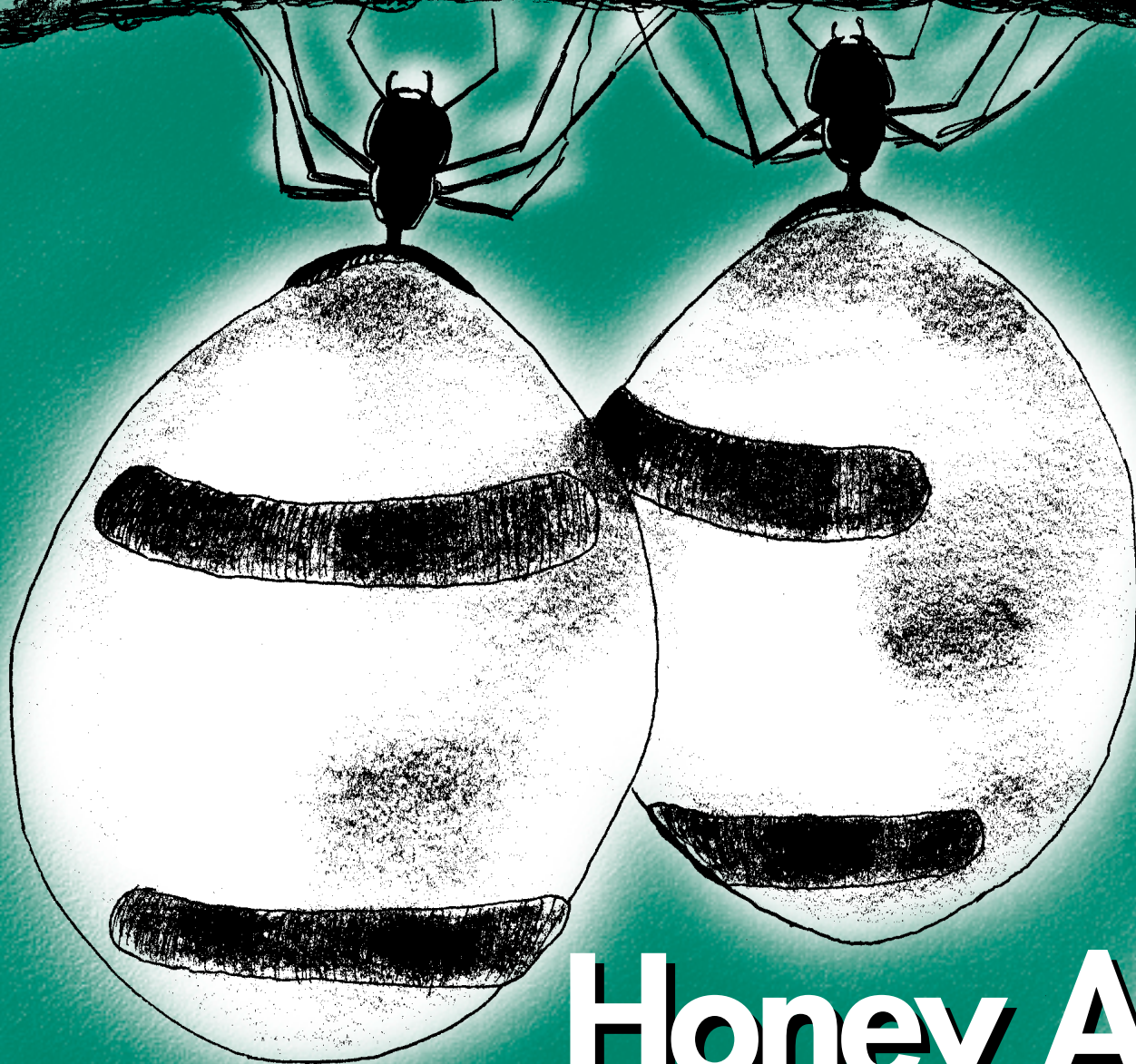




Junior Ranger

Review

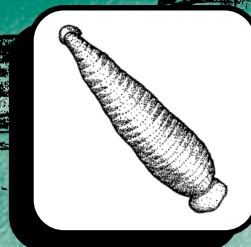
Issue 3, 2001



Honey Ants



On the Brink
Golden Bandicoot



Urban Encounters
Leeches

Creature Feature

Honeyants:

Under the roots of a Mulga tree you may find a special treat. It's *Campanotus inflatus*, the **Honeyant**.

It's hard work digging out these delicious living lollipops.

The nests may extend 2 metres beneath the surface.

Each nest has a vertical shaft leading up to the surface.

A number of horizontal tunnels run off it.

Industrious workers leave every day to collect honeydew and nectar. They take it back underground but need somewhere to store it. They don't want it getting full of sand.

So, they feed it to a special caste of ants, called **repletes**.

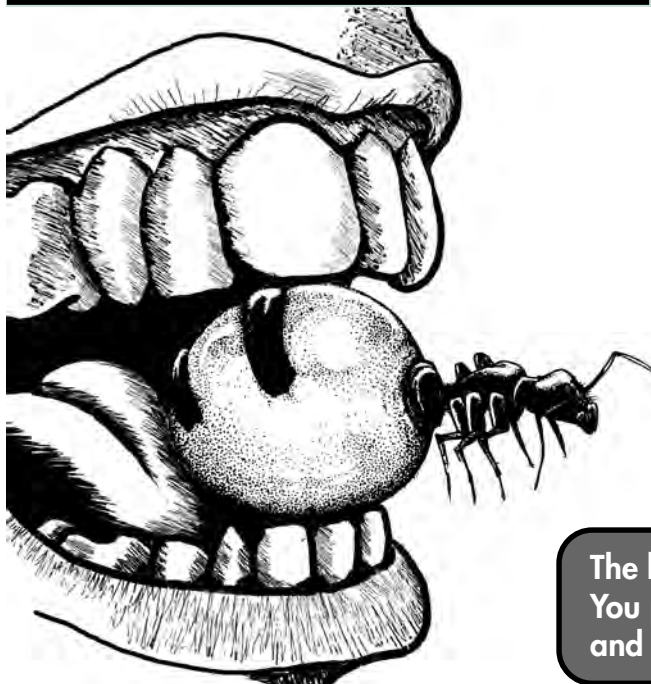
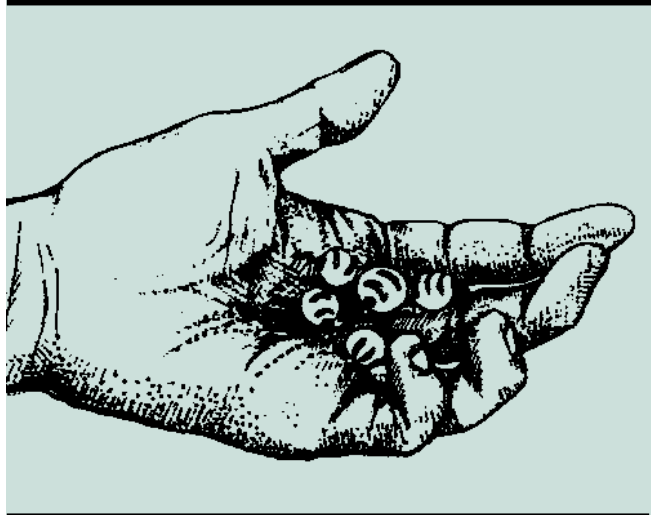
The repletes become living honey-pots. Long and slender at first, their abdomen soon swells to the size of a grape.

These overstuffed creatures are too fat to walk about.

They spend the day hanging by their legs from the ceiling.

In the tough times, when there is not much food to be found, the community draws on its savings. The workers

stroke the repletes who regurgitate the honey, drop by drop.



Red Racehorse Ant

The Red Racehorse Ant *Melophorus bagoti* stores honey in the same way.

But their repletes don't grow anywhere near as big as those of *Campanotus inflatus*.

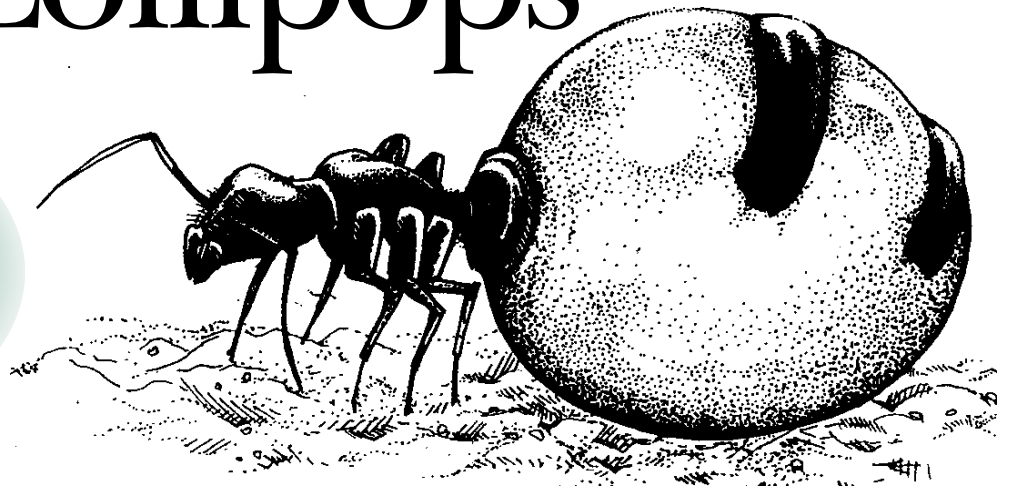
They can still walk around.

Melophorus bagoti are the firewalkers of the ant world. They collect food in the heat of the day when the ground may be very hot. They got the name Racehorse Ant because they run around very fast to avoid getting burnt feet.

The honey is delicious. You don't swallow the ants. You put them on your tongue, bite on the abdomen and suck out the honey.

Living Lollipops

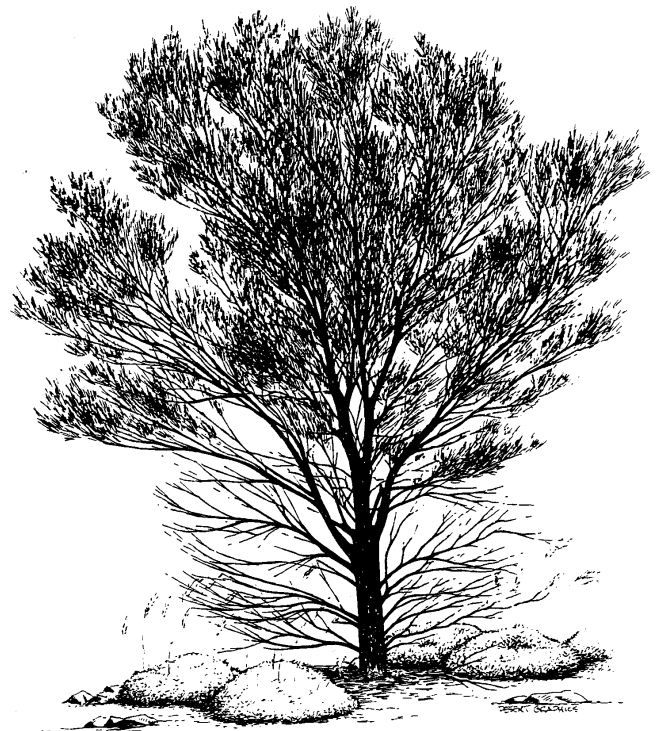
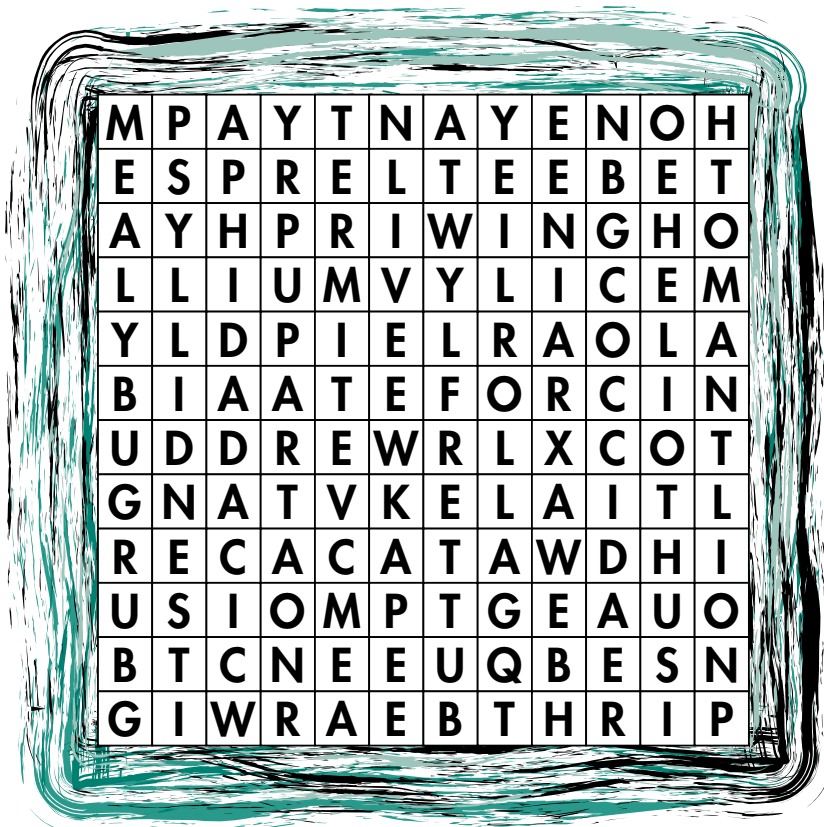
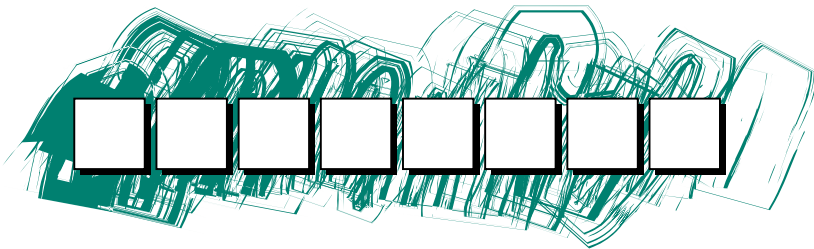
What do the Arrernte people of Alice Springs call Honeyants?



To find out you must first find the 29 insect words in the puzzle. Colour the boxes as you find each letter.

You should have 8 left over.
String them together to spell the Arrernte name for the honeyant.

- | | | |
|-----------|-----------|---------|
| ANTLION | GRUB | PUPA |
| APHID | HELIOTHUS | QUEEN |
| BEETLE | HONEYANT | TERMITE |
| BUTTERFLY | LARVA | THRIP |
| CICADA | LERP | WASP |
| COCCID | LICE | WAX |
| COCKROACH | MEALYBUG | WEB |
| EARWIG | MOTH | WEEVIL |
| GALL | NEST | WING |
| GNAT | PSYLLID | |

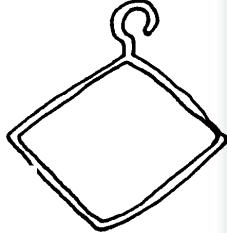
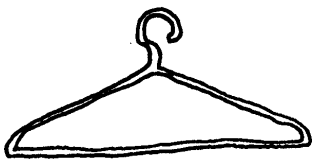


Honeyants build their nests in the sand under the roots of Mulga trees.

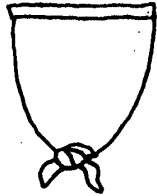
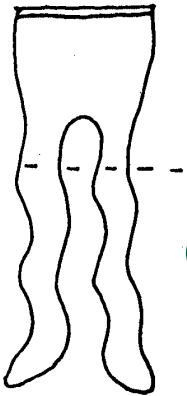
Project Page

Making a Ponding Net

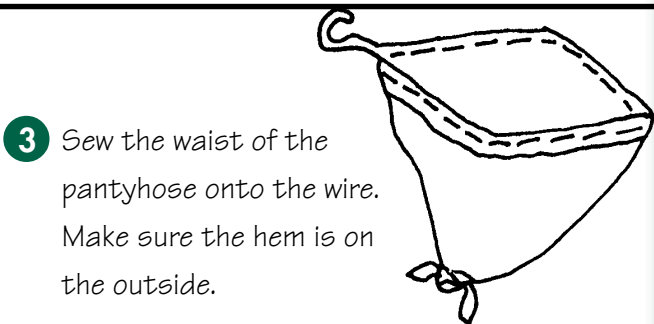
What to do:



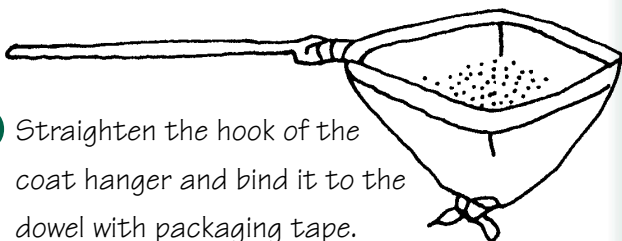
- 1 Bend the coat hanger until it is a square shape.



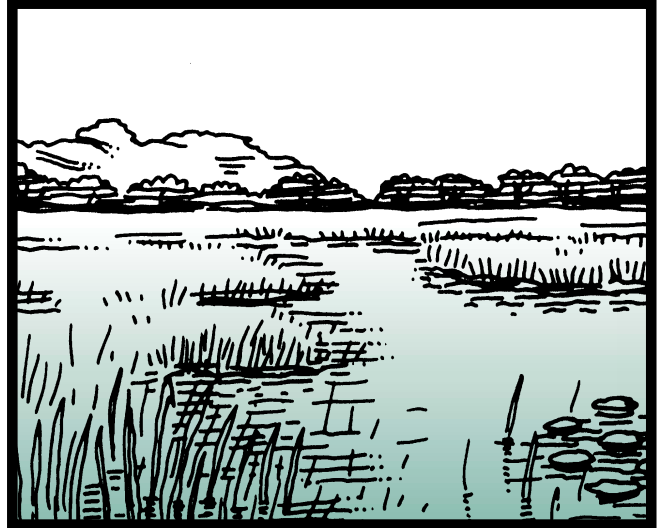
- 2 Cut the legs off the pantyhose just below the knee and tie them together in a tight knot.



- 3 Sew the waist of the pantyhose onto the wire. Make sure the hem is on the outside.



- 4 Straighten the hook of the coat hanger and bind it to the dowel with packaging tape.



What you will need:

- wire coat hanger
- needle and thread
- pantyhose
- a piece of dowel or a straight stick
- packaging tape

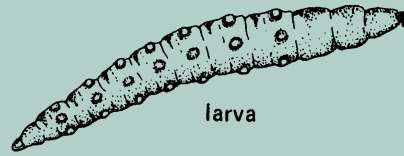
The last edition of the *Junior Ranger Review* showed how to make a **pooter** for catching terrestrial (landliving) minibeasts. Here's another simple tool for you to make. It will help you collect and study some of the tiny aquatic creatures that live in our waterholes and swamps.

COLLECTING

To collect a variety of freshwater creatures, you need to sweep the net through the water in different areas. A waterhole contains many microhabitats. Some creatures move about on the surface but others prefer to hide amongst the vegetation along the edges. You should also sweep the bottom and check what's attached to submerged rocks. A white enamel dish is handy for examining your catch.

What's My Name?

Can you crack the code to reveal the names of these aquatic creatures?
 (Clue: aquatic creature is zjfzgrx xivzgfiv)
 see page 11 for the answer.



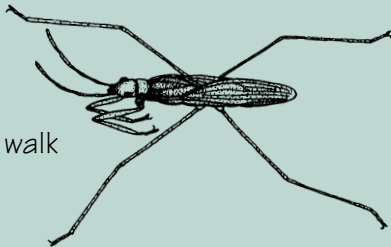
larva

The larvae have a cylindrical body and are pointed at both ends. They are about a centimetre long.

n z i x s

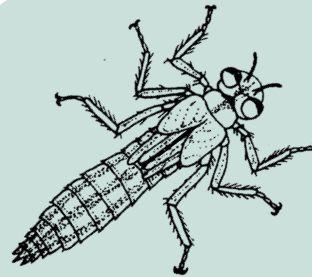
u o b larva
 larva

They can walk on water.



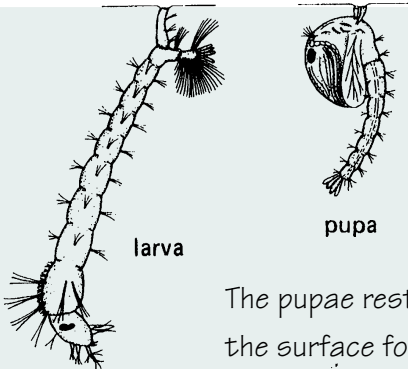
water

h g i r w v i



Both nymphs and adults are great hunters.

w i z t l m u o b nymph
 nymph



larva

pupa

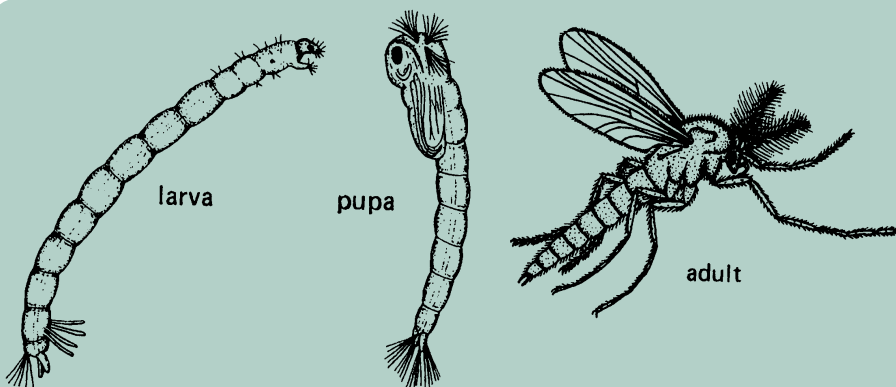
The pupae rest at the surface for air.

n l h j f r g l



The adults are about 5 cm long. They have a breathing tube that extends from the tip of the tail.

water
 h x l i k r l m



larva

pupa

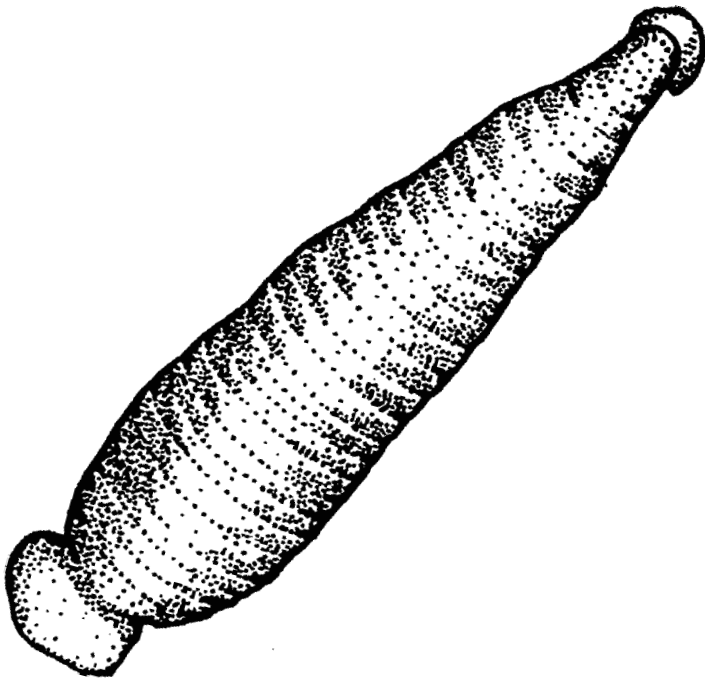
adult

The adults look like mosquitoes but don't suck blood. The larvae are bright red and called bloodworms.

n r w t v

Urban Encounters

There are many patches of rainforest on Darwin's doorstep. They are home to a variety of creatures, including our looping leeches. Sooner or later, you're bound to meet one.....But don't be alarmed. They are really pretty harmless!



Leeches are not the most loveable of creatures but don't let them put you off walking in wet forests. They don't eat much!

Leeches

Habitat

Leeches are inhabitants of Australia's wet forests. They're relatives of earthworms. It just happens that they prefer a feed of blood to garden compost.

Appearance

Some leeches are brightly coloured, with yellow or red stripes. Most are simply black or brown.

They have a sucker at each end of their body.

The posterior one is bigger than the one on their head.

Moving

Leeches have a highly developed nervous system that can detect light, warmth and vibrations. They seek their prey by looping across the forest floor or dropping from overhanging plants. They can travel quite quickly, alternately attaching one sucker to the surface and then somersaulting onto the other sucker.

Feeding

They have three semi-circular teeth, around their mouth, to slice a small slit in the skin of their prey. They inject an anaesthetic so the victim doesn't feel anything and they can feast without being noticed.

To make sure the blood keeps flowing, they inject two chemicals into the skin. One is a histamine to dilate the blood vessels leading to the wound.

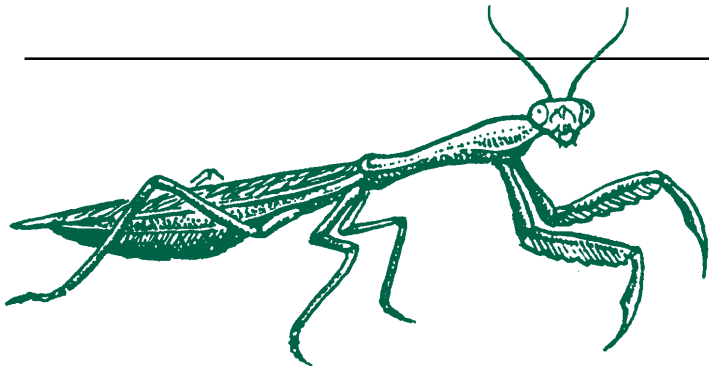
The other is an anticoagulant to prevent a clot forming. Leeches can survive for months on a single meal of blood. Bacteria in their gut slowly digest it for them.

Getting rid of them!

Putting lots of insect repellent on your feet and legs, before you put your boots on, helps let the little guys know they're not welcome.

A quick flick to the head with your finger tip is usually enough to dislodge a leech that's thinking about lunch. Rubbing salt in their noses also lets them know you mean business!

Nature Quiz



How Many of These Questions Can You Answer?

You'll find the answers on page 11.

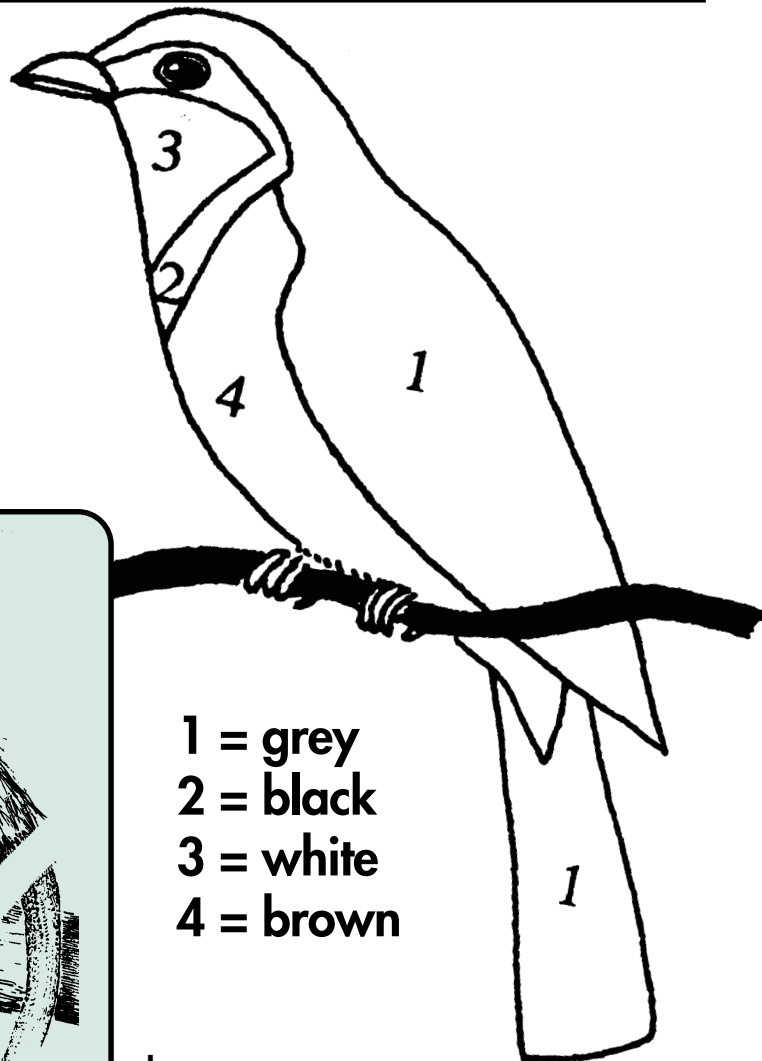
1. How many wings does a honeybee have?
2. What is the common name for *Acanthaster planci*, a creature that eats coral polyps?
3. What kind of animals are macropods?
4. What does the female Praying Mantis do to the male after they mate?
5. How many claws does a cat have?
6. What large dancing bird is the only Australian member of the crane family?
7. What do herpetologists study?
8. What order of insects contains the most species?
9. How many eyes does an earthworm have?
10. Many Australian animals have a marsupium. What is it?

What bird am I?

I am a small, male bird found in both Central Australia and the Top End. I like dry country with lots of shrubs and trees. I eat insects and grubs.

My name has two words. The first one refers to the colour of my tummy and the second to my call.

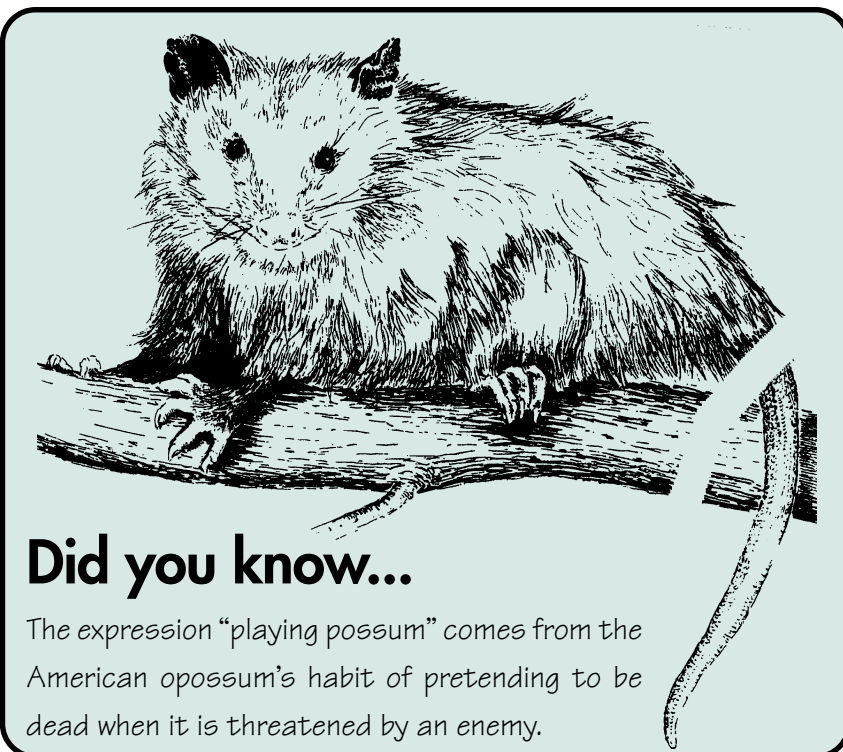
Use the number code to colour me. Then find my picture and name in a bird book.



- 1 = grey
- 2 = black
- 3 = white
- 4 = brown

I am a

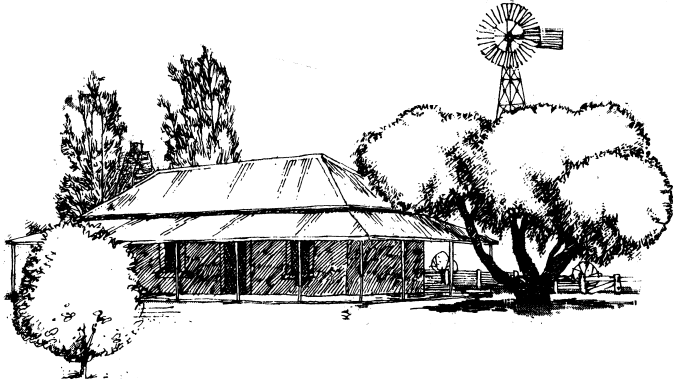
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>



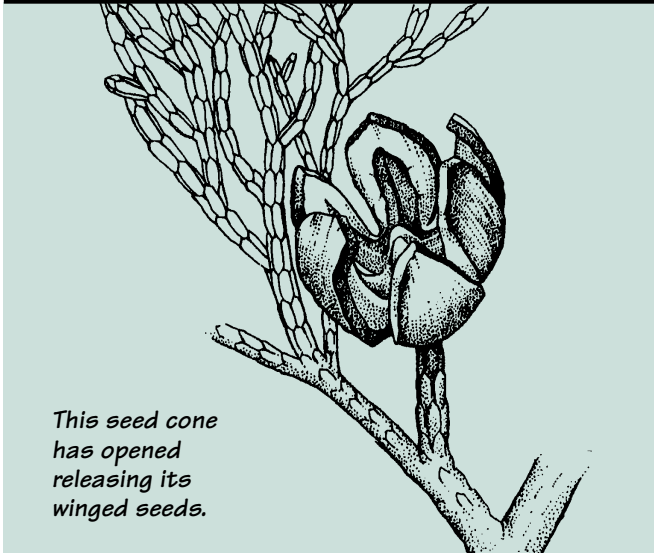
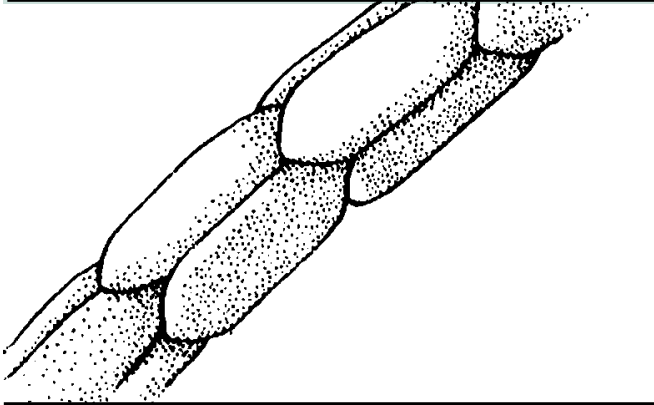
Did you know...

The expression "playing possum" comes from the American opossum's habit of pretending to be dead when it is threatened by an enemy.

Plant Profile



When our pioneer settlers built themselves a home, they knew there was one native timber that would pass the test of time....and termites.



This seed cone has opened releasing its winged seeds.

Cypress Pine

The dry, rocky ranges of the Centre are home to a tough Australian. Long periods without rain are not a problem for the native Cypress Pine *Callitris glaucophylla*.

It was prized as a building material in the early days of the Territory because of its resistance to termites. The wood contains a strong smelling resin that termites don't like. It's not so tough, however, in the face of fire. Growing on rocky hillsides provides it with some protection against bushfires.

Size

Cypress Pine is a medium-sized tree with rough, dark bark.

Leaves

You have to look closely to see the Cypress Pine's blue-green leaves. They look like scales, stuck onto the ends of the branches. Having such tiny leaves ensures that not much surface area is exposed to the hot, dry air.

Flowers

You'll never see flowers on this tree. It doesn't produce any. Pollen is produced at the tips of the branches. Seeds develop lower down the stems, in round cones.



Northern Cypress Pine

Callitris intratropica is a close relative of the Cypress Pines of the Centre. It grows into a more upright shape. Extensive stands of the tree grow in coastal regions of western Arnhem Land and Melville Island.

Plant Profile

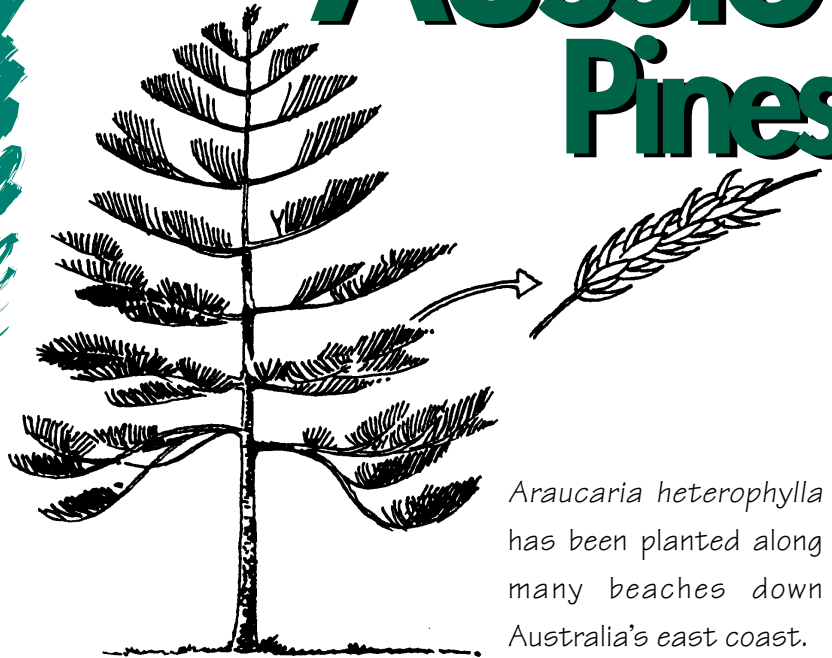
Other Aussie Pines

	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

Use this grid to decode the names of some other Australian pines.

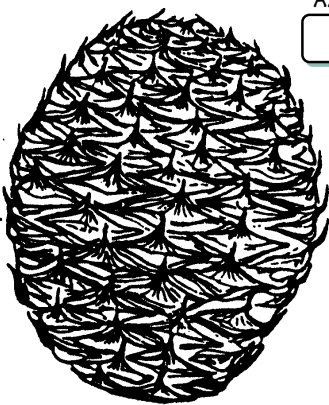
YOU CAN CHECK YOUR ANSWERS ON PAGE 11.

A close relative *Araucaria bidwilli* grows in southeast Queensland. Aboriginal people travelled from far and wide to feast on the roasted nuts when they were ripe.

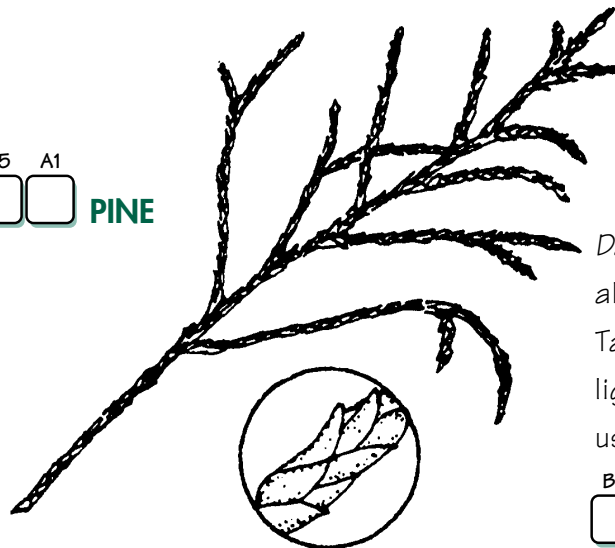


Araucaria heterophylla has been planted along many beaches down Australia's east coast.

C4 C5 D3 B1 C5 C2 C1 B4 D4 C2 A1 C4 A4
 PINE



A2 E1 C4 E5 A1
 PINE



Dacrydium franklinii grows along rivers in southwest Tasmania. The timber is light but very tough and used for boatbuilding.

B3 E1 C5 C4
 PINE

An astonishing discovery from the Jurassic era

E3 C5 C2 C2 A5 C3 B4
 PINE

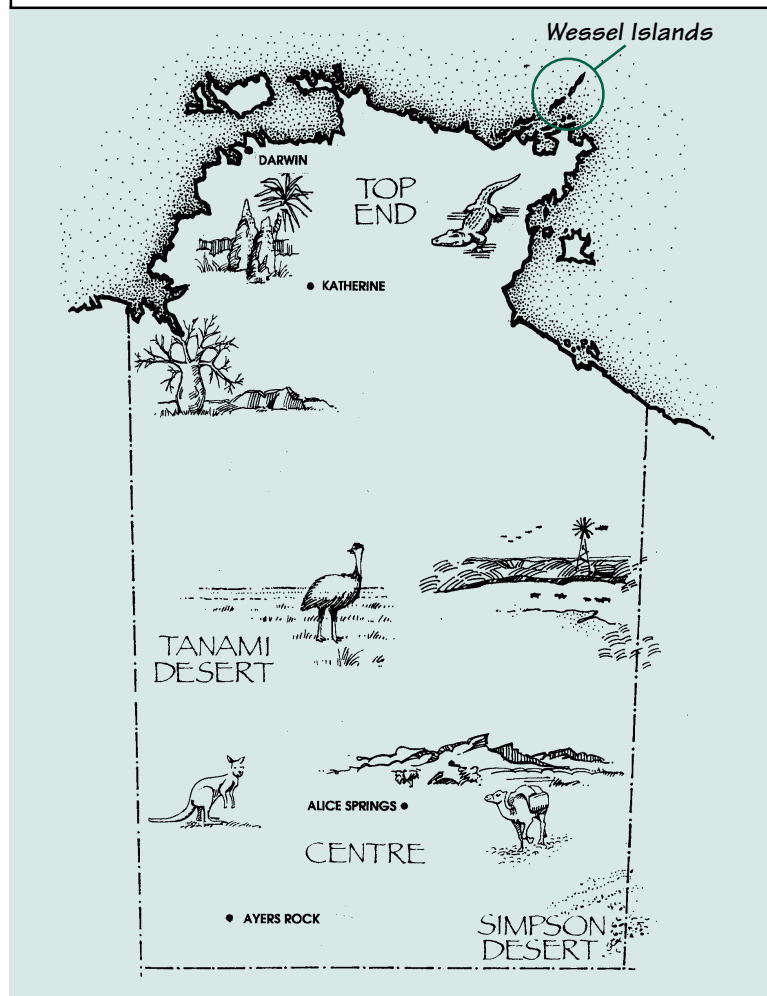
In 1995, a ranger was bushwalking in a remote and rugged part of the Blue Mountains, near Sydney. He came across a grove of 23 unusual pine trees and 16 seedlings in a gully. The biggest was 35 metres tall, with a trunk one metre in diameter. Plant experts were astonished by the find. No other trees like them exist on Earth. They are living fossils: the sole survivors of a type of tree not known on Earth since the age of the dinosaurs. The tree is named after the national park in which it was found.

On the Brink

Golden Bandicoot



The creature has golden-brown fur on its back and sides and is smaller than its relative, the Northern Brown Bandicoot.



It was the dry season of 1993. The scientists had spent 8 weeks surveying the Wessel Islands: a chain that extends out from the remote north-eastern corner of Arnhem Land. Despite extensive searching, spotlighting and setting 7 000 traps, they had found disappointingly few animals.

One species they couldn't fail to notice were the dingoes that patrol the beaches of the largest island, Marchinbar. They collected some dry droppings and sent them south to mammal expert Barbara Triggs to be examined. A short time later, an excited Barbara phoned back to say that they contained unusual bandicoot hairs.

It turned out they were hairs of the rare Golden Bandicoot *Isodon auratus*.

It is a nocturnal animal, most active in the three or four hours after dusk and before dawn. Its diet includes grubs, centipedes, termites and plant material. It lives on its own and individuals are aggressive towards each other.

Females give birth throughout the year but the numbers of females with pouch young increases after good falls of rain. Normally two babies are born.

Wildlife experts thought the animal had disappeared from the northern part of the Territory 100 years ago.

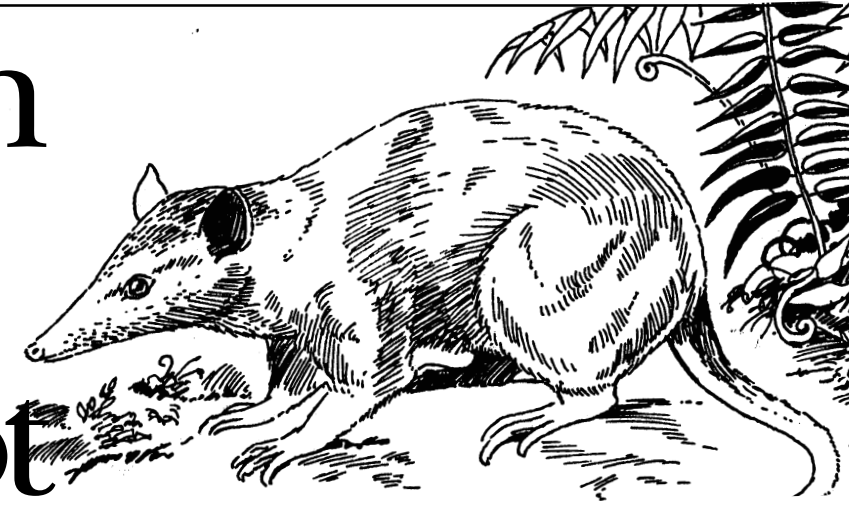
Golden Bandicoots were still common in the sand and spinifex country of inland Australia until the 1930s.

Aboriginal people regularly hunted them for meat because they were one of the most abundant of the middle-sized mammals.

By 1960, however, they had disappeared from Central Australia. Today, you only see them in a few scattered places in the Kimberley region and on Augustus, Barrow and Middle Islands off the coast of Western Australia.

The discovery that they may still survive in the Wessel Islands caused great excitement among Territory scientists and rangers. Hopefully the dingoes in the islands haven't finished them off. Perhaps they might turn up in other areas.

Northern Brown Bandicoot



The Northern Brown Bandicoot *Isodon macrourus* is a great survivor. Other mammals have bitten the dust but it remains common in the populated areas of northern Australia and the Queensland coast.

Bandicoots spend the day sleeping under clumps of grass or leaf litter.

They visit people's gardens at night, scratching around for grubs and worms, as well as fruit and vegetable matter. They are also quite fond of Pal and will happily raid the dog's bowl.

Muscles, a quick turn of speed and sharp teeth are not the only things that keep them a step ahead of

dogs, cats and cars. They also have an amazing capacity for reproduction.

Northern Brown bandicoots hold the world record for the shortest pregnancy. The babies are born only 12 or 13 days after mating, compared to 18 - 21 days for house mice and 30 for rabbits.

Did you know...

Bandicoots have back legs like a kangaroo but don't hop. They gallop like a horse when they need some speed.

You can tell that bandicoots are around by the small conical holes they leave in your lawn as they poke around for grubs and worms.

The sound they make is a cross between a grunt and a squeak.

When looking for tucker they dig with their front legs and then sniff in the hole with their long nose.

A female's pouch opens backwards. This stops the babies getting covered with dirt as Mum scratches for food.

Bandicoot is actually the name for a large rat that lives in southern India and Sri Lanka. When explorer George Bass saw the Aussie animals in 1799, he thought they were the same creature he'd seen in his travels to India. In his diary, he referred to them as bandicoots and the name stuck.

Puzzle Answers

Creature Feature (page 3)

Yerrampe

What's my name? (page 5)

left hand side - water strider, mosquito

right hand side - march fly larva,

dragonfly nymph, water scorpion

bottom of page - midge

Nature Quiz (page 7)

1. Four

2. Crown of Thorns Starfish

3. Kangaroos and wallabies

4. Bites off its head

5. Ten

6. Brolga

7. Reptiles

8. Beetles

9. None

10. A pouch

What am I? (page 7)

Rufous Whistler

Other Aussie Pines (page 9)

Norfolk Island Pine, Bunya Pine, Huon

Pine and Wollemi Pine

Around the Traps

G'day from Ranger Bill

It is terrific to see so many young Territorians being involved in the study and protection of our natural environment. But if you are not within the Junior Ranger age of 9 – 14 years there are a number of ways that you can also become involved with the Commission.

The Commission has a number of active Friends Groups and a Volunteers Program, which provides a great opportunity for the community to become involved in and informed about Commission activities.

The Friends of Darwin Botanic Gardens meet regularly throughout the year with presentations, workshops, field trips and working bees. Over the last year the group has been involved with hosting the Wollemi Pine exhibition on tour from the Royal Botanic Gardens in Sydney (see inside for further information about this ancient species), participated in the Garden fair with displays and plant sales, undertaken fundraising and preparation of the Gardens souvenir guide book and held displays at various community events.

Darwin

Junior Rangers spent June discovering the effects fire has on the Top End environment. Members discovered which plants are adapted to fires, the different ways they are adapted and then burnt small fuel loads to test out how well plants from different habitats would burn. Science and technology were the order of the day when members learnt about remote sensing, viewed satellite images, made their own fire action plan and also learnt scientific techniques for sampling burnt and unburnt areas for evidence of flora and fauna.

Our Bushfire officers were also on hand to talk to the Junior Rangers about their job, the equipment they use and the kinds of fires they deal with. Members were able to each use the fire hose and watch how the incendiary capsules (used when conducting aerial burns) fizz and ignite to start fires.

Members focused on some of our special Territorians in July. Junior Rangers encountered mosquitoes under the microscope, amphibians in our parks, the secret lives of dragonflies and made a take home dragonfly model. Members also boarded the crocodile capture boat 'Porosus', handled croc catching equipment, discovered how crocodile traps work and became part of the food-chain in the croc caper game. Upcoming activities will see our Top End Junior Rangers becoming involved in a variety of coastal and weather activities.

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 design and layout are by Big Picture Graphic Art. The front cover was drawn by Robbie Henderson. Illustrations in this edition are by James Carter, Bob and Kaye Kessing, Ralph Miller, Andrew Saunders, Robert Walter and Bob Whiteford.

The Alice Springs Desert Park also has a number of volunteers who assist in the operation of the park from administration to fund raising to collecting seeds or tending to animals.

The community can also become involved through the volunteers program where you can choose which area of the Commission you would like to assist in. Projects that volunteers have undertaken over the last year have included biological studies in Finke Gorge National Park, assisting Park Rangers in general park management activities such as the 900 hours of volunteer work at Gregory National Park, monitoring Gouldian Finch populations, studying the impact of fire on cycad populations, visitor surveys and much much more.

The assistance of volunteers is invaluable in undertaking on ground environmental Commission projects.

For further information on how to become involved with the Volunteers Program contact Pam Wickham, Volunteer Coordinator for the Territory on 8988 8188.

Alice Springs

The Alice Springs Desert Park welcomed a special new resident early in the New Year – a hand reared Mala, or Rufous Hare-wallaby. Soon it will join other Malas in the Park's Nocturnal House. Malas are one of the world's most endangered animals.

The young Mala was ejected from her mother's pouch last May in the remote Tanami Desert. The Parks and Wildlife Commission's Mala Project officer, Don Langford found this little bundle of fur beside a service track. Thinking the Mala was dead, Don brought her back to Alice Springs, to send on to the NT Museum. He placed the little bundle of fur onto a block of ice, thinking it would prevent it from 'going off'. She was in such bad condition that she fooled someone who has worked with her kind for 18 years.

However, after returning to Alice Springs, the bag containing the young Mala 'squirmed' when Don picked it up. She was then handed over to Denise Bryan, a Wildlife Carer. Committed to looking after orphaned and injured animals, the little Mala couldn't ask for a better Mum.

After weeks of intensive care, special wallaby formula, a hot water bottle and plenty of cuddles, the little Mala recovered and even put on weight.

Now more than six months later, she is set to join her mates at the Desert Park, where the keepers can slowly introduce her to other Mala. Soon, visitors to the nocturnal house can see this brave little desert survivor.

Katherine

It's the school holidays and in Katherine we are experiencing some beautiful dry season weather which is cool and fresh. The cool weather has everyone making the most of it, especially Junior Rangers. Junior Rangers have been doing lots of environmental activities learning more about 'saving the environment' through contact with our amazing National Parks. Junior Rangers are finding out the true roles National Parks have in saving the environment, offering visitors recreational activities and nature appreciation opportunities.

Learning about our National Parks has included visits to Edith Falls and Nitmiluk National Park. Then the fun starts because all Junior Rangers have to find out as much as they can by only using the interpretive information that is supplied in the particular Park being visited. To do this effectively all Junior Rangers are to act and ask questions as if they were overseas visitors to the Northern Territory. Through this activity, not only do Junior Rangers learn how to use Parks facilities to their best advantage, they also learn why Parks are designed a particular way to make the best use of the main park features which are the natural ones such as waterfalls. Junior Rangers have also been doing art (yep, painting) so that they can tell others through picture messages about how nice our National Parks are.

Junior Rangers have also been learning about our native wildlife. Activities have included spotlighting in the hills, animal trapping and we have returned to building our Junior Ranger pond. More hands were made available for the pond activity because the YMCA children joined us. The pond activity had Junior Rangers weeding all the unwanted plants from the site and cleaning up the shore and landscaping the area, as well as adding native plants to the pond bank. We are very happy to report that the aquatic plants that we added to the pond during earlier activities are actually growing. Plus we keep finding more and more wildlife finding their way to the pond, so it will not be long before the area will start to behave like a real wetland billabong.

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