

Hattah-Kulkyne National Park

Wildlife Detective Activity Book



WELCOME

The activities in the Wildlife Detective book are designed for primary school-aged children.

Children are encouraged to pick and choose the activities in the book that interest them.



Become a wildlife detective

Welcome to Hattah-Kulkyne National Park!! Join Kalan the Kangaroo and become a Wildlife Detective to learn more about environmental watering at the Hattah Lakes. When you have completed at least six activities in this book, email your checklist on page 27 to the Mallee Catchment Management Authority to receive your 'Wildlife Detective' head torch and participation certificate!



Email:
reception@malleecma.com.au

This book belongs to:

Date of your visit to HKNP:

The activities can be easier and fun to do with an adult so feel free to share your book and get started on your first challenge! Have fun!!

*Please note, head torches will be sent to the first 450 participants.

Introducing Hattah-Kulkyne National Park

The 48,000 ha Hattah-Kulkyne National Park and adjoining Murray-Kulkyne Park are located in north-west Victoria on the banks of the Murray River between Robinvale and Mildura, Victoria. The Park Office is approximately 75km south of Mildura and 450km north-west of Melbourne.

The two Parks together contain 13,000 ha of lakes and floodplain, which are called 'The Hattah Lakes'. There are 20 freshwater lakes at Hattah, ranging in size from small (10 ha or roughly eight Aussie rules football ovals) to huge (200ha) lakes - the equivalent of 80 Melbourne Cricket Grounds (MCGs)!!



The importance of the Hattah Lakes

Hattah-Kulkyne National Park is an inspiring place that needs to be cared for by amazing people like you. The Hattah Lakes have many important environmental, social, cultural and economic values and because of these, the Hattah Lakes was selected as one of six 'The Living Murray' (TLM) Icon Sites within the Murray Darling Basin. The Hattah Lakes provide habitat (homes) for many native and threatened plants and animals and act as a critical refuge for waterbirds during times of drought when the landscape is dry.

The Hattah Lakes are extremely important to the local Indigenous (aboriginal) community with more than 1,000 indigenous archaeological sites registered. These include burial sites, scarred trees, shell middens, artefact scatters and hearths. In the mid 1800s, three grazing stations were set up across Hattah-Kulkyne National Park by the early European settlers. Forestry practice occurred in the early 1900s and the initial Hattah Lakes National Park was established in 1960.

IMPORTANT WORDS:

Archaeological site:

A place that shows past human activity and has been preserved (maintained in its existing state).

Drought: *A long period of time without natural rainfall.*

Habitat: *The natural environment where plants and animals live and can find food, shelter and mates.*

Refuge: *Shelter or protection; a place of safety.*



Pied Cormorants nesting at Hattah-Kulkyne National Park



Aboriginal Scarred Tree where the bark has been removed for a canoe.

Introducing Hattah-Kulkyne National Park

Did you know....In 1981, Hattah-Kulkyne National Park and Murray-Kulkyne Park were named a biosphere reserve because of their significant natural values and twelve of the Hattah Lakes are listed as internationally important under the Ramsar Convention because of their valuable waterbird habitat and biodiversity values.

Today, thousands of visitors explore Hattah-Kulkyne National Park every year to enjoy camping, bushwalking, birdwatching, swimming, kayaking and canoeing. This number of visitors increases when there is water in the lakes.

Remember when you visit the park:

- Leave only footprints, take only pictures and memories.
- Let animals find their own food, do not feed them.
- Don't pick the plants, they provide food and shelter for animals.
- Place rubbish in the bins provided in campsites and picnic areas.



IMPORTANT WORDS:

Biodiversity: the variety of all life forms on earth - the different plants, animals and micro-organisms which form a particular ecosystem.

Biosphere Reserve: important areas on a world scale for their interesting landscapes, plants and animals and the way they have been used by people.

Ecosystem: is a community of living and non-living things that work together.

Threatened species: any living thing which is declining in numbers and at risk of becoming extinct.



Environmental watering of the Hattah Lakes

Despite their beauty, the Hattah Lakes and surrounding environment have over a long period of time become unhealthy due to regulation of the Murray River. The locks and weirs control how much water can flow downstream and we take large volumes of water from the River to use in our homes and for agriculture. Because of this, the Hattah Lakes and surrounding floodplain don't fill up as often or stay wet for as long as they would have naturally before European settlement.

Therefore many of the big River Red Gum trees that require regular big drinks have become unwell as they start to dry out.

The Black Box trees and other floodplain plants further from the water's edge are receiving even less water so they too are becoming dry and unhealthy. If the trees around the lakes and floodplain of Hattah are dying due to lack of water, the animals that rely on these plants for their food and homes will also either die or have to move away from the area.

How can we help?..... environmental watering!

Scientists, Catchment Management Authorities and managers of the Murray River and National Parks came together and decided that environmental watering was needed - water was to be pumped from the Murray River into the Chalka Creek (which connects the Hattah Lakes to the Murray River) and allow the water to flow into the twelve Hattah lakes that are Wetlands of International Importance under the Ramsar Convention.





How does environmental watering work?

Lots of construction occurred: A big pump station was built on the Murray River between Chalka Creek and Messenger's Bend, along with stop banks and four regulators (which can stop or allow water to flow through) at Oatey's Creek, Cantala Creek, Messenger's Bend and Kramen Creek.

Water from the River is pumped through the pump station, into Chalka Creek and into the lakes (depending on which regulators are opened and closed and how much water is pumped out of the River).

The regulators can hold water in the lakes to increase the benefits of environmental watering events.

Why do we need environmental water?

The benefits environmental watering provides the Hattah-Kulkyne National Park are:

- River Red Gum and Black Box trees and floodplain plants have the water they need to drink;
- Wetland and floodplain trees and plants remain healthy and continue to provide food and habitat to native animals;
- Native animals are more likely to live at Hattah because they have better access to water for drinking and breeding, and better access to food and habitat.
- We all get to enjoy the benefits environmental watering provides Hattah!

KEY MESSAGE:

Where there is healthy water, there are healthy plants and animals!



Sick River Red Gum Trees in 2005

Fresh new leaves after environmental watering in 2007

What have you discovered?

Where have you been in Hattah-Kulkyne National Park? Tick the boxes showing the places you have visited on the map. If you have visited a place that is not on the map, please write or draw it in the box below.

I have also visited:



I have visited:

Visitor Information Centre

Camp ground

Picnic Area

Chalka Creek

Lake Little Hattah

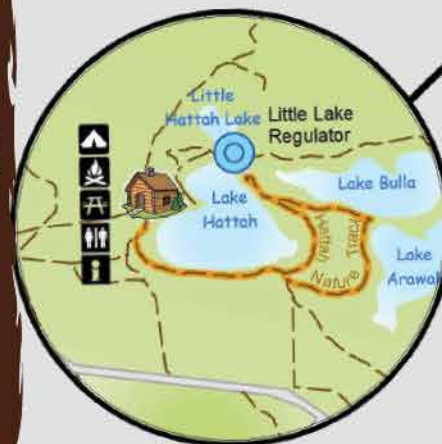
Pump Station

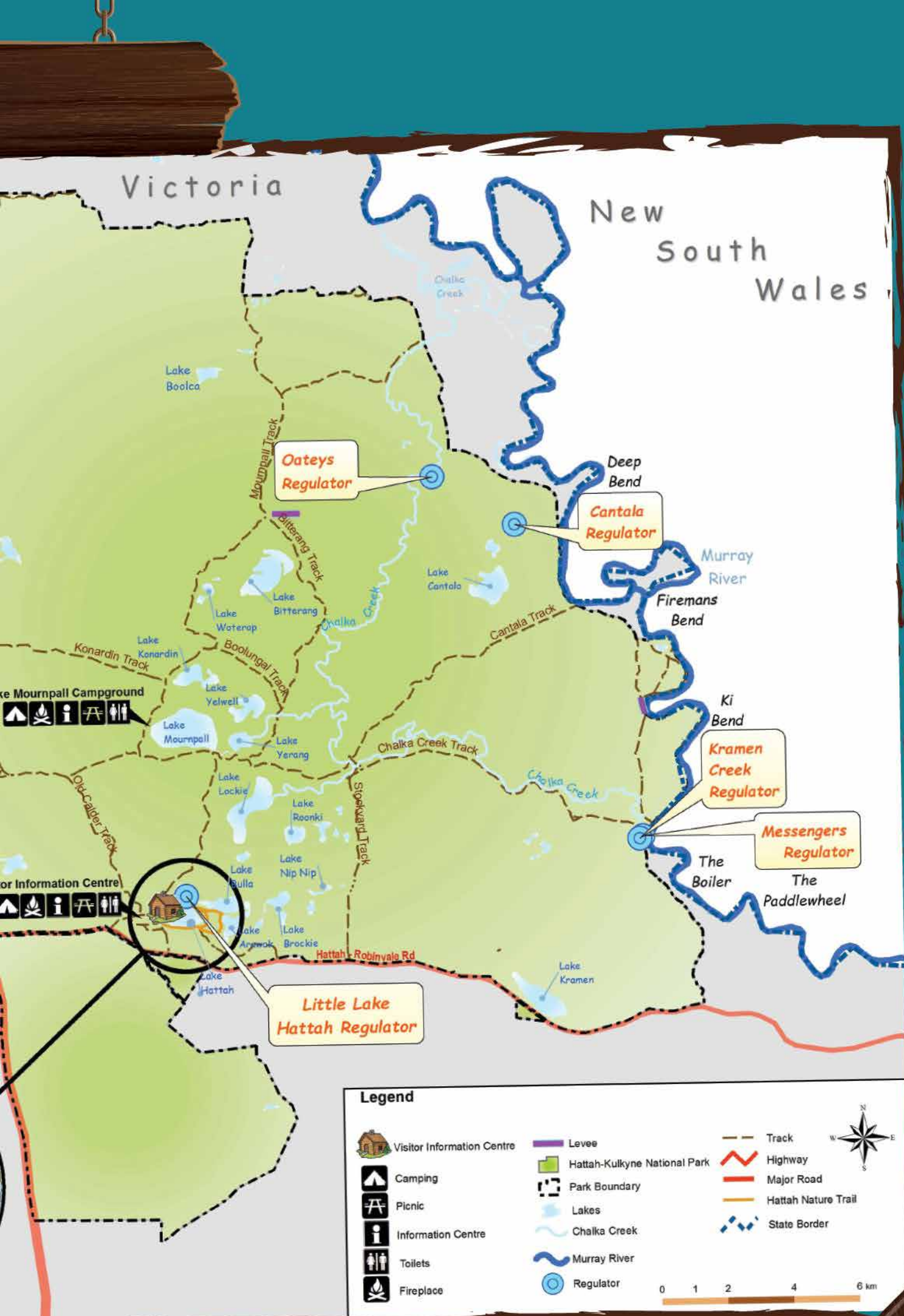
Murray River

Regulator

Did you know?

Lace monitors (also known as a tree goanna) are the second largest monitor in Australia after the Perentie and grow up to 2m. They have strong claws and powerful legs used for digging and climbing and have a long forked tongue like a snake. Monitors are predators and scavengers eating insects, small mammals, lizards, nestling birds, eggs and carrion. They are considered endangered in Victoria due to habitat loss. In the warmer months, Lace monitors can often be spotted climbing the large River Red Gum trees around the Hattah Lakes in search of nestlings (baby birds), bird eggs and other food items.





Wildlife watch

Native (the good)

Place a tick against the animals you have seen. 

Butterfly



Frog



Goanna



Snake



Regent Parrot



Pelican



Photo credits for native animals:
Hayden Cannon (Ogyris butterfly)
Alex Holmes (Frog, Goanna, Snake,
Regent Parrot and White-bellied Sea-Eagle)
Mallee CMA (Pelican and Darter)

All native wildlife deserves our respect. View animals from a safe distance and be watchful in the warmer months for reptiles becoming active. Some snakes are venomous and should be left alone at all times. Please tell an adult if you see a snake and make sure you stay well away from it.

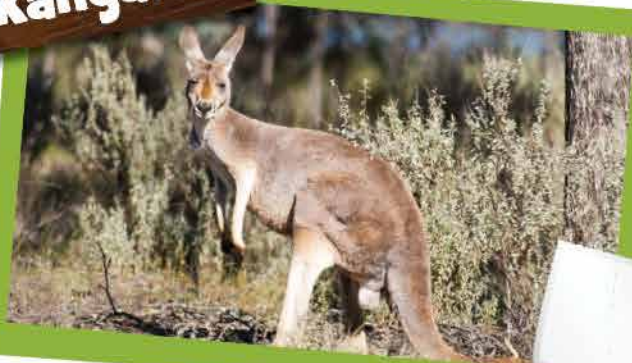
Darter



Emu



Kangaroo



White-bellied Sea-Eagle



v's introduced (the bad)

Did you know that not all animals at Hattah-Kulkyne National Park are native to Australia? Some animals like foxes, cats and rabbits were introduced to Australia by European settlers.

Introduced animals are bad for Australia as they can kill our native animals, compete with our native animals for food and shelter and eat our native plants so that they are no longer present in an area, causing soil erosion and weeds to grow in their place.

Photo credit: Ben Herman (Fox).

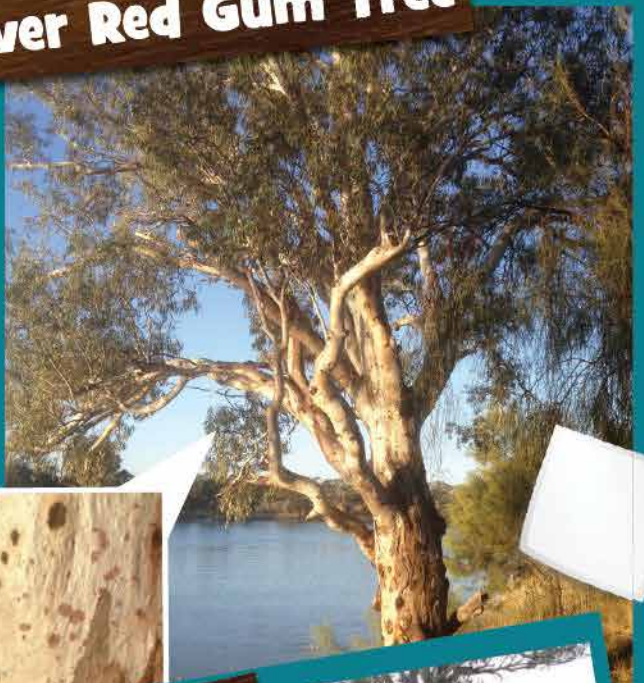


Flora finder

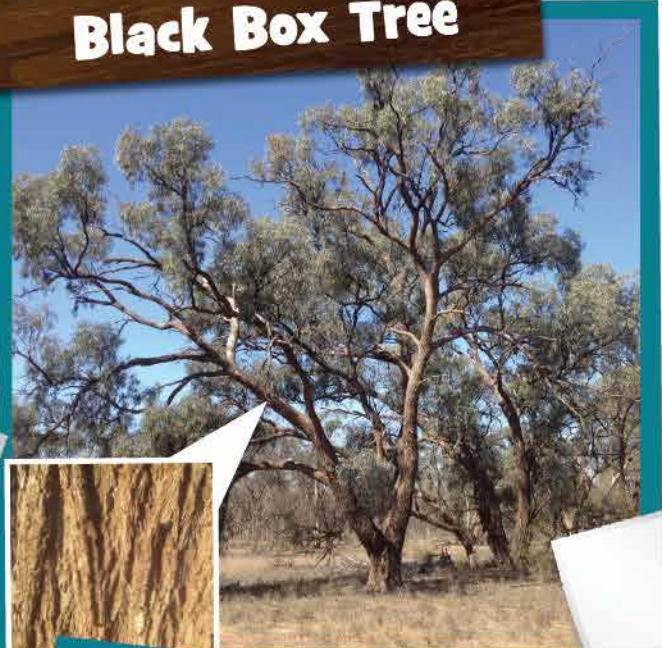
Place a tick against the plants you have seen.



River Red Gum Tree



Black Box Tree



Cumbungi



Lignum

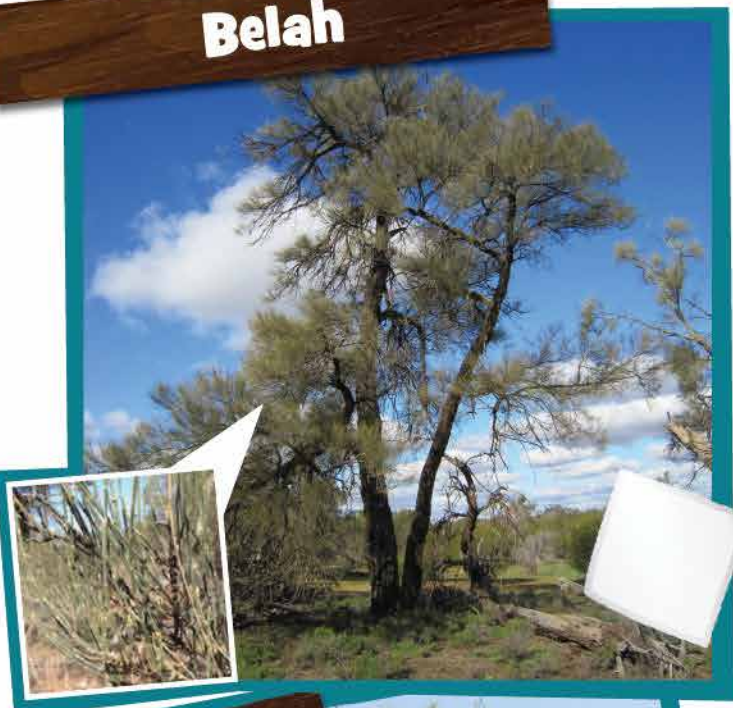


Lily

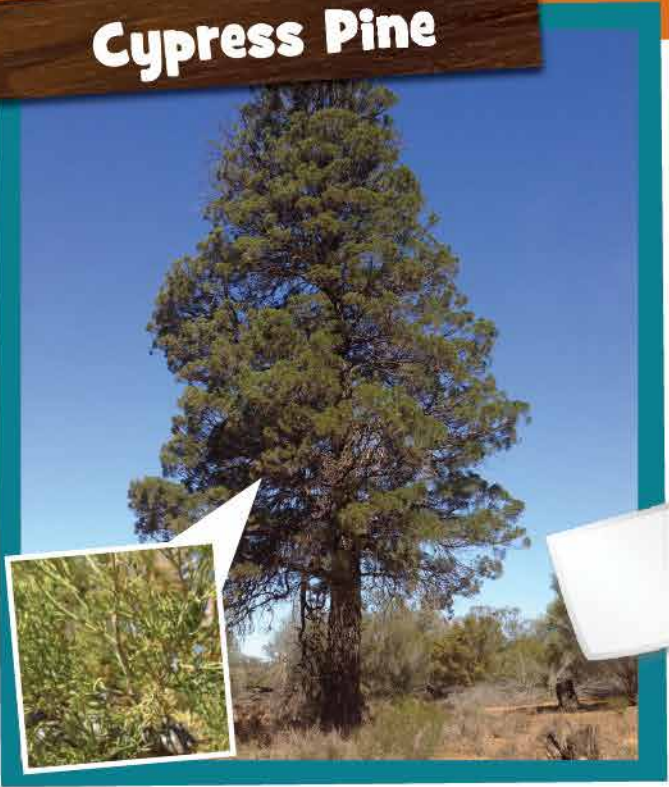


You may notice as you travel through Hattah-Kulkyne National Park that some of these species of plants are only found in floodplain areas that receive water, while others are found on higher sandy areas of the park. Can you circle which plants will benefit most from environmental watering?

Belah



Cypress Pine



Hopbush



Saltbush

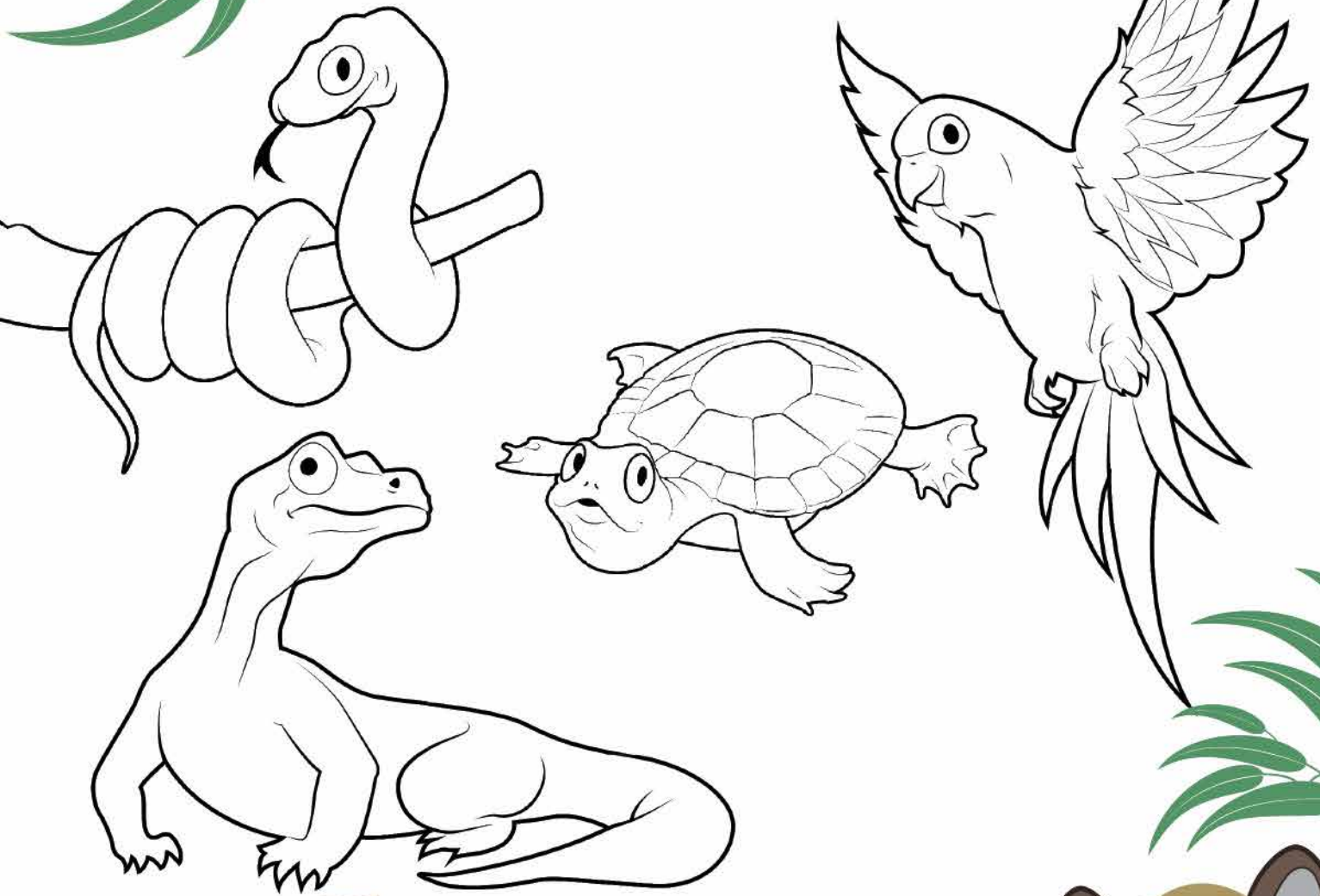


Mallee Tree



Photo Credit:
Zoe Jellie (Cumbungi, Lignum,
Hopbush insert and Mallee Tree)
Fiona Murdoch (Lily)
Mallee CMA (Hopbush)
Sarah Holmes (River Red Gum
Tree, Black Box Tree, Belah,
Cypress Pine, and Saltbush)

Colouring crazy critters



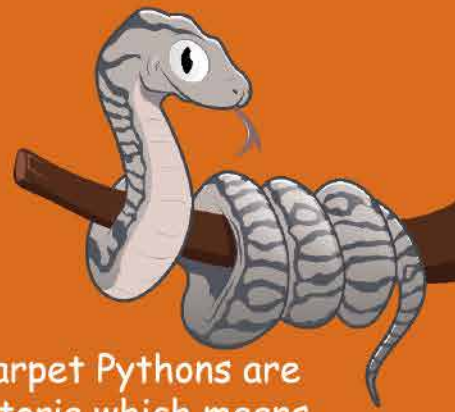
Did you know?

There are over 300 species of mammals, birds, reptiles, frogs and fish recorded within Hattah-Kulkyne National park. Nearly 60 of these are listed as threatened in Victoria or Nationally. Many of the bird species are migratory and protected under international migratory bird agreements with Japan, China and Korea. You will learn more about a number of these threatened species such as Claudia the Carpet Python, Larry the Lace Monitor, Robbie the Regent Parrot and Tabitha the Eastern Long-necked Turtle throughout this activity book.

Can you colour each of our threatened species in? You may choose to colour them in different colours to what you see in nature! Let your imagination run wild!!



Murray-Darling Carpet Pythons



Pythons are non-venomous snakes from the reptile family, cold-blooded animals that have to bask in the sun to warm their bodies. Murray-Darling Carpet Pythons live in trees and logs with hollows or rocky outcrops with dense bark / leaf litter and shrub cover. This species lives at Hattah-Kulkyne National Park, although are difficult to see because they are nocturnal and often coiled up inside a hollow or under dense shrubs. They feed on small mammals and birds - by first coiling their bodies tightly around their prey to suffocate them and then eat them.

Murray Darling Carpet Pythons are threatened in Victoria which means there are not many remaining in the wild. This is due to loss of habitat - loss of large hollow bearing trees and logs, through predation by foxes and cats and poisoning through rabbit baiting programs.

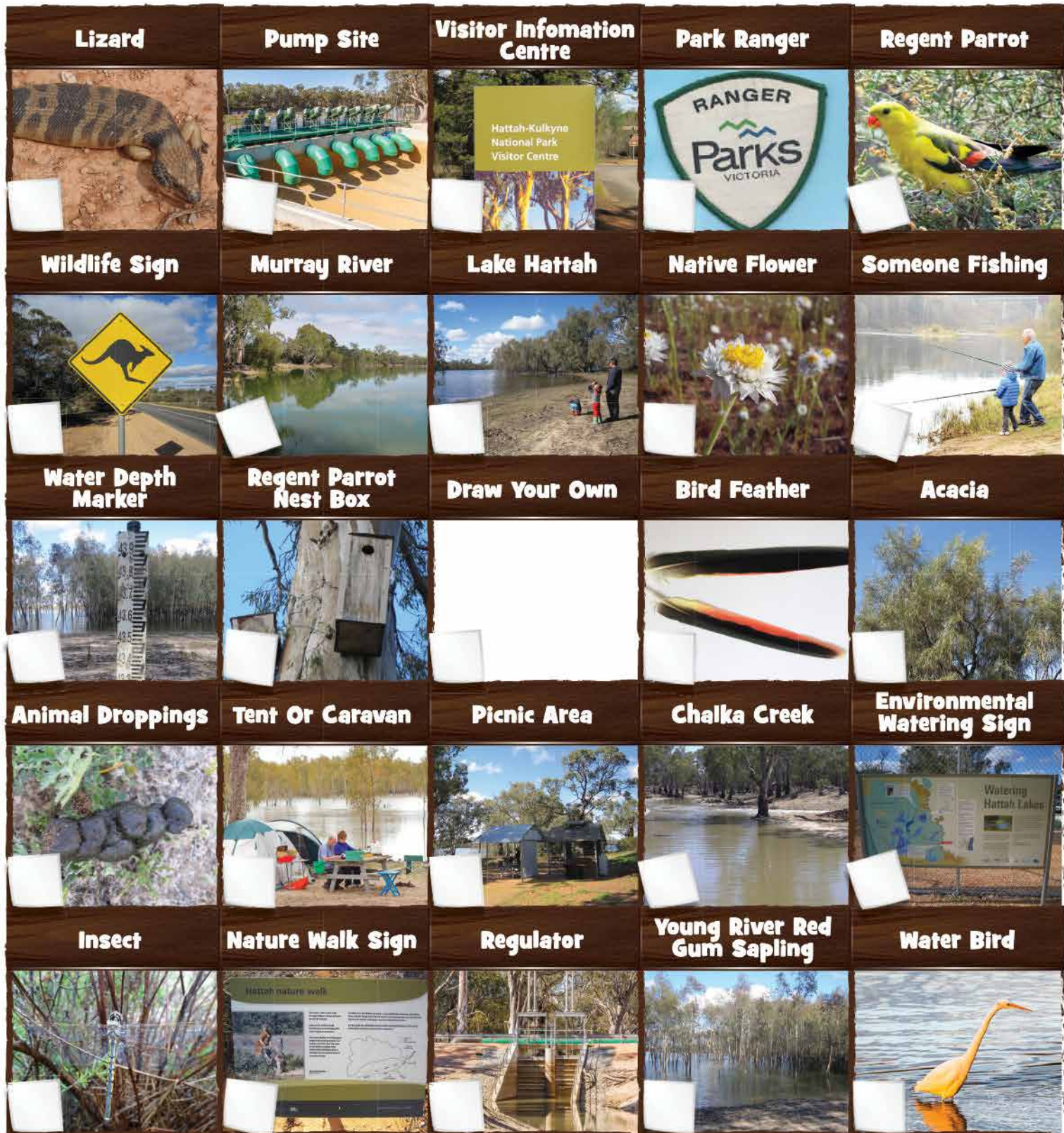
Environmental watering of the Hattah Lakes will help to improve the health of River Red Gum, Black Box trees and floodplain vegetation where the Carpet Python lives. This in turn will provide habitat for other animals which the Carpet Pythons feeds on.

Photo Credit: Geoff Heard



Scavenger hunt bingo

Go on a scavenger hunt in Hattah-Kulkyne National Park. Look out for (but don't collect), the items in the boxes below. Remember to leave all plants and animals where you find them. Place an "X" on each of the items you find. Find five in a row either down, across or diagonally in order to complete this activity. Good luck!....Can you find them all?



Please see photo credits on page 26.

A-maze-ing discoveries

Did you know?

Turtles are reptiles that carry their home (their shell) on their back. They can tuck their head, legs and tail into their shell to escape from predators. There are three species of freshwater turtle found at Hattah-Kulkyne National Park - the Eastern Long-necked Turtle, Broad-shelled Turtle (also a long-necked turtle) and Murray River Turtle (a short-necked turtle). The Broad-shelled Turtle and Murray River Turtle are threatened in Victoria due mainly to predation of eggs from foxes and wild pigs.

Turtles feed on invertebrates such as worms, snails and insect larvae (including mosquitoes), shrimps and yabbies, while some turtles prefer algae and water plants. The environmental watering at the Hattah Lakes will help to increase numbers of freshwater turtles by improving breeding habitat and providing better access to food.

Help Tabitha the Turtle find her way over the turtle passage (a series of smooth, smaller rocks which are easier to walk over) at Messenger's Regulator down the Chalka Creek and into the Hattah Lakes.



Tracks and other traces

Did you know that there are many ways to identify animals.....we can do it without actually seeing them! We can identify animals by:

- Seeing the tracks their feet make in the sand and dirt;
- Hearing their calls nearby or in the distance;
- Seeing traces of the animal i.e. their scats (droppings), animal parts such as feathers, or fur left behind or bones from skeletal remains of animals that have passed away.
- Scratches in the ground or on trees where a particular animal has been scratching/digging to find food - i.e. echidnas dig in the ground looking for ants to eat.

Can you match the animal on the left with their tracks or traces on the right? Join a line linking the two together. Tick the box on the left if you have spotted either the animal or its tracks/remains while visiting Hattah-Kulkyne National Park.



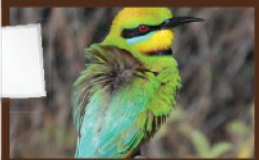
Kangaroo



Emu



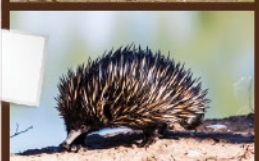
Carpet Python



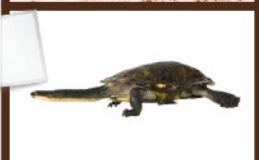
Rainbow Bee-eater



Human



Echidna



Freshwater Turtle



a)



b)



c)



d)



e)

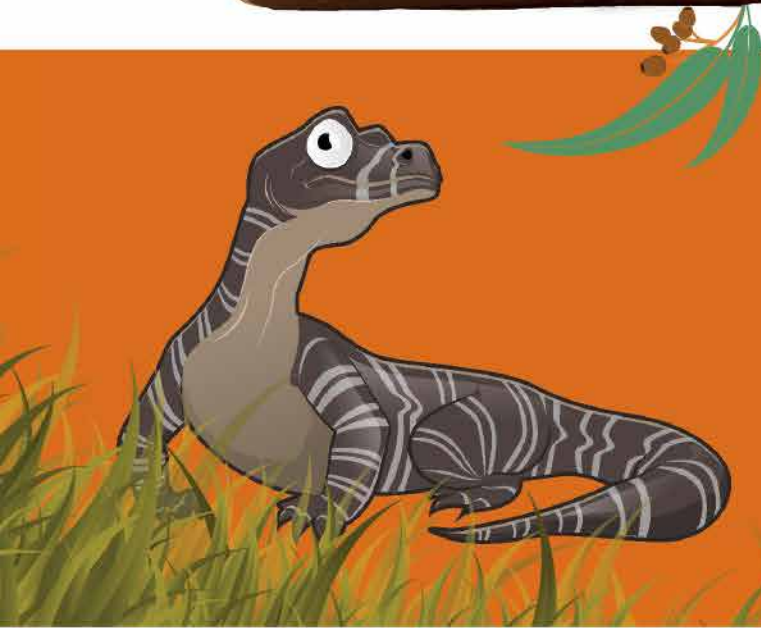


f)



g)

Lake reflections



Find a nice spot overlooking one of the Hattah Lakes. Which lake was your favourite? Did the lake have water in it?

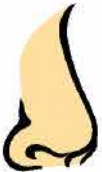
Do you know if the lake had received environmental water? Draw a picture of your favourite lake in the box.....if you want to, include yourself in the picture! List some of your discoveries below:



Two things I saw: _____



Two things I heard: _____



Two things I smelled: _____



Two things I touched: _____

Draw a picture of your favourite lake in the box

Regent Parrots



Regent Parrots are a Nationally threatened bird (listed under the Environment Protection and Biodiversity Conservation Act 1999 as vulnerable) with very few remaining only in one small area where the three states of Vic, SA and NSW meet. Regent Parrots are a medium-sized, fast flying, yellow (male) or olive green (female) parrot with contrasting blue-black (male) or blue-green (female) wings and tail and red markings on their wings.

They nest in the hollows of River Red Gum trees and need vegetation corridors (a continuous stretch of wildlife habitat) to fly between their breeding sites near the Murray River and inland feeding ground to escape predators.

Regent Parrot numbers have reduced due to:

- Clearing of habitat (nesting and feeding sites).
- Competition from other animals for nest hollows.
- Loss of vegetation corridors between breeding and feeding habitats.
- Road kills and poisoning.
- Human disturbance around nesting sites.

Did you know?

As part of the Hattah Lakes environmental watering project, Regent Parrot nest boxes were placed on a number of River Red Gum trees close to the Pump Site on the Murray River to increase the number of nesting sites for breeding birds. See if you can spot them! Can you see birds using the nest boxes (usually occurs in spring)?



Photo Credit: Alex Holmes



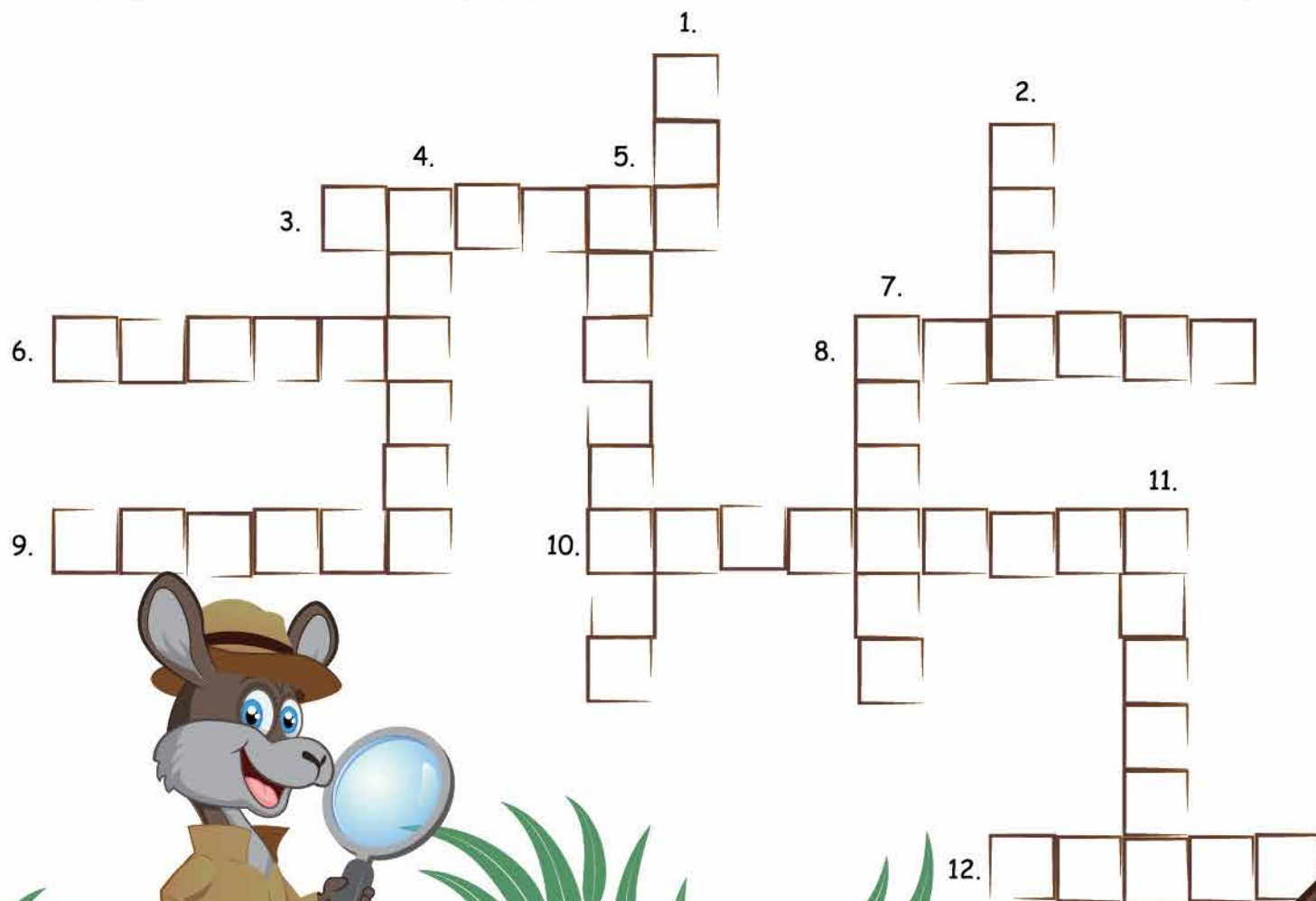
Wonderful watering

DOWN

1. The Authority who coordinated the environmental works at Hattah-Kulkyne National Park in partnership with other key Agencies was the Mallee _ _ _.
2. How many regulators have been installed as part of the Hattah Lakes environmental watering project?
4. The name of the main lake near the visitor information centre.
5. The name of the largest marsupial found at Hattah-Kulkyne National Park.
7. The number of lakes at Hattah-Kulkyne National Park listed as Wetlands of International Importance under the Ramsar convention.
11. The large Eucalyptus trees around the Lakes and along the Murray River that will benefit from the environmental watering.

ACROSS

3. The name of the major Creek joining the Murray River to the Hattah Lakes.
6. The Nationally threatened parrot species found at Hattah.
8. An animal that will benefit from the environmental watering that carries its home on its back.
9. The main purpose of delivering environmental water to the Hattah Lakes is to improve the _ _ _ _ _ of the floodplain ecosystems.
10. These structures help to control which lakes receive environmental water after it is pumped from the Murray River and into Chalka Creek.
12. This structure is used to take water from the Murray River and into the Chalka Creek.



Healthy ecosystems

An **ecosystem** is a community of living things interacting with the nonliving parts of the environment (things like air, water, soil etc) as a system. In general, if one part of the ecosystem is unhealthy, it can affect the overall health of the ecosystem because they all interact together. For example, if there isn't enough water in the Hattah Lakes, the plants around the lakes may become sick and even die and therefore can't provide food, habitat and shelter for the animals that rely on them.

The animals may then either move away from the Hattah Lakes or become sick themselves. Therefore if the Hattah Lakes don't receive enough water, the ecosystem becomes very unhealthy.

Imagine you are a big River Red Gum tree on the edge of Lake Hattah. In the space below, write your responses and/or draw pictures in relation to the following questions:

Your roots haven't received a drink in a very long time. How are you feeling? Can you draw a picture of what you might look like?

What happens to the surrounding plants and animals around you after the Lakes receive environmental water?

The Mallee CMA turn on the pumps at the Murray River and water flows through Chalka Creek into Lake Hattah! You have a long awaited drink!!.....How do you feel now?

Can you draw a picture of you (the big gum tree) at Lake Hattah after receiving environmental water? Think about the health of the plants and animals in and around the lake. What animals would you see?

Whacky watering word-find

There are 20 environmental watering words hidden in the water of Lake Mournpall.
Can you help Percy the pelican find them all?
Words can be found forwards, backwards and diagonally!



BIODIVERSITY
BLACK BOX
BREEDING
CARPET PYTHON
CHALKA CREEK
ECOSYSTEM
ENVIRONMENTAL WATER
FLOW
FROG
HATTAH KULKYNE

HEALTH
LAKE HATTAH
MEGALITRES
MESSENGERS
MURRAY RIVER
PUMPS
REGENT PARROT
REGULATOR
RIVER RED GUM
TURTLE

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

Habitat detective



Did you know that the place where animals live is called habitat? A good habitat will provide an animal with food, water, shelter and space to move. While you are in Hattah-Kulkyne National Park, look for good habitat for floodplain animals (animals that live near water).

Food:

Home:

Animals:

The environmental watering activities at the Hattah Lakes help to improve the health of and the amount of habitat available to plants and animals.

KEY MESSAGE:

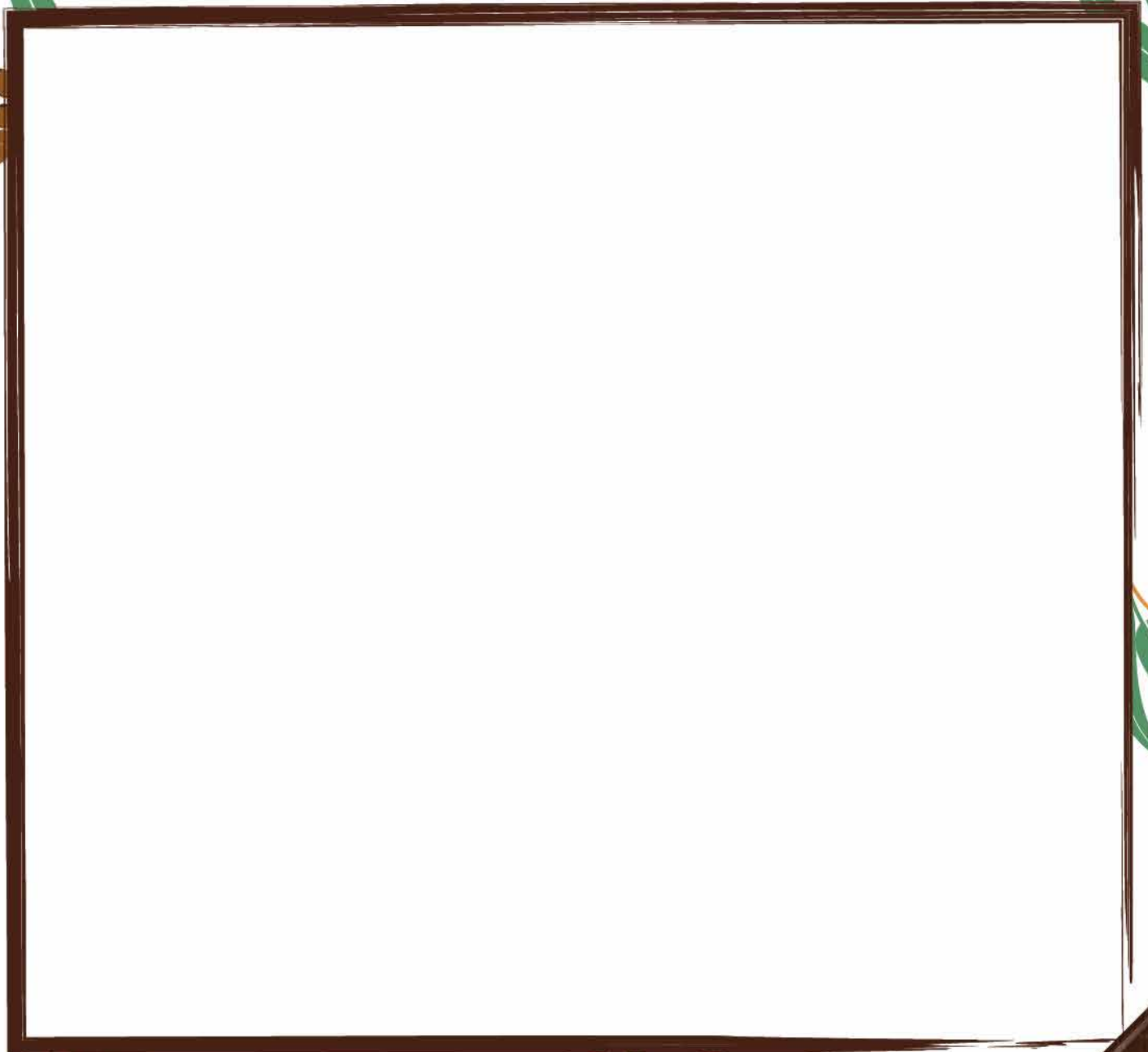
Environmental water = healthy ecosystems
= healthy habitat = healthy plants and animals
= healthy Hattah-Kulkyne National Park!!

Nature sketchbook

You can be a naturalist! A naturalist is someone who observes things in nature. He or she studies plants, animals, rocks, soils or water to understand them and help protect them. Pretend that you are a naturalist at Hattah-Kulkyne National Park. Find a quiet spot where you can sit and observe the plants and animals around you.

In the space below, draw or write about what you see. Label your drawings if you know the names of what you are looking at.

If you are looking at one of the lakes, draw or make notes about whether the lake has water in it.



Congratulations

Congratulations Wildlife Detectives, you have completed the Hattah-Kulkyne National Park Activity Book.....hope you have had fun!! Please complete the checklist on the next page to receive your participation certificate!!

Photo credit Zoe Jellie
(Flower and Chalka Creek)
and Mallee CMA.

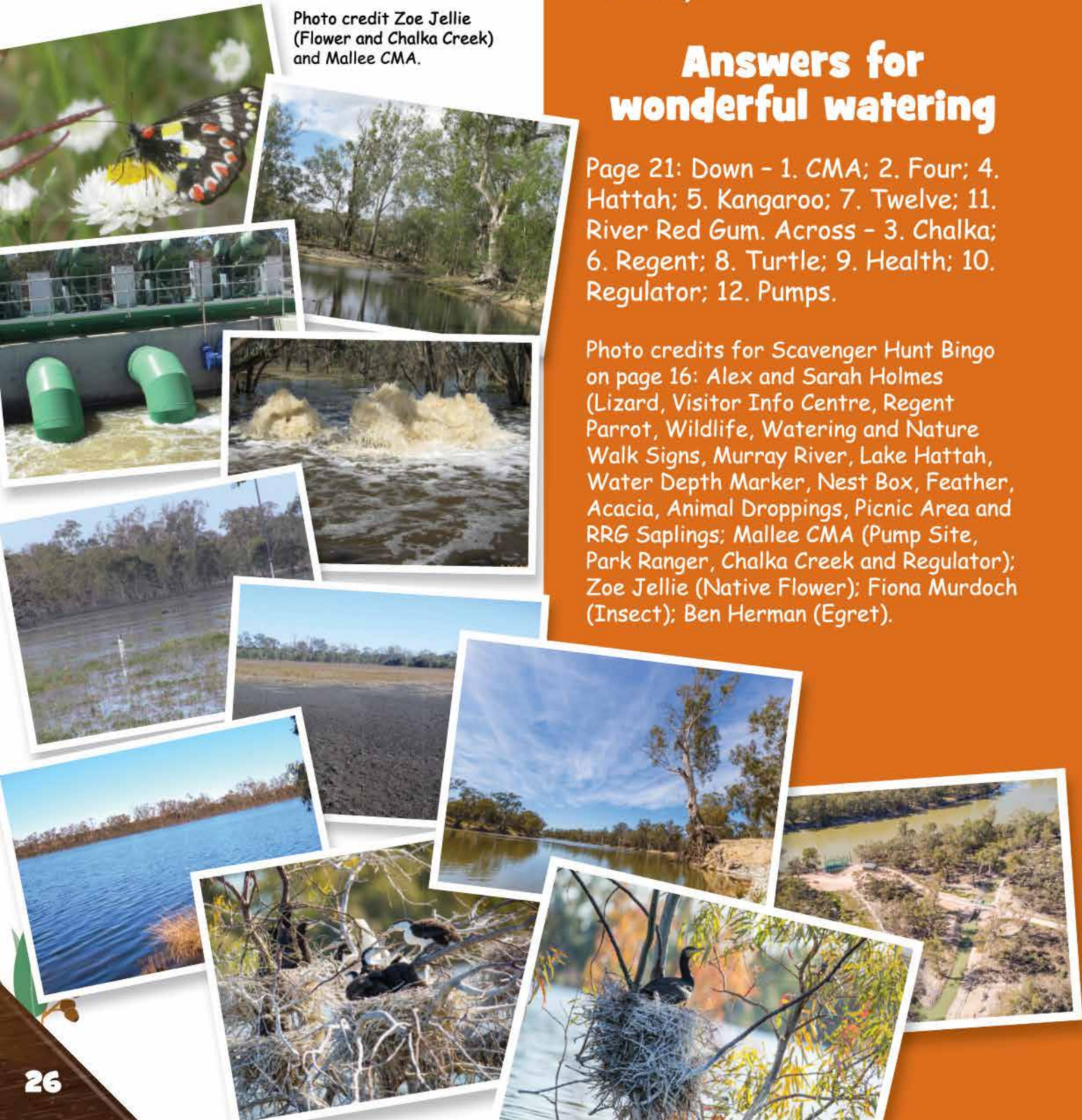
Answers for tracks and other traces

Page 18: Kangaroo g); Emu a); Carpet Python d); Rainbow Bee-eater f); Human c); Echidna b); Freshwater Turtle e).

Answers for wonderful watering

Page 21: Down - 1. CMA; 2. Four; 4. Hattah; 5. Kangaroo; 7. Twelve; 11. River Red Gum. Across - 3. Chalka; 6. Regent; 8. Turtle; 9. Health; 10. Regulator; 12. Pumps.

Photo credits for Scavenger Hunt Bingo on page 16: Alex and Sarah Holmes (Lizard, Visitor Info Centre, Regent Parrot, Wildlife, Watering and Nature Walk Signs, Murray River, Lake Hattah, Water Depth Marker, Nest Box, Feather, Acacia, Animal Droppings, Picnic Area and RRG Saplings; Mallee CMA (Pump Site, Park Ranger, Chalka Creek and Regulator); Zoe Jellie (Native Flower); Fiona Murdoch (Insect); Ben Herman (Egret).



Wildlife Detective Activity Book checklist and comments page

Can you help us out? Please complete this page and email your responses to the Mallee Catchment Management Authority to receive your 'Wildlife Detective' head torch and participation certificate!! Please note, head torches are sent to the first 450 participants.



Mallee Catchment Management Authority
Email: reception@malleecma.com.au

1. While completing your Wildlife Detective Activity Book, was it
(circle your answer):

Awesome fun

Fun

Ok

Not much fun

Boooooorrrinnng



2. Were the activities (circle your answer):

Easy

Just Right

Too Hard



3. Which activities did you complete?

(Tick the boxes against the activities you completed)

- Which 3 activities did you like best? (Circle your answers)

- Which 3 activities did you like least? (Place a big X through them)

- | | | |
|---|--|--|
| <input type="checkbox"/> What have you Discovered | <input type="checkbox"/> A-Maze-ing Discoveries | <input type="checkbox"/> Healthy Ecosystems |
| <input type="checkbox"/> Wildlife Watch | <input type="checkbox"/> Tracks and Other Traces | <input type="checkbox"/> Whacky Watering Word Find |
| <input type="checkbox"/> Flora Finder | <input type="checkbox"/> Lake Reflections | <input type="checkbox"/> Hunting for Habitat |
| <input type="checkbox"/> Colouring Crazy Critters | <input type="checkbox"/> Wonderful Watering | <input type="checkbox"/> Nature Sketchbook |
| <input type="checkbox"/> Scavenger Hunt Bingo | | |

4. How old are you? (Tick the box)

- ☐ Between 4 - 5 ☐ Between 6 - 7 ☐ Between 8 - 9 ☐ Between 10 - 12

5. Did this activity book help you learn more about environmental watering at Hattah-Kulkyne National Park?

- ☐ Yes ☐ No

Thank you for visiting Hattah-Kulkyne National Park and learning about environmental watering



mallee
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