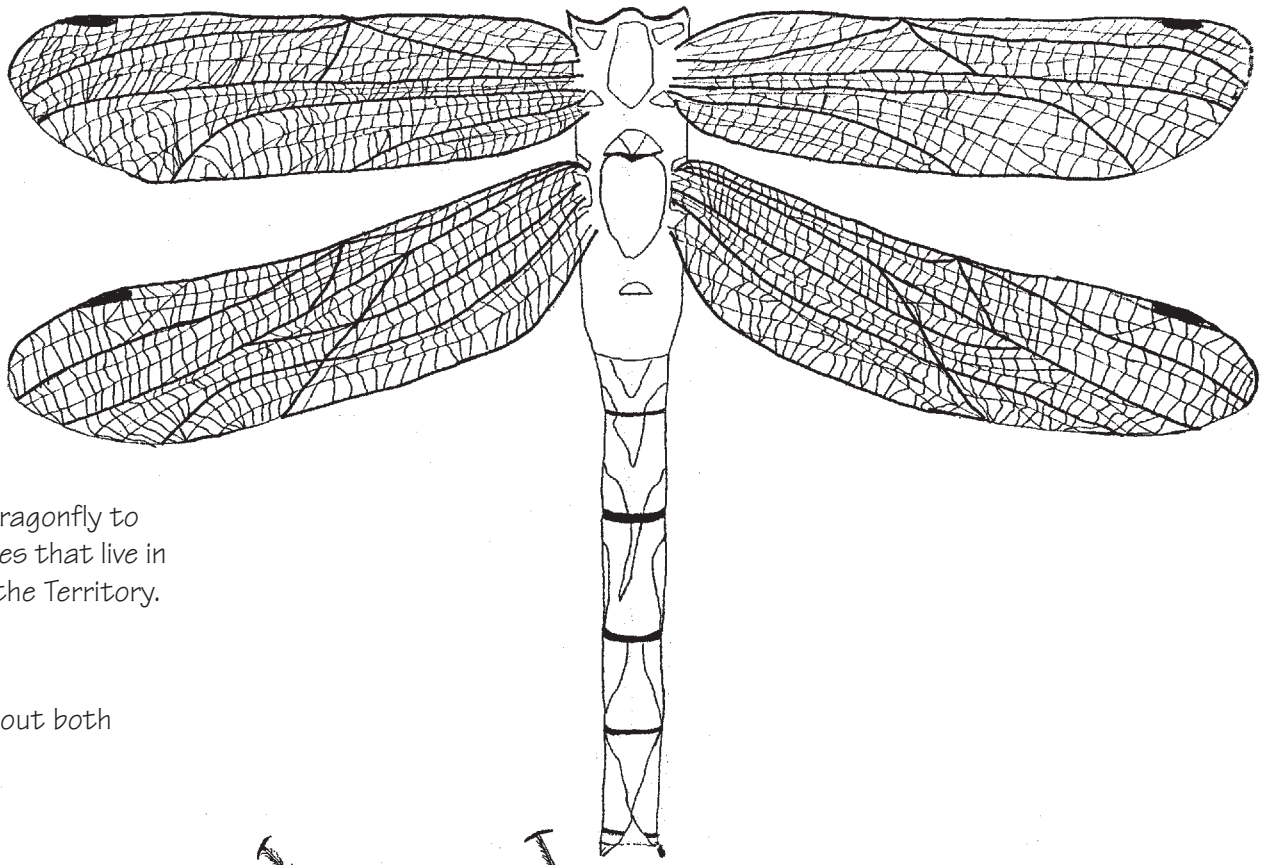
A dragonfly nymph sheds its skin several times as it grows. When it's time for the final moult, it climbs up a plant stem and out of the water for the first time in its life. Its back splits open like a zipper and a new adult dragonfly wriggles out and takes shape.

Did you know...

- There are more than 6 000 species of dragonflies, worldwide.
- Dragonflies can fly backwards.
- During the age of the dinosaurs, there were dragonflies with a wingspan of 70 cm.
- Big numbers of dragonflies appear in the Top End in April-May, signaling the end of the wet season.

Make your Own Dragonfly

All you'll need is coloured pencils, a pair of scissors and some glue.



Step1

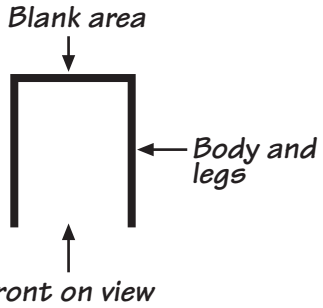
Colour your dragonfly to match the ones that live in your part of the Territory.

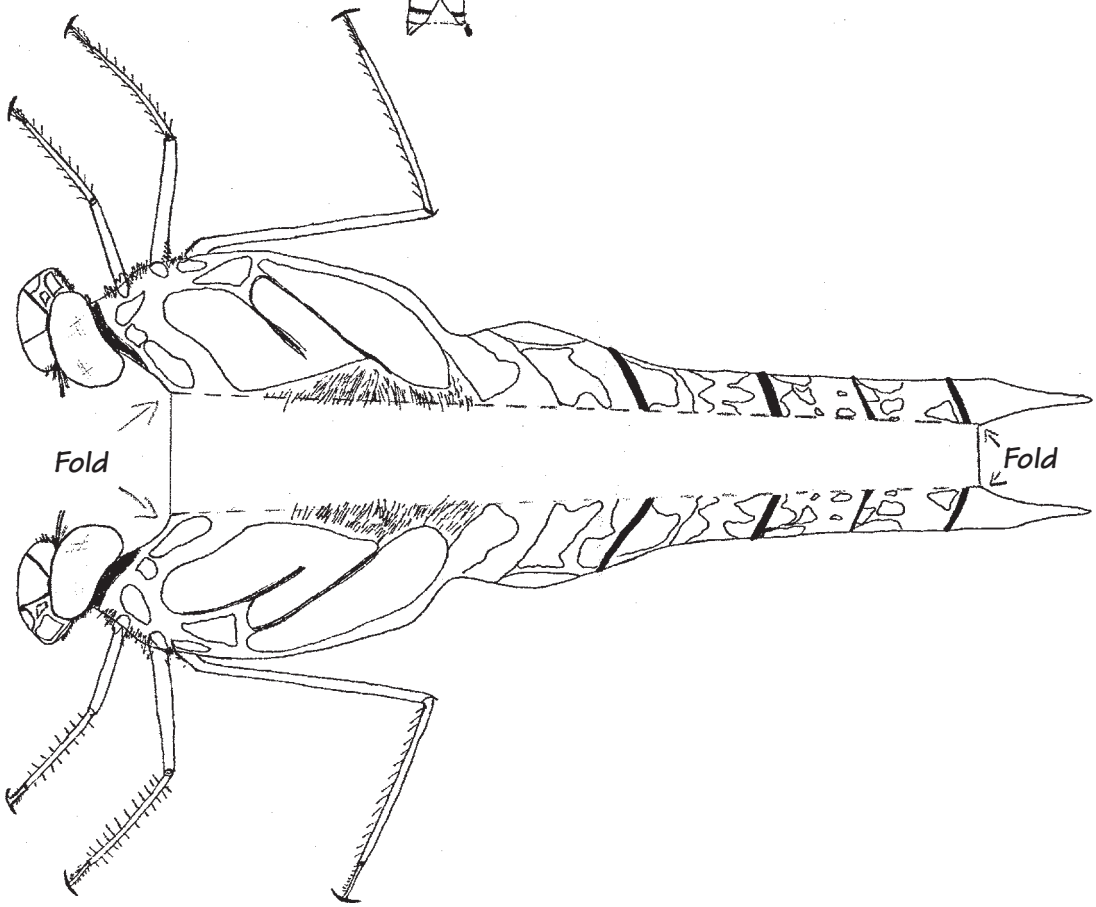
Step2

Carefully cut out both pieces.

Step3

Fold the body along the two straight lines indicated.





Step4

Glue the wing section onto the body section.

Step5

Glue both sides of the head together.

The Fly-By-Night Parrot

The Night Parrot (*Pezoporus occidentalis*) is a bird that has achieved legendary status among birdwatchers. For many years people thought it must be extinct. Then, in 1990, a team from the Australian Museum miraculously rediscovered the bird in western Queensland.

In October 1990, the scientists were heading home to Sydney after working in Broome, the Kimberley and the Top End. They stopped along the road near Boulia in western Queensland to look at some Pratincoles. One of the men happened to look down and there, by the roadside, was the carcass of a Night Parrot.

It probably died after being hit by a car. Ants had removed most of the flesh and much of the tail was missing. But there was no doubt about the bird's identity. The Night Parrot was obviously not extinct.

In 1996 two live birds were seen at Newhaven Station, west of Alice Springs. Station owner Alex Coppock and camel researcher Jurgen Heucke were fixing a bore pump when two of the birds flew in and landed on a gate, 3 metres away.

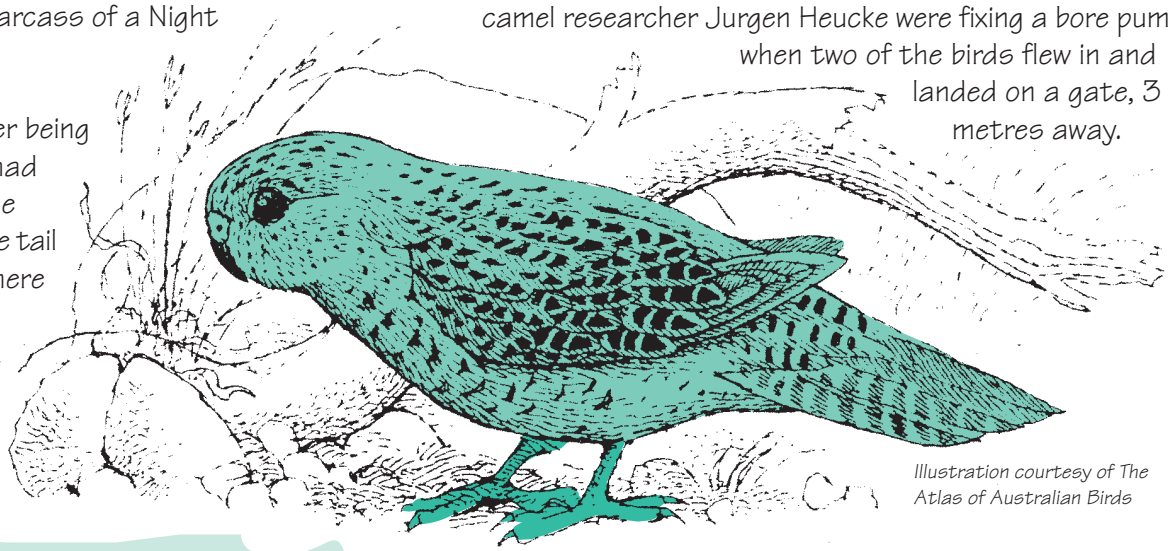


Illustration courtesy of The Atlas of Australian Birds

The Night Parrot looks like an overweight Budgerigar. Its feathers are a mixture of green, yellow and black but it is not as brightly coloured as a budgie.

It is a bird of the inland plains. Being a seed eater, it needs to drink regularly.

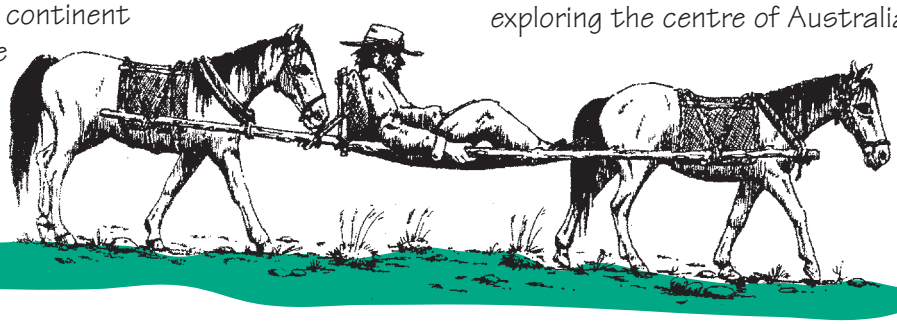
The Night Parrot is truly a remarkable bird. For starters, it is nocturnal. Plus, it spends its time on the ground like a quail and sleeps in a burrow! So it's not your typical parrot.

Bird experts believe that this very rare bird is a highly nomadic species, moving around the arid inland in search of suitable habitat.

The Night Parrot was discovered by explorer John McDouall Stuart. In 1845 he collected a specimen near Cooper's Creek in South Australia.

Stuart was one of Australia's greatest explorers and the Stuart Highway is named after him. In 1862 he led the first party to cross the continent from Adelaide to the Top End. He was so sick on the return trip that he could no longer ride.

The famous English ornithologist John Gould made up the name Night Parrot in 1861, while Stuart was exploring the centre of Australia.



Who am I?

Use the grid to work out the names of some more nocturnal birds.

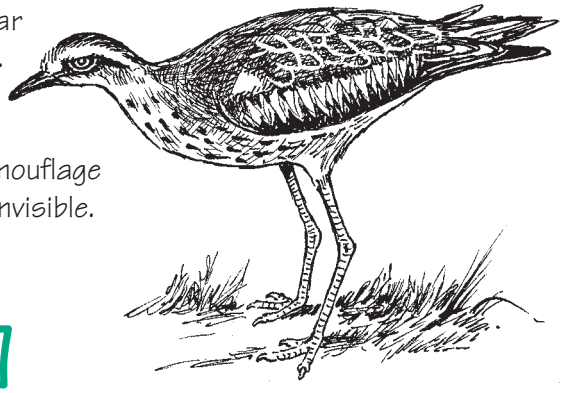
	1	2	3	4	5
A	A	B	C	D	E
B	F	G	H	I	J
C	K	L	M	N	O
D	P	Q	R	S	T
E	U	V	W	X	Y

I am a nocturnal bird of dry country. I am a relative of the Tawny Frogmouth. During the day, I roost in the open on rocky ground or ridges.

D4 D1 C5 D5 D5 A5 A4

C4 B4 B2 B3 D5 B5 A1 D3

I have long legs and big eyes. I live near creeks and waterholes where there are lots of insects for me to eat. You may hear me wailing at night. I rest on the ground in the daytime but my camouflage makes me almost invisible.



A2 E1 D4 B3

D4 D5 C5 C4 A5

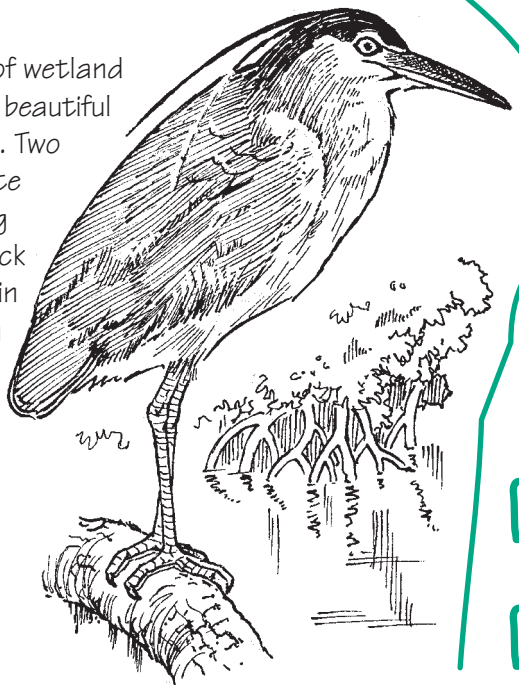
A3 E1 D3 C2 A5 E3

D3 E1 B1 C5 E1 D4

C4 B4 B2 B3 D5

B3 A5 D3 C5 C4

I am a bird of wetland areas. I have beautiful brown wings. Two slender, white plumes hang from my black cap. I roost in trees during the day. At night I feed on small fish, frogs, shellfish and insects.



I have solid yellow-green legs and a black and white head. I live on sandy beaches near mangroves but am now rare in many parts of northern Australia. I feed on crabs when the tide goes out.

A2 A5 A1 A3 B3

D4 D5 C5 C4 A5

A3 E1 D3 C2 A5 E3

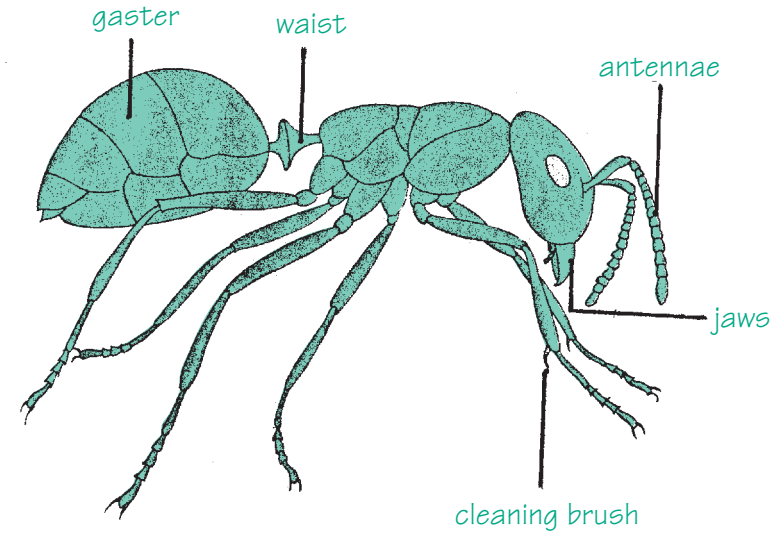
Ants

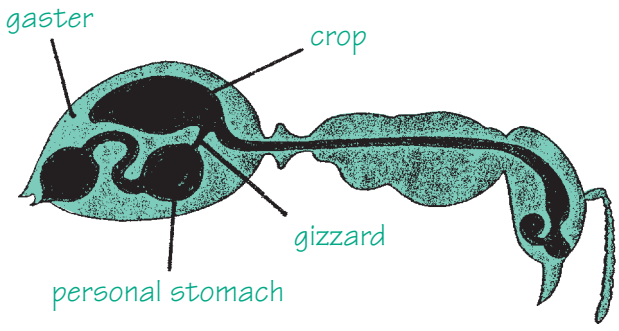
No matter where you live in Australia, there will be ants sharing your block of land with you. There are more ants in Australia than any other country on Earth.

Some Ant Anatomy

Worker ants have two stomachs. They have a personal one to satisfy their own needs and a public one, called a crop, where they store food for other ants. When they go foraging, they convert everything they collect into liquid and store it in the crop. Its walls are thin and elastic so it can expand and hold a lot.

When the worker returns from a foraging expedition to the nest, an inside worker asks for food. It strokes the others head with its antennae and opens it mouth. They both stretch their legs, stand tall and 'kiss'. A drop of liquid passes from the food gatherer's crop into the other's mouth. A worker with a crop full of food can feed many others in this way.





The Secret of the Kiss

Ants are amazing creatures, living and working so well together in large, well-organised communities. They may be tiny but, acting in union, they are a force to be reckoned with. What is their secret?

We used to think they must be highly intelligent insects but now know this is not so. Although they are capable of learning, ants are not especially intelligent at all. The secret to their behaviour is their kiss.

Food is not the only thing they pass to each other when they kiss. They also pass on other substances which are vitally important to the organisation of the colony. These are 'chemical messages' which may, for example, tell another ant what jobs need doing or warn of danger.

Because ants constantly feed, lick and touch each other, these messages soon pass all around the colony. This is the secret of the ants' organised way of life.

Why only the queen lays eggs.

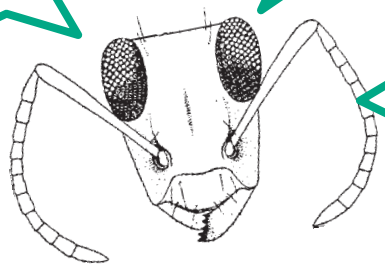
In the deepest and safest part of the nest, the queen lies in her royal chamber, surrounded by her attendants. While some feed and groom her, others look after her babies in the nursery.

Only the queen lays eggs. She produces a potent chemical that keeps her daughters sterile. The workers who groom her find it irresistible and lick it from her body. They pass it on to all the other workers when they kiss.

Ants Did you know...

In many ant colonies, the jobs done by the workers depend on their age. Young ones are employed as childcare workers. As they get older, they shift to being construction workers. Later in life they become food gatherers.

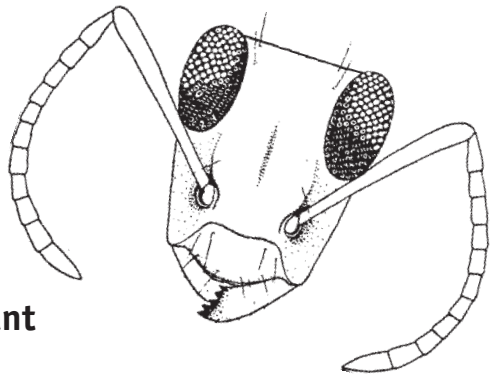
Ever wondered why ants move in long lines? They have a well-developed sense of smell and use chemicals to mark their trails. With a touch of its tail, each one leaves a drop on the ground for those behind to follow.



Some ants collect broods from other nests and raise them as slaves.

The life cycle of an ant has 4 stages: egg, larva, pupa and adult. From egg to adult takes 8 – 10 weeks.

Robotic Ants



Based on the way insects move, scientists have tried to invent robots that can move over different surfaces. Most of these are too big and clumsy to be successful. In northern Australia lives an ant that may provide the perfect model.

Australia has more than 1 000 species of ants. The Northern Territory is home to a group unlike any of the others. They belong to the genus ***Opisthopsis*** and have a flat face like a grasshopper, with enormous eyes at the corners of their head. What's more, these timid creatures have a jerky way of moving like tiny little robots.

They are quite fast and may be seen running about during the hottest part of the day, on ground and on vegetation.

Opisthopsis rufoniger occurs in central Australia. It has an orange head and a black gaster. ***Opisthopsis haddoni***, from the Top End, is similar except that the first half of its gaster is orange, rather than black. Both are around 5 mm long.

Robotic ants often build their nests inside those of other ants or in termite mounds.

You can learn more about these and other ants by clicking onto the CSIRO's web site

Australian Ants Online **www.ento.csiro.au/science/ants**

PUZZLE ANSWERS

Plant Profile (page 2)
Coolibah

Reptile Words (page 3)
Perentie

A Smelly Top Ender (page 4)
Amorphophallus or Cheeky Yam
Rotten Cheesefruit

Nature Quiz (page 5)
1. a)
2. a)
3. c)
4. a)
5. c)
6. c)
7. Kowari
8. Dragonfly
9. c)
10. Scorpion

On the Brink (page 9)
Spotted Nightjar
Rufous Night Heron
Bush Stone-curlew
Beach Stone-curlew

Around the traps

G'day from Ranger Bill

Welcome to the New Year! Last year we asked our Junior Ranger members what they would like to see featured in this year's Reviews. Based on these responses we will be covering topics on fungi, birds, marine life, feral animals and of course plenty of topics on our native plants and animals. Our project pages will keep you busy and the nature quizzes will keep you guessing!

We invite everyone from our Junior Ranger members to those who receive the Review interstate and overseas to send in information on wildlife you encounter so we can share this information through the Review. Remember the Review is also available on our website if you prefer to download your copy, just head to http://www.nt.gov.au/paw/

Darwin

The Darwin Junior Ranger Program for the 9 – 11 year olds will be underway in April with the Program for older members (12 – 14 years) starting in May. Members will have the opportunity to be involved in a range of topics this year including getting to know your local parks and reserves and finding out more about some of the jobs that Parks and Wildlife staff are involved with. Members will explore our great Top End habitats including freshwater environments, monsoon vine forests and eucalypt woodlands as well as exploring the geology of our land.

We bid a fond farewell to Dianne Martin this year. Di will be heading off to the marine unit of Australian Customs to help safeguard our shores. We thank her for the great activities she designed last year. Check out Di's great dragonfly activity in this issue in the Project Page!

I will also be leaving the Program this year to head to sunny Queensland. It's been a great program to be involved in over the past three years and I've enjoyed presenting the activities to you all. Thank you to all the members and parents for your help and support over the years.

The Program will operate with two Community Education staff this year. Dean McAdam remains with the program and is joined by Vanda Lockley. Four different activities will be offered each month, these will run on Tuesdays and Sundays. Call 8999 4565 for further information.

Roana O'Neill

Alice Springs

As you may be aware by now, Ranger Kym has moved on to another job and I will be running the Junior Ranger Program in Alice Springs in 2002. My name is Ranger Emily, some of you may remember me from the Junior Ranger Program in Darwin. I am looking forward to meeting all the Alice Springs and Tennant Creek Junior Ranger members and their Parents when the program kicks off soon.

As we are in the last months of autumn and moving into winter, there are a few changes happening out in the bush around Alice Springs. Junior Rangers will soon be visiting the Alice Springs Sewerage Ponds where at this time of year Black Swans are laying eggs and we will also be taking on the Simpsons Gap Bike track, where you can see a lot of bright yellow blossom on the Cassias. This is also the time of year when the Coral Bean Tree sheds its red seeds, Aboriginal women collect them and use them to make jewellery.

Autumn in central Australia is a good time of year as the nights start to get pretty chilly but the days continue to be mild and sunny. It is a great time to get out and take a look.

See you out in the bush!
Ranger Emily.

Katherine

Frogwatch was the first series of activities that the Junior Rangers did for 2002.We have had another great wet season, even though it didn't rain at first and everyone thought it was never going to arrive.

It is amazing how well frogs have adapted and how responsive our native frogs are to the wet weather. When the rains returned after what seemed like a drought the frogs let the animal world know that it was frog time again. Boy, what a racket!

This was good for Frogwatch, which was intentionally left later into the wet season than usual so that Junior Rangers could make the most of the wettest period of the monsoon rains. Thankfully it worked, and it was much cooler.

Even though the Cane Toad is spreading, our native frog species can still be accounted for, so far, but it is important that Junior Rangers keep our records going to see what the long term impacts on native frog species may be.

The early start to the year made the most of the period when our wildlife is most active. Plenty of water means lots of green plants, which in turn feeds the insects and then larger and larger animals. With no shortage of food our wildlife become very healthy and breed. This highly active time of the year allowed Junior Rangers to get a good look at some of our more secretive wildlife such as snakes (from the safety of a bus), geckoes, and possums.

The main monsoon time of the year is known as Jiyowk to the Jawoyn Aboriginal people, which is the main tribe within the Katherine, Mataranka and Pine Creek area. To trace these seasons the Jawoyns use indicator species which let them know when one of the five seasons is about to begin.

In Jiyowk the black current (Murrunggurn) and White current (Jurritjba) are ready to eat. Junior Rangers will continue to learn about the Jawoyn people and their seasons and how they differ from the way we think the weather works.

Junior Rangers can also look forward to finding out about the amazing ways the Jawoyn Aboriginals survive in the bush. How they hunt and gather food, and travel vast distances across the land. Most importantly we will be finding out how close the Jawoyn people are to nature, which is very different from the way we live today. So, get ready to eat Goanna and other bush tucker at Manyallaluk and meet Jawoyn people who can teach us knowledge and skills about the bush environment and their land.

Activities Junior Rangers can look forward to this year are bush survival, animal tracking, wildlife identification, wildlife caring, snakes and bush tucker. Then we'll lift our heads up (sleepily) and look at the night sky on some amazing astronomy nights where we will learn navigation skills. All during the seasons of Jiyowk and Banggarang.

See you all there
Bye from Ranger Andrew

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