

Acknowledgements:

The idea of Mac Koala Club was envisaged in 1995 by Steven Ward and Robert Close from Western Sydney University and Jeff McGill, the editor of the Macarthur Advertiser. Jeff supported the project whole-heartedly throughout its 18 year life and deserves great credit for its success.

The project was planned as a way to involve the Campbelltown—Macarthur residents in contributing to a scientific project by reporting koala sightings in an area where koalas are relatively scarce and difficult to find and study. Once found and ear-tagged, the koalas could be studied when the community reported sightings. Mac Koala Club columns then allowed feedback to the community on the koalas' movements and life histories, and provided updates on the koala research. The columns involved the wider community with koalas and the unique bushland environment which borders the eastern edge of Campbelltown.

For the next 18 years (1995 to 2013), articles were written by Robert Close, Steven Ward and Tristan Lee. These stories convey scientific research in a way that everyone could follow. The articles included the life histories of generations of koalas living in the Campbelltown area. Starting with Molly's story and ending with St Helen, readers of the Macarthur Advertiser followed the Mac Koala Club column each week. In the early years, young members had their birthday wishes from Mac Koala printed in the column. However, not all columns featured koalas. For example, the first two official records of platypuses in the Georges River were reported on the Mac Koala Club hot-line and details were provided in the next Mac Koala Club columns.

Several people were involved in the making of this four volume set and they deserve credit for their dedication in storing, collating and indexing the columns: Thelma Bourke, Verlie Fowler, Georgia Close and the Campbelltown Library Staff especially Claire Lynch and Andrew Allen.

We don't know what the future of Campbelltown's koalas will be. The eventual arrival of the disease, chlamydia, is likely to have a major effect on them as will clearing of bushland. These columns, presented in the four volume set will allow historians, researchers, students and interested community members to picture the Campbelltown koalas at a time when their numbers and distribution were increasing.

Dedication:

This four volume set of Mac Koala columns is dedicated to the late Thelma Bourke who collected the columns in the early years and stored them for all of us to enjoy today and in the future.

Stephen J. Fellenberg (Insektus) and Lynette Bowden: Curators and Editors

4th February 2016

Campbelltown's Macarthur Advertiser

Mac's Koala Club

Volume 1. 1995 –1999



This four (4) volume set of Campbelltown's Macarthur Advertiser Mac's Koala Club was compiled by Lynette Bowden and Stephen Fellenberg. February 2016.

Campbelltown Macarthur Advertiser

Mac's Koala Club

1995-1999

Date	Article Name	Author
29/12/1999	No article	
22/12/1999	Sarah's in top hands	Steven Ward and Robert Close
15/12/1999	Burning matter must be solved	Robert Close and Steven Ward
8/12/1999	Help to preserve our habitat for possums	
1/12/1999	Why do dead animals do tell tales	Steven Ward and Robert Close
24/11/1999	Gary returns	Steven Ward and Robert Close
17/11/1999	Old koalas waste away	Steven Ward and Robert Close
10/11/1999	Martin still going	Steven Ward and Robert Close
3/11/1999	Cat parasite danger	Robert Close and Steven Ward
27/10/1999	Sighted in the suburbs	Steven Ward and Robert Close
20/10/1999	Devotees leaving no leaf unturned	Steven Ward and Robert Close
13/10/1999	Koala film is a big hit	Steven Ward and Robert Close
6/10/1999	Kind couple finance uni video	Steven Ward and Robert Close
29/09/1999	Dan weighs in after travelling	Steven Ward and Robert Close
22/09/1999	Battle in the tree tops	Steven Ward and Robert Close
15/09/1999	Koala crosses line of no return	Robert Close and Steven Ward
8/09/1999	Grant sets a new record	Steven Ward and Robert Close
1/09/1999	To be Frank, he's great	Steven Ward and Robert Close
25/08/1999	An echidna's sad demise	Robert Close and Steven Ward
18/08/1999	Radio collars might help	Steven Ward and Robert Close
11/08/1999	For safe creosuing	Robert Close and Steven Ward
4/08/1999	Noxious weed wildlife threar	Steven Ward and Robert Close
28/07/1999	The shy lyre bird	Steven Ward and Robert Close
21/07/1999	Cottoning on to life	Steven Ward and Robert Close
14/07/1999	Our history is defeated	Steven Ward and Robert Close
7/07/1999	Rare ssquirrel glider	
30/06/1999	The shy koala	
23/06/1999	Owl no hoot for budgie	Steven Ward and Robert Close
16/06/1999	Mac's koala club	
9/06/1999	Too smart for humans	
2/06/1999	Few left: Black is beautiful	Steven Ward and Robert Close
26/05/1999	Terrific owl power	Steven Ward and Robert Close
19/05/1999	Rosier look for koalas	Steven Ward and Robert Close
12/05/1999	One angry koala	
5/05/1999	Vet talks on native pets	Steven Ward and Robert Close
28/04/1999	How a land owner is helping wildlife	Robert Close and Steven Ward
21/04/1999	Book prints our study	
14/04/1999	Death addera a hazaed	
7/04/1999	No article	
31/03/1999	A leafy legacy	Robert Close and Steven Ward
24/03/1999	Scratch, me happy	Steven Ward and Robert Close
17/03/1999	Joe blake goes fill monty when dining	Steven Ward and Robert Close

10/03/1999	Large untagged male spotted	Steven Ward and Robert Close
3/03/1999	Direction finer works	Steven Ward and Robert Close
24/02/1999	Bellows tell a story	Robert Close and Steven Ward
17/02/1999	Bound to be a few surprises	Steven Ward and Robert Close
10/02/1999	Best laid plans often go astray	Steven Ward and Robert Close
3/02/1999	Cute and cuddly puzzle	Steven Ward
27/01/1999	Sarah has cub, both well	Steven Ward
20/01/1999	We cover the plover	Steven Ward and Robert Close
13/01/1999	Wary Eric proves to be a big nipper	Steven Ward and Robert Close
6/01/1999	Another cub for Lyn	Steven Ward and Robert Close

Date	Article Name	Author
30/12/1998	NO ARTICLE IN PAPER	
23/12/1998	Long way to come	Steven Ward and Robert Close
16/12/1998	Caught after fierce struggle	Steven Ward and Robert Close
9/12/1998	Frog a colourful character	Steven Ward and Robert Close
2/12/1998	Kerry's capers	Steven Ward and Robert Close
25/11/1998	Underground life of burrowing frog	Steven Ward and Robert Close
18/11/1998	Hopping for joy at frog find	Steven Ward and Robert Close
11/11/1998	Bold visitor an easy catch	Steven Ward and Robert Close
4/11/1998	Angela's release caught on TV	Steven Ward and Robert Close
28/10/1998	Dan makes great pilgrim's progress	Steven Ward and Robert Close
21/10/1998	Evidence of koala breeding	Steven Ward and Robert Close
14/10/1998	Georges River bushland home to native animals	Steven Ward and Robert Close
7/10/1998	Students examine bushland	Steven Ward and Robert Close
30/09/1998	Koala remains make the life of a biologist	Robert Close and Steven Ward
23/09/1998	Go east, young Dan: it's home	Steven Ward and Robert Close
16/09/1998	Onto the unknown	Steven Ward and Robert Close
9/09/1998	Sighting confirmed	Steven Ward and Robert Close
2/09/1998	Shirl and cub are well	Steven Ward and Robert Close
26/08/1998	Sugar gliders a great sight	Steven Ward and Robert Close
19/08/1998	Jacob's hidden harem	Steven Ward and Robert Close
12/08/1998	Pop along to open day	Steven Ward and Robert Close
5/08/1998	Bulrushes clear water	Steven Ward and Robert Close
29/07/1998	NO ARTICLE IN PAPER	
22/07/1998	Waterways goes to waste	Steven Ward and Robert Close
15/07/1998	Devilish Dan escapades	Steven Ward and Robert Close
8/07/1998	Natura history still in making	Robert Close and Steven Ward
1/07/1998	A fast train a-comin: Furry friends face risk	Steven Ward and Robert Close
24/06/1998	Bush clearing to put bandicoots at risk	Steven Ward and Robert Close
17/06/1998	Sandy joins family	Steven Ward and Robert Close
10/06/1998	Dogs signalled alert for koala in reserve	Steven Ward and Robert Close
3/06/1998	It's your chance to make a difference	Steven Ward and Robert Close
27/05/1998	Another koala road-kill	Steven Ward and Robert Close
20/05/1998	Practice on Roger make a better Alby	Steven Ward and Robert Close
13/05/1998	Tree provides nifty nursery	Steven Ward and Robert Close
6/05/1998	Roger now models for students	Steven Ward and Robert Close
29/04/1998	Water rats: cop a look	Steven Ward and Robert Close
22/04/1998	Breeding puzzle	Steven Ward and Robert Close

15/04/1998	North-south links needed	Steven Ward and Robert Close
8/04/1998	Reunion with Franchesca	Steven Ward and Robert Close
1/04/1998	Alan plays hard to get	Steven Ward and Robert Close
25/03/1998	Appeal to track Kevin	Steven Ward and Robert Close
18/03/1998	A search for some tricks for research	Steven Ward and Robert Close
11/03/1998	What the devil?	Robert Close and Steven Ward
4/03/1998	Dan leads us a merry chase	Steven Ward and Robert Close
25/02/1998	Lyn survives the environs	Steven Ward and Robert Close
18/02/1998	Rover's return	Steven Ward and Robert Close
11/02/1998	Plea for caller on koala to ring again	Steven Ward and Robert Close
4/02/1998	NO ARTICLE IN PAPER	
28/01/1998	Koalas attracted to our native trees	Steven Ward and Robert Close
21/01/1998	Young koalas facing danger	Steven Ward and Robert Close
14/01/1998	Bill survives pawful perils	Steven Ward and Robert Close
7/01/1998	Search on in wake of fires	Steven Ward and Robert Close

Date	Article Name	Author
31/12/1997	No Paper	
24/12/1997	No Paper	
17/12/1997	Glider bullied by cockies	Steven Ward and Robert Close
10/12/1997	Koalas makeus keep our place	Steven Ward and Robert Close
3/12/1997	A new member joins the club	
26/11/1997	Joeys, cubs and babies	Steven Ward and Robert Close
19/11/1997	Koalas on the go lately	Steven Ward and Robert Close
12/11/1997	Koalas or Wombats?	Steven Ward and Robert Close
5/11/1997	Shirley catches on	Steven Ward and Robert Close
29/10/1997	Koala alert in Camden	Steven Ward and Robert Close
22/10/1997	Sad news to report	Steven Ward and Robert Close
15/10/1997	Bush rats aplenty	Steven Ward and Robert Close
8/10/1997	Clues on spotting the elusive koala	Steven Ward and Robert Close
1/10/1997	Best defence is invisibility	Steven Ward and Robert Close
24/09/1997	Jacob's safety ladder	Steven Ward and Robert Close
17/09/1997	Closer than we think	Steven Ward and Robert Close
10/09/1997	Mum and cub safe	Robert Close and Steven Ward
3/09/1997	Enjoy the sight of old brushies	Steven Ward and Robert Close
27/08/1997	Go-ahead for video	Steven Ward and Robert Close
20/08/1997	Steve collared by radio	Steven Ward and Robert Close
13/08/1997	Koala tales tall but true	Steven Ward and Robert Close
6/08/1997	Koala is doing fine	Steven Ward and Robert Close
30/07/1997	Creek koala haunt?	Steven Ward and Robert Close
23/07/1997	Enter a hefty specimen	Steven Ward and Robert Close
16/07/1997	Stuffed, but poor Roger carries on	Steven Ward and Robert Close
9/07/1997	Searching for species	Steven Ward and Robert Close
2/07/1997	How koala Mac died	Steven Ward and Robert Close
25/06/1997	Molly, Gaylene both fit and well	Steven Ward and Robert Close
18/06/1997	Fiesty Kevin in top health	Steven Ward and Robert Close
11/06/1997	Lyn and her cub sighted	Steven Ward and Robert Close
4/06/1997	Young ane failed to survived the night	Steven Ward and Robert Close
28/05/1997	Planes' long term effect	Steven Ward and Robert Close

21/05/1997	A really angry critter!	Steven Ward and Robert Close
14/05/1997	Enter another Olympic mascot	Steven Ward and Robert Close
7/05/1997	Animals come first	Steven Ward and Robert Close
30/04/1997	What do we know about the koala?	Steven Ward and Robert Close
23/04/1997	Please fill in survey form	Steven Ward and Robert Close
16/04/1997	Report koala sightings	Steven Ward and Robert Close
9/04/1997	Echidna in district	Steven Ward and Robert Close
2/04/1997	Called must ring us again to tell more	Steven Ward and Robert Close
26/03/1997	Binoculars and antenna stolen	Steven Ward and Robert Close
19/03/1997	Equipment was stolen	
12/03/1997	Domestic dogs that kill	Robert Close and Steven Ward
5/03/1997	Skulls play role	Steven Ward and Robert Close
26/02/1997	Charting the DNA of koalas' lifestyles	Robert Close and Steven Ward
19/02/1997	Seen a rare wallaby lately?	Steven Ward and Robert Close
12/02/1997	Call for road sign	Steven Ward and Robert Close
5/02/1997	On lookout for potoroos	Steven Ward and Robert Close
29/01/1997	A wallaby from the swamp	Steven Ward and Robert Close
22/01/1997	Hard to spot wallaby	Steven Ward and Robert Close
15/01/1997	Airport threat	Steven Ward and Robert Close
8/01/1997	Facts on bandicoots	Steven Ward and Robert Close
1/01/1997	No Paper	

Date	Article Name	Author
25/12/1996	No paper	
18/12/1996	Time fast running out	Robert Close and Steven Ward
11/12/1996	Molly's now a mum	Steven Ward and Robert Close
4/12/1996	Mac was too smart and slipped his collar	Steven Ward and Robert Close
27/11/1996	Bill's classy eartags	Steven Ward and Robert Close
20/11/1996	Louts in a low act	Steven Ward and Robert Close
13/11/1996	Enter the quoll: long may it stay	Steven Ward and Robert Close
6/11/1996	Lyn was collared- but only briefly	Steven Ward and Robert Close
30/10/1996	Tough life in bush	Steven Ward and Robert Close
23/10/1996	Mac's great party	Steven Ward and Robert Close
16/10/1996	Keep a watch on koalas	Steven Ward and Robert Close
9/10/1996	Ups and downs of populations	Steven Ward and Robert Close
2/10/1996	Just a phone call away	Steven Ward and Robert Close
25/09/1996	Car strikes down another animal	
18/09/1996	Impact of our native predators on koalas	
11/09/1996	Keep an ear out for breeding bellows	Steven Ward and Robert Close
4/09/1996	Care for koalas	
28/08/1996	The killers in the bush	Steven Ward and Robert Close
21/08/1996	Why not join Mac's Koala Club	
14/08/1996	Plane effects on koakas	Steven Ward and Robert Close
7/08/1996	Scent marks the spot	
31/07/1996	The territorial male	Steven Ward and Robert Close
24/07/1996	At home on their range	Steven Ward and Robert Close
17/07/1996	Sightings of koalas are very important	Steven Ward and Robert Close
10/07/1996	When a mouse is an antechinus	
3/07/1996	Eucalyptus eaters	Robert Close and Steven Ward

26/06/1996	What's in gum leaves	Steven Ward and Robert Close
19/06/1996	No article	
12/06/1996	Tracking koalas	
5/06/1996	Koalas surviving in a way most other animals ca	Steven Ward and Robert Close
29/05/1996	Day out for a winner	Steven Ward and Robert Close
22/05/1996	Corridors for koalas	Steven Ward and Robert Close
15/05/1996	Cool seasons take a toll	Steven Ward and Robert Close
8/05/1996	Scratched signs	Steven Ward and Robert Close
1/05/1996	A most unusual koala	Steven Ward and Robert Close
24/04/1996	Students on trail of Franchesca, cub	Steven Ward and Robert Close
17/04/1996	Why ignorance does not mean bush bliss	Steven Ward and Robert Close
10/04/1996	Look hard for ear tags	Steven Ward and Robert Close
3/04/1996	Fruit bats help koalas	Steven Ward and Robert Close
27/03/1996	Problems in paradise	
20/03/1996	Tiny bacteria help digest food	Steven Ward and Robert Close
13/03/1996	Home sweet pouch	
6/03/1996	Lyn's out in bush without her collar	Robert Close and Steven Ward
28/02/1996	No article	
21/02/1996	New home may be the answer	Robert Close and Steven Ward
14/02/1996	How many are there?	Steven Ward and Robert Close
7/02/1996	Companions of the campbelltown Koalas	Steven Ward and Robert Close
31/01/1996	Mac'c Koala Club: What's it for?	Steven Ward and Robert Close
24/01/1996	No article	
17/01/1996	No article	
10/01/1996	No article	
3/01/1996	No paper	

Date	Article Name	Author
27/12/1995	No paper	
20/12/1995	Koalas:The community response	
13/12/1995	No article	
6/12/1995	Koalas and their Relations	Robert Close
29/11/1995	Koala Myths	Robert Close
22/11/1995	Koala Trees	Steven Ward and Robert Close
15/11/1995	Koala Research	Steven Ward and Robert Close
8/11/1995	Molly's story	Steven Ward
25/10/1995	Koalas:What to Do?	Steven Ward and Robert Close

KOALAS: WHAT TO DO?



So far this spring Campbelltown residents have directed us (researchers at the University of Western Sydney) to 8 koalas which we would not have found without your help. Two of these 8 were young koalas killed by dogs. The last, shown here, was found on the 19th October. This animal was 7 months old and although there are no obvious wounds, the dog caused internal

injuries severe enough to kill.

Although this is an unfortunate example of what can happen to koalas, the community has enhanced our knowledge of where koalas are and what they are doing by reported sightings. We are studying koalas in the Campbelltown area and because they are difficult to locate, the community's help is essential. All sightings of koalas, alive or dead, are valuable. Koalas have been found in many suburbs on the east of Campbelltown. A recent example is a koala caught near Airds High School four weeks ago. We have fitted some koalas with identifying ear tags. If you should see a koala with ear tags, please note down their colours as that will allow us to identify the koala.

If you find a koala that is injured or in distress we recommend that you leave it where it is and contact us as soon as possible. If it is necessary to handle the koala, cover it first with a thick blanket. Despite their cuddly appearance, male koalas, especially, are strong wild animals and can inflict nasty wounds with both their claws and teeth. If you have sighted a koala please contact the University on (046) 20 3100 or after hours on (046) 20 3444.

Steven Ward and Robert Close,
Department of Biological Sciences
UWS Macarthur.

MAC. AD 8-11-95



Molly's Story

On a happier note than last week's column about dog attacks on koalas, we'd like to introduce you to Molly (shown here). She was first found in Kentlyn on the 8th May, 1994, when she came into a back garden. At that time she was 18 months old, badly dehydrated and weighed only 3.1 kilograms.

She was nursed back to health by WRES (Wildlife Information Rescue Emergency Services) worker Gaylene Parker after 10 days of care. She was fitted with a radio collar and had an orange ear tag put in the left ear and a green one in the right. She was then released into the bush at Wedderburn and radio tracked to follow her movements. She was later captured on the 10th November 1994 and weighed 3.9 kg.

In December, unfortunately she was found in the field with a broken leg and was returned to Gaylene's care. After 6 weeks of tender loving care she was released again. When captured on the 2nd August 1995, she was in good health and weighed 5.3 kg. This means that in 15 months, despite setbacks, she had almost doubled in body weight. She is still in the bush at Wedderburn and we will give updates on her progress in future columns. We hope that she will have a baby next year, so stay tuned.

Remember too if you see a koala to look out for the ear tags and to carefully note the location. Who knows it might even be Molly? If you have sighted a koala you can contact a Prof. Robert Close on (046) 20 3100 or after hours on (046) 20 3444.

Steven Ward

KOALA RESEARCH

What research is being done on our Campbelltown koalas? Well at the moment we (from the University of Western Sydney) are trying to answer some basic biological questions.

For instance how many koalas are there around Campbelltown? We know that our koalas are moving into the suburbs on the east of Campbelltown, are in the Wedderburn area, in parts of the Holsworthy army range and are even moving across to the Heathcote National Park. However, as we don't know how much of this land the koalas are actually using, we cannot accurately estimate the population size.

Hopefully our research, with the assistance of the community, will produce a better estimate of the number of koalas, where they are, where they go, whether they are disease free and how well they are breeding. This sort of information is essential when making planning decisions; if we don't know where the koalas are and what they are doing, then we can inadvertently cause irreparable damage. If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 20 3444.

Steven Ward and Robert Close

15.1195

KOALA TREES

People can help koalas that move into the suburbs by planting trees that koalas like to eat. Wurrimbirra Sanctuary donates a suitable seedling to all Mac Koala club members, but there are a number of species that you can plant. Koalas mainly eat leaves from Eucalypt trees of course, although they will use other species and have even been found eating pine needles. Koalas mainly eat grey gums (*Eucalyptus punctata*) and stringybarks (*Eucalyptus agglomerata* and *Eucalyptus oblonga*) in the sandy areas of Campbelltown. In the areas with clay and shale soils, koalas favour forest red gums (*Eucalyptus tereticornis*) and cabbage gums (*Eucalyptus amplifolia*).

Tree seedlings should be planted in a hole which has good drainage, at least twice the width of the soil ball, and one and a half times as deep. Mix in some of compost and well rotted cow manure. Make sure the roots are not wound around the soil ball, and if they are, carefully tease them out so that they can grow out into the soil. Cover the top of the soil ball, then backfill the hole, firming down the soil to support the plant. Water thoroughly and place mulch up to, but not touching, the trunk.

Carefully consider the location where you place your seedling. Currently forest red gums and cabbage gums are being included in the Mac Koala packs, with other species to come later. Forest red gums are big trees and should be planted at least 10 metres away from houses and power lines. Cabbage gums are smaller, but should still be planted at least 5 metres away from houses and power lines.

If you sight a koala please contact Robert Close on (046) 203 100, or after hours on (046) 203 444.1

Steven Ward and Robert Close.

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and help save our Koalas.

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MAC'S KOALA CLUB

Date:

Name:

Address:

Phone: Date of Birth:

Sign:

Parent/Guardian

Koala Myths

A number of myths have arisen from observation of koalas. One is that koalas are always "drunk" on Eucalyptus leaves. Eucalyptus leaves contain essential oils which give eucalypts their distinctive smell, but these oils are toxic to most other mammals. Although koalas are able to detoxify (i.e. make harmless) most of the oils found in eucalyptus leaves, they are not drunk. Detoxification of the oils does take a lot of energy though. To conserve energy koalas usually move slowly and spend a lot of time sleeping. This is why some people came to the conclusion that koalas are always drunk. Another myth is that the name "koala" means "does not drink water". In fact an aboriginal name, koobor has this meaning. However koala derives from Colo an aboriginal name which comes from the Hawkesbury river district and was used to name the Colo river to the north of Sydney.

"Koala" is a truly Australian name. It does not need any attachments such as "bear". Of course koalas are not bears at all and humans are more closely related to bears than koalas are. There is a strong movement now to use Australian names for species native to Australia. Examples are using bilby instead of rabbit-eared bandicoot and thylacine instead of Tasmanian tiger. So remember it's not koala bear, it's just called koala.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 20 3444.

Koalas and their Relations

Koalas are unique animals. Koalas, like many Australian animals are marsupials and this means that they're mammals which have a pouch. However, what do you think their closest living relatives would be?

For quite a while scientists thought koalas are most closely related to possums. More work has been done now though and it appears that the koalas closest living relative is the wombat. One of the similarities that the two species share is a backward facing pouch. This was useful when the koalas ancestors lived, like the wombats do, on the ground and dug burrows. When they shovelled earth behind them it wouldn't fill up the pouch.

Now, however when mother koalas have a baby in the pouch they must have good tummy muscle control to stop the baby falling out. There was a female koala at Taronga Zoo who had poor muscle control and kept losing her babies. The problem was solved the Zoo vet put a stitch in her pouch to keep it closed.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 20 3444.

Note:

No column published on this date

KOALAS: THE COMMUNITY RESPONSE

The community has given a great response with 10 koala sightings and we would like to thank those people who have reported them. Of particular interest was a sighting of a koala crossing the Hume Highway in Casula, at about 11pm. This location is approximately 500 metres away from the bush, so the koala would have travelled quite a distance through market gardens. This kind of information is why the community's help is such a great assistance in gathering information on koalas. There's nothing like having thousands of pairs of eyes helping out.

We hope that the community will continue to call in with sightings. There are other ways to find out if there are koalas in your area though. For instance the mating season for koalas is in full sway and the males will be calling to females and warning off other males. The call is a grunt-squeal and sounds a bit like an anguished pig.

If you are walking in the bush or even in the suburbs you can look out for koala scratches and droppings. The scratches on trees will normally be 2 or 3 parallel lines. The scratches will not show up well on trees such as stringybarks which have soft fibrous bark but can show up quite clearly on trees with smooth bark such as grey gums. Koala pellets are like large olive pips. Possum pellets may look similar but are narrower and look like tiny sausages. If you are unsure place the droppings in a sealed container for 1-2 days. Koala droppings will have a strong Eucalypt aroma. If in double seal a few pellets in a plastic container or wrapper and them to us at the University of Western Sydney. If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 20 3444.

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MAC'S KOALA CLUB

Date:

Name:

Address:

Phone: Date of Birth:

Sign:

Parent/Guardian

27.12

263 Queen St, Campbelltown. P.O. Box 234. Campbelltown 2560

Mac's Koala Club: What's it for?

This week we thought we would explain how Mac's Koala Club will help the Campbelltown koalas. Well Mac's Koala Club is raising money to fund research. Your money will help pay for a student's scholarship (Steven Ward), which will allow him to spend 3 years studying koalas full time. What a life! The catch is that at the end of it he must write a thesis (the size of a book). His work will then be examined by 3 experts on marsupial biology. If they think that his work is not good enough then he loses his 3 years of hard work. If he passes he's awarded a Ph.D. and gains the title of "Dr". The benefit for the community is that we will know a lot more about the lives of koalas.

So how will the research help the koalas? Well at the moment we cannot say for certain how many koalas there are, even just at Wedderburn. Also we don't know what sort of habitat the koalas prefer and why. Koalas in Victoria appear to behave quite differently to koalas in the Campbelltown region. For instance in Victoria they use an area of 2-3 hectares, whereas our Campbelltown koalas use 30-50 hectares. Quite a difference! These sort of differences mean if a development is proposed we cannot accurately predict how it will affect the koalas. However, if we find out how Campbelltown koalas behave normally then we can make much more accurate predictions. If we don't have information about the koalas then it's much more likely that we'll hurt them inadvertently.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 20 3444.

Steven Ward and Robert Close.

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MAC'S KOALA CLUB

263 Queen St. Campbelltown P.O. Box 234

Date:

Name:

Address:

Phone: Date of Birth:

Sign:

Parent/Guardian

Campbelltown Macarthur Advertiser, Wednesday, December 13th, 1995

Campbelltown Macarthur Advertiser, Wednesday, December 27, 1995

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Campbelltown Macarthur Advertiser, Wednesday, January 3, 1996

Campbelltown Macarthur Advertiser, Wednesday, January 10, 1996

Campbelltown Macarthur Advertiser, Wednesday, January 17, 1996

Campbelltown Macarthur Advertiser, Wednesday, January 24, 1996

Mac's Koala Club: What's it for?

This week we thought we would explain how Mac's Koala Club will help the Campbelltown koalas. Well Mac's Koala Club is raising money to fund research. Your money will help pay for a student's scholarship (Steven Ward), which will allow him to spend 3 years studying koalas full time. What a life! The catch is that at the end of it he must write a thesis (the size of a book). His work will then be examined by 3 experts on marsupial biology. If they think that his work is not good enough then he loses his 3 years of hard work. If he passes he's awarded a Ph.D. and gains the title of "Dr". The benefit for the community is that we will know a lot more about the lives of koalas.

So how will the research help the koalas? Well at the moment we cannot say for certain how many koalas there are, even just at Wedderburn. Also we don't know what sort of habitat the koalas prefer and why. Koalas in Victoria appear to behave quite differently to koalas in the Campbelltown region. For instance in Victoria they use an area of 2-3 hectares, whereas our Campbelltown koalas use 30-50 hectares.

Quite a difference! These sort of differences mean if a development is proposed we cannot accurately predict how it will affect the koalas. However, if we find out how Campbelltown koalas behave normally then we can make much more accurate predictions. If we don't have information about the koalas then it's much more likely that we'll hurt them inadvertently.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 20 3444.

Steven Ward and Robert Close.

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MAC'S COLUMN

Companions of the Campbelltown Koalas



Koalas are not the only endangered species which live in the bush around Campbelltown. Three other endangered species have been found in the O'Hares Creek Catchment area during a survey conducted for the Macarthur branch of the National Parks Association. These 3 endangered species are: the broad-headed snake; the giant burrowing frog; and the red-crowned toadlet. For these species, except the broad-headed snake, there are so few individuals left that they are considered to be rare and vulnerable to extinction. Also, under law, these species are protected.

The broad-headed snake, however, is considered to be threatened. This means that the species is considered to be very close to extinction, and is also protected. The reason that the broad-headed snake is threatened is that it lives in "rock-on-rock" habitat i.e. under rocks which have exfoliated, or "peeled" off larger rocks. These sort of loose rocks have frequently been removed by people, often illegally, to use as "bush rock" in suburban gardens. As the rocks under which the broad-headed snake lives are formed of sandstone, they break easily. This means that people walking on top of the loose rocks in the bush can destroy the broad-headed snake's habitat. Surprisingly, despite being close to such a large urban area as Sydney, most of the bush around Campbelltown is quiet pristine. Of course, as Campbelltown develops there will be increasing pressure on the surrounding bushland, and we will have to be careful if we want to keep species such as the broad-headed snake, koalas and others.



The Broad-headed snake. Photograph by Phil Teschke.

If you sight a koala please contact Robert Close on (046) 20 3100, or after hours on (046) 26 8679. Steven Ward and Robert Close

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HAPPY BIRTHDAY THIS MONTH TO:

- Jessica Zack — Andrew Craig — Nathan Grech — Ryan Thomas — Jodee Halcrow — Adrian Rietdyk — E. McCabe — Rachel Siskovic — Ruth Jenman — Jessica McKenzie — Zoe Shepherd — Elizabeth Clark — Donovan Mosley — Tara Proctor — Jacob Andaloro — Christopher Horace Thornton.

Write to Mac's Koala Club — Campbelltown P.O. Box 234.

Date:

Name:

Address:

Phone: Date of Birth:

Sign:

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How many are there?

MOST readers will not be aware that there is debate between scientists over whether or not koalas are under threat of becoming extinct. Why don't the scientists agree? Well, it's essentially due to difficulty of estimating how many koalas there are.

Why is this so hard if all you have to do is go out there and count them? Unfortunately, it's not that easy. Koalas are hard to spot and the areas involved are so huge that counting all the koalas would take too much time, and cost far too much. Instead, we have to estimate numbers.

First we would count the koalas in a certain area, say in 100 hectares. Then if you know how much suitable habitat there is you multiply the number of koalas per hectare by your total area to obtain your estimated population. However, when different people use this method they come up with completely different estimates.

For example, the Australia Koala Foundation has estimated that there are 40,000-80,000 koalas in Australia, but other researchers believe that there

are a million koalas in Victorian alone.

These estimates are very difficult because we are not sure exactly where koalas occur, and how many there are per hectare where they occur. This is because density at which koalas occur varies enormously. In Victoria five koalas per hectare may be common, whereas in Campbelltown there may only be one koala per 10 hectares.

Despite the low density of koalas in the Campbelltown region we believe the population is thriving and sending out young ones to recolonise former habitats.

To make sure our estimates of population numbers is correct we need your help to record sightings. This gives us an idea of the total area used by koalas and numbers per hectare.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours (046) 26 8679.

Macarthur Advertiser, Wednesday, February 14, 1986

LAST week's Macarthur Advertiser reported the capture of the koala Lyn - and her newly born baby - from Kentlyn Primary School, and showed her being weighed in a hessian bag, as pictured above.

The koala was put in the bag for two reasons: First, wild koalas are not as cuddly as they seem and can scratch and bite, and second, marsupials (animals with pouches) calm down when in the dark, perhaps bringing back comforting memories of when they were young in their mother's pouch.

Lyn certainly relaxed during her brief period of captivity at Elizabeth Macarthur Agricultural Institute, with a

local veterinarian, a former Taronga Park Zoo vet, conducting her physical examination.

The vet said Lyn's heart rate was very calm and pronounced her to be in excellent condition, with no outward sign of the disease chlamydia (which affects koalas).

After consuming a large quantity of Eucalyptus nicholii during her overnight stay at the institute, Lyn was released back into her home range sporting blue and pink ear tags and a collar with a small radio transmitter.

If you sight a koala, contact Robert Close on (046) 20 3100 or after hours on (046) 26 8679.



In the bag - a pair
of happy koalas



KOALAS: Sometimes there may be problems with translocations

Macarthur Advertiser, Wednesday, February 21, 1996

New home may be the answer Victoria's bold move

By Dr ROBERT CLOSE
and STEVEN WARD

IN Victoria, most koala populations have been established by translocating animals, that is, koalas were moved from one location to another.

This was done because there was a surplus of animals at French and Phillip islands, while on the mainland of Victoria koalas were almost extinct because they were hunted for fur from the 1880s to the 1920s.

However, there are problems with translocations. If there are already koalas where the new animals are moved to, then you will be disrupting the resident koalas.

Also, if there are no koalas already at the spot where the translocation is to take place, this may be because koalas cannot survive in that area.

Other problems with translocation arise because adult koalas use a certain area (called a home grange), and if they are moved from this area they will often try to return.

Another risk is that normally only a

mac's koala club

few animals are used to establish a new population problem, causing inbreeding (related koalas that mate and have babies).

Inbreeding is a problem because after a while there will be less variation in the population. Variation is important, because we cannot predict what will happen in the future.

For example, if the koalas catch a new disease and there is no variation (that is all koalas are almost identical), then they would probably all be affected because they are so similar. However, if the koalas are different, then some may be resistant to the disease.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 26 8679.

Note:

No column published on this date

Campbelltown Macarthur Advertiser, Wednesday, February 28, 1996



LYN the koala, captured and collared at Kentlyn Public School, photographed recently by ADAM HOLLINGWORTH.

Lyn's out in bush without her collar

YOU will remember that on February 7 we captured and collared a female koala, which we named Lyn, at Kentlyn Public School.

Before we released her, we fitted her with a radio collar.

The radio collar is worn around the koala's neck and consists of a collar, a small waterproof aluminium container with a battery, and a wire, coated in plastic, which protrudes about 7cm to 8cm.

The whole collar only weighs 200g and the battery lasts about eight

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months.

The collar constantly emits beeps on a radio frequency, which can be detected by a special receiver.

The receiver can pick up the beeping at distances of up to 5km

under good conditions and can be used to work out which direction the signal is coming from.

We can then walk in the direction indicated by the receiver until, hopefully, we find Lyn.

But Lyn recently lost her radio collar.

This means that we can no longer track her movements.

The reason why Lyn lost her radio-collar is probably because it got caught under a stick, or twig.

When we fit a radio collar for a koala we deliberately leave it

loose enough so that if the collar does get caught it can come off.

This may cause some inconvenience for us, but it means that koalas won't hang themselves.

Lyn, like 15 other koalas, is still wearing ear-tags which may be seen with binoculars.

Lyn's ear-tag colours are pink and blue.

If you sight Lyn, or any other koala, please contact Robert Close on (046) 20 3100, or after hours on (046) 26 8679.

- Robert Close and Steven Ward

Home sweet pouch

IN koalas pouches, the young (cubs) are only as big as a fingernail when they are born and up to six months old. Most births occur in December and January, 35 days after mating.

Births may occur as late as March, although this is uncommon.

When born, koala cubs only weigh about 0.5 grams and are less than two centimetres long.

After it makes its way to the pouch the cub attaches to a nipple for 15 weeks.

At 22 weeks it has fur and the cub starts to look cautiously out of the pouch.

At this time the mother also produces a dark coloured fluid called pap (discussed

next week) which the cub consumes.

At 24 weeks, cubs are fully furred and they try eating leaves for the first time.

As the cub becomes larger and more confident it will spend longer periods out of the pouch, clinging to the belly of the mother, and after a while will ride on her back.

The cub slowly makes longer and longer trips away from the mother.

After 12 months the cub will be independent, although they often stay in the territory used by the mother for another year.

The mother often, although not always, mates once the cub is weaned.

Usually only one cub

mac's koala club

is born, although twins occur occasionally. If this happens it is unlikely that both will survive.

Interestingly, unlike other marsupials, female koalas do not clean the pouch, and when the young emerge they are covered in a black tar-like material which is composed of the cub's wastes.

Once the cub has emerged the mother will clean it.

This is why, as mentioned in a previous column, when one koala at Taronga Zoo had problems keeping the cub in the pouch (because the pouch faced backwards), the vet could sew the pouch up.

This couldn't have been done with other marsupials, like a kangaroo, as they regularly clean out the pouch. If the kangaroo and other marsupials cannot clean out the pouch, the young will die.

If you sight a koala please contact Robert Close on 9046) 20 3100 or after hours on (046) 26 8679.

- Steven Ward and Robert Close

Helping hand for Simone

MORE and more of our younger readers are becoming interested in the local koala colonies and Mac's Koala Club. One letter from comes from Simone Marie Beer:

"I am researching the koala for a school project. I would like to be a member of your club and I would like to know if you could send

me some pictures and facts and info about koalas for my project. Thank you."

"P.S. Please send as soon as possible as it is due in on the 24th of March. I am in Year 3 at Belmont Primary School."

The Koala Club is on the ball and has already sent Simone the details she needs.

MC AD 20-3-96

Tiny bacteria help cubs to digest food

LAST week we discussed how koala cubs develop their life in the pouch.

We also mentioned that at the time when they emerge from the pouch, aged six months, they consume pap produced by the mother. Pap is a dark green fluid produced by the intestine and released from the mother's anus, or bottom.

Pap is consumed over a number of days and basically consists of concentrated digested leaves. The pap is rich with microbes (single-celled organisms also known as bacteria) which provide the koala cub with the microbes it needs to properly digest eucalyptus leaves.

This rich brew of bacteria is swallowed by the cub and goes to the caecum to help the young cub change from a milk diet to leaves.

The use of microbes in the koala to help digest eucalyptus leaves is similar to cows and many other herbivores (animal which eat plants). In fact, humans

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also have microbes which help our digestion, but we don't need them as much as herbivores do, so we don't have so many.

The koala is unusual in that most of the microbes live in the caecum. The caecum is basically a dead end bit of tubing which is connected to the intestine. In fact, the koala has the largest caecum for its size - up to two metres long.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 26 8679.

□ Steven Ward and
Robert Close

Problems in paradise

YOU may have seen newspaper stories of a koala cull at Kangaroo Island, South Australia. The authorities there are considering culling (killing) 2000 koalas.

We are not involved in the decision at Kangaroo Island but we would like to comment on the problem.

Koala populations can increase in size rapidly if conditions are suitable, such as on Kangaroo Island. In most habitats, koala numbers are kept down by deaths from dogs, dingoes, fires, cars, chlamydia and dehydration.

If there are excess young they will disperse from the colony into surrounding habitat. This is fine on the mainland but on an island the young have nowhere to go, and population numbers can increase

mac's koala column

rapidly. This can be a problem as too many koalas can eat all the available leaves (called overbrowsing).

If overbrowsing occurs then koalas will die as there will not be enough food.

In the past koalas have been moved to reduce the population size of koala colonies on islands. However, this is expensive, time-consuming and as we have discussed in a column previously, may cause harm to both the koalas being moved and to any resident koalas in the

area to which new koalas are moved.

At Campbelltown, the koala population appears to be expanding, and you might ask whether culling would ever be necessary here. Fortunately, there is still a large area of adjacent bushland in the Army and Water Board land, so young animals will disperse there.

If the community protects other bushland corridors then our Campbelltown koalas will help recolonise vacant areas.

One such corridor already links the George and Nepean rivers, and could allow our koalas access to all of the bush around Sydney.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 26 8679.

Fruit bats help koalas

KOALAS and flying foxes: what do they have in common?

Here at the university, we are trying to identify the eucalypt species eaten by Campbelltown koalas by studying the leaf fragments that finish up in their droppings. Cell patterns on the leaf fragments in their droppings are distinctive, so we can identify the species the leaf fragment came from. Recently we found a lot of pollen from eucalypt flowers in some koala pellets and would like to know whether the koala actually ate the flowers or whether the pollen was eaten accidentally with the leaves.

Another mammal species seen at Campbelltown eats eucalypt flowers. You may have seen it as a black shape silhouetted

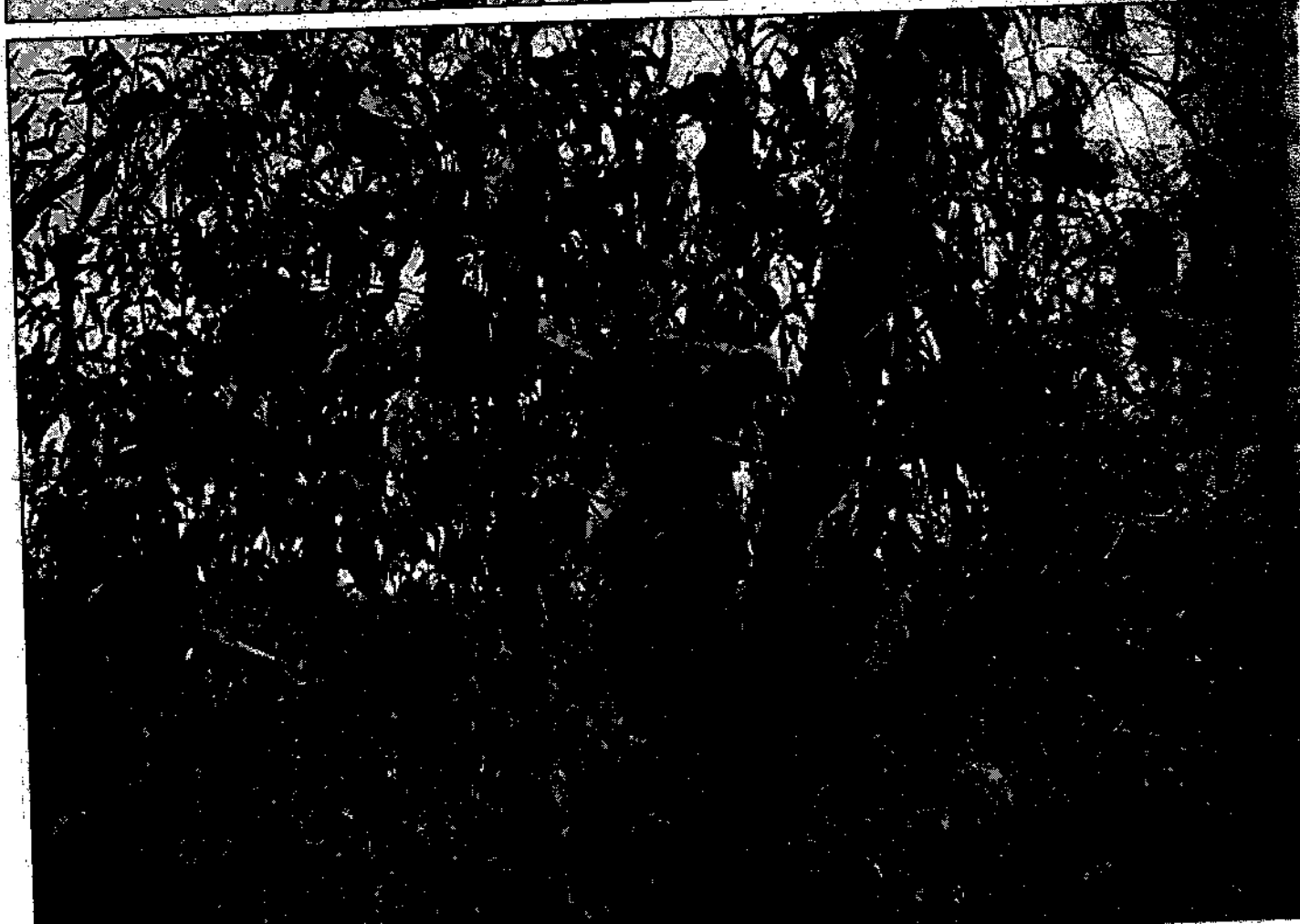
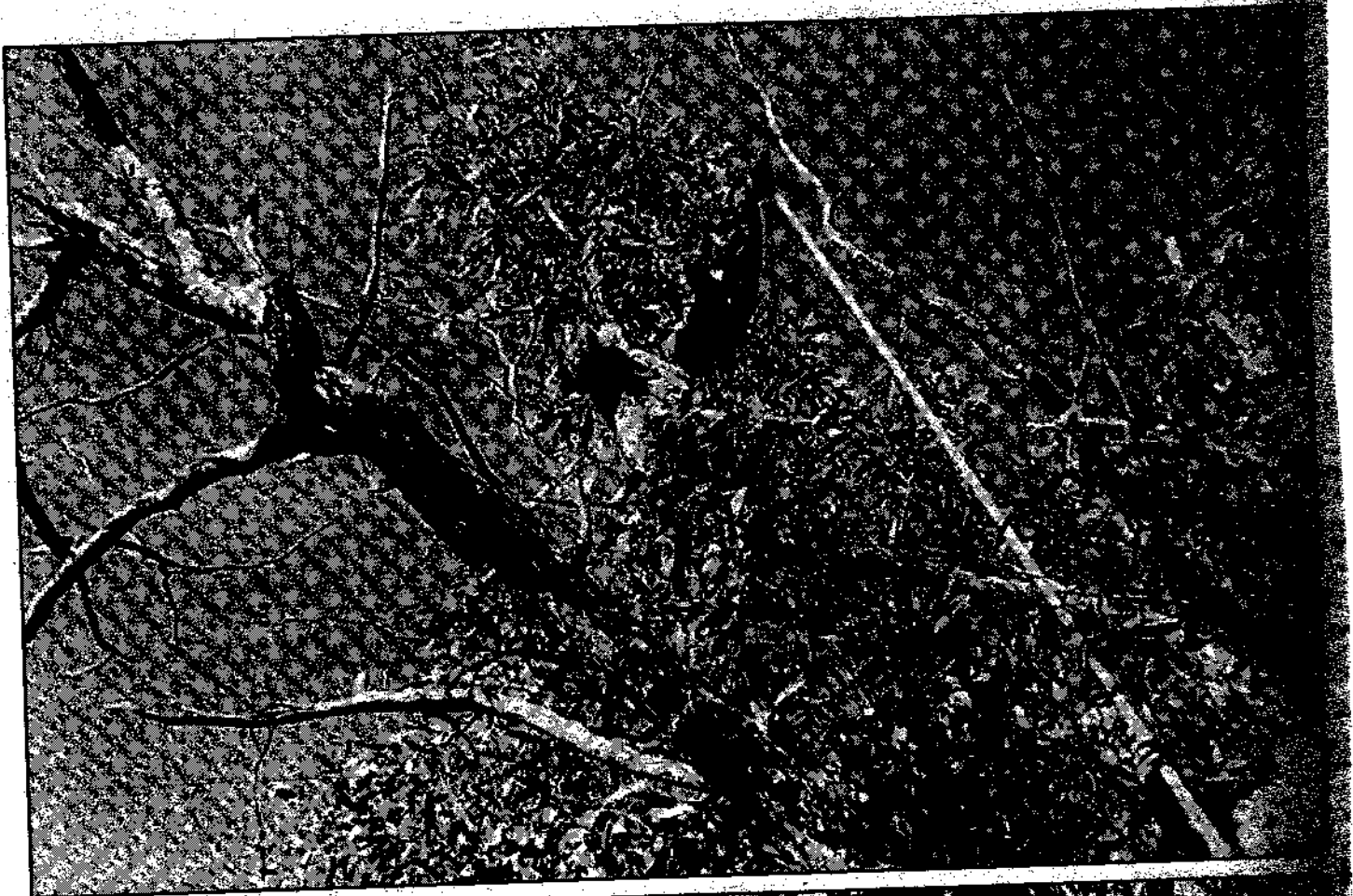
mac's koala club column

against the moon. Of course, it's the fruit bat or flying fox. It uses the nectar from flowers for energy, and the pollen for protein. The fruit bat is very important for pollinating gum trees and thus helps the native trees to produce fertile seeds. So the fruit bat helps the koala by making sure there are always young gum trees ready to replace those that die.

There are many thousands of fruit bats in the Campbelltown district. They "camp" in a patch of forest near Camden and fly out at sunset, making a terrific din as they spread out across the countryside. They may fly as far as 100km in a night. Wedderburn orchardists are forced to put huge nets over their orchards to protect their fruit. Unfortunately, as the eucalypt forests are removed, the pressures on the orchards from fruit bats will increase. All the more reason for citizens and councils to plant eucalypts whenever they can! The koalas would agree too.

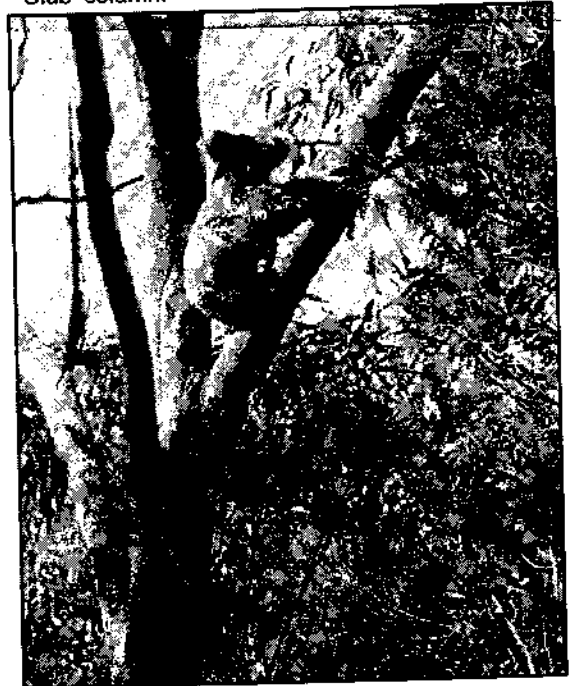
If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 26 8679.

By Steven Ward and Robert Close





HEY kids: As you can see from these pictures our local area boasts quite a few koalas. But to survive they need your help. Do you want to save Campbelltown's koalas? Joining Mac's Koala Club is a great way and it's a lot of fun as well. To join, get the details on page 14 of today's paper. For an update on the club and local koalas, turn to page 30, for Mac's Koala Club column.



Look hard for ear tags

AS part of our study of Campbelltown koalas, we have to catch, examine and fit as many koalas as possible with coloured ear tags.

When we release the koala we prefer to return it back into the same tree that it was caught in because this minimises the disturbance to the koala.

There are, however, exceptions to this rule and under special conditions we will move a koala, but only if the animal is in extreme danger.

One example is Molly, a female koala we've mentioned in other columns.

Molly was found severely dehydrated in a garden in Kentlyn.

After being nursed back to health, she was released into an area at Wedderburn left vacant by a female koala which had

However, the animals may well simply move back to the same spot.

This has been shown from regions such as Port Macquarie, where translocated koalas have returned to a former range.

We can track the movements of these animals if people tell us of sightings of koalas and record the colour of any ear tags: each animal has a different colour combination (one tag in each ear).

You'll probably need binoculars to see these tags.

These sightings help us (and the koalas!) by building information on where they occur and the habitat they use.

If you sight a koala, call Robert Close on (046) 203 100, or after hours on (046) 268 679.

- Steven Ward and Robert Close.

mac's koala club column

recently died of kidney problems.

A more recent example was a male koala sighted in a tree next to Airds High School and was completely surrounded by houses, roads, dogs and people.

Another was a male found being molested by a dog besides the road at 8.30 one morning in Kentlyn.

We moved both of these males 1-2km to the nearest bushland.

Why ignorance does not mean bush bliss

mac's koala club column

KOALAS have been in the Campbelltown region since the Dreamtime.

However, there was a furore in 1986 when koalas were "rediscovered" in Wedderburn after a development was approved.

The development had been given the all-clear by National Parks and Wildlife Service officers who at the time were unaware of koalas in the area.

It is important to emphasise that a few local people did know that koalas were [and still are] present in the area proposed for development.

Perhaps they did not know where to report sightings or even if it was worthwhile telling anyone.

We have come across people who feel very protective of "their" koalas and are reluctant to pass on information.

This reluctance arises from fears the koalas will be harassed. But it can cause the sort of problems the Wedderburn development caused, where the lack of official information almost led to koala habitat in Wedderburn being destroyed.

This is a problem, not just for koalas but also for other species.

If this local knowledge is not passed on it is a real loss. So who do you tell? Well, koala sightings should be reported to us.

We are also particularly interested in historical reports - if hunting occurred, where and how many were taken, and so on.

Sightings of other species, especially rare or endangered ones should be reported to us or the Australian Museum or the National Parks and Wildlife



Service (both can be found in the phone book).

These reports provide a wealth of information, and who knows, you may even discover a new species, such as the wollemi pine (a large tree), which was found last year near Sydney.

Rare mammals which may still persist in the area include the spotted-tailed quoll and small wallabies, perhaps the brush-tailed bettong (feared extinct on the mainland), the red-necked pademelon, or the brush-tailed rock wallaby.

So keep your eyes and your cameras ready.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 26 8679.

□ By Steven Ward and Robert Close

Students on trail of Franchesca, cub

FRANCHESCA was first found on September 15, 1995, by students from the University of Western Sydney on an environmental science camp.

She was captured and fitted with ear tags (orange in the left ear and light blue in the right) and a collar. She weighed 7.25kg.

The batteries in the radio-collars used, although long-lasting, have to be changed every six to eight months.

So, on Saturday the 13th we tracked Franchesca and caught her to change her radio collar.

When we caught her she was 10m high in a blood wood (*Eucalyptus gummifera*).

We (Robert Close and Steven Ward) both climbed the tree and waved a flag on the end of a pole above Franchesca's head.

This persuades the koala to climb down the tree, perhaps the flapping is like a wedge-tailed eagle attack.

Once she got to the bottom two volunteers used a net to restrain her until we could place her in



IF you sight a koala, contact Robert Close.

mac's koala club column

a bag.

She had a female cub in the pouch about five months old.

She was 10cms-long and was just getting her first fur (short pale hairs).

Because Franchesca's pouch was not fully mature when we caught

her previously, this is her first cub.

Franchesca and the cub together weighed 8.4 kilograms, which is a good healthy weight and is quite a large increase since she was last caught.

The cub will grow quickly now up to a total

of 700 grams in the next two months at which time she'll start eating leaves.

This is the time in Franchesca's life when she needs the best food - let's hope we get some more rain soon to make her job easier.

We let Franchesca and her cub go once we had weighed and measured her and fitted her new collar.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 26 8679.

□ Steven Ward and Robert Close.

A most unusual koala

IN last week's column we described how we caught Francesca, a female koala at Wedderburn, and changed her radio collar which allows us to track her movements.

We caught Molly, whom we have mentioned before, on April 19 because her collar also needed to be changed.

We anticipated that Molly would have a cub, as Francesca did when caught about three weeks ago. However, this was not the case.

When we examined her pouch we found that it was divided by a membrane so that she effectively had a double pouch.

This is quite unusual and means that Molly is a very special koala indeed.

We also found the nipple which a cub would feed from was right at the edge of the pouch.

We mentioned previously that a koala's pouch is unusual in that it faces backwards and we think this means that because Molly's nipple is so close to the edge of the pouch, that if she did

mac's koala club column

have a cub it would fall or be scraped from the pouch.

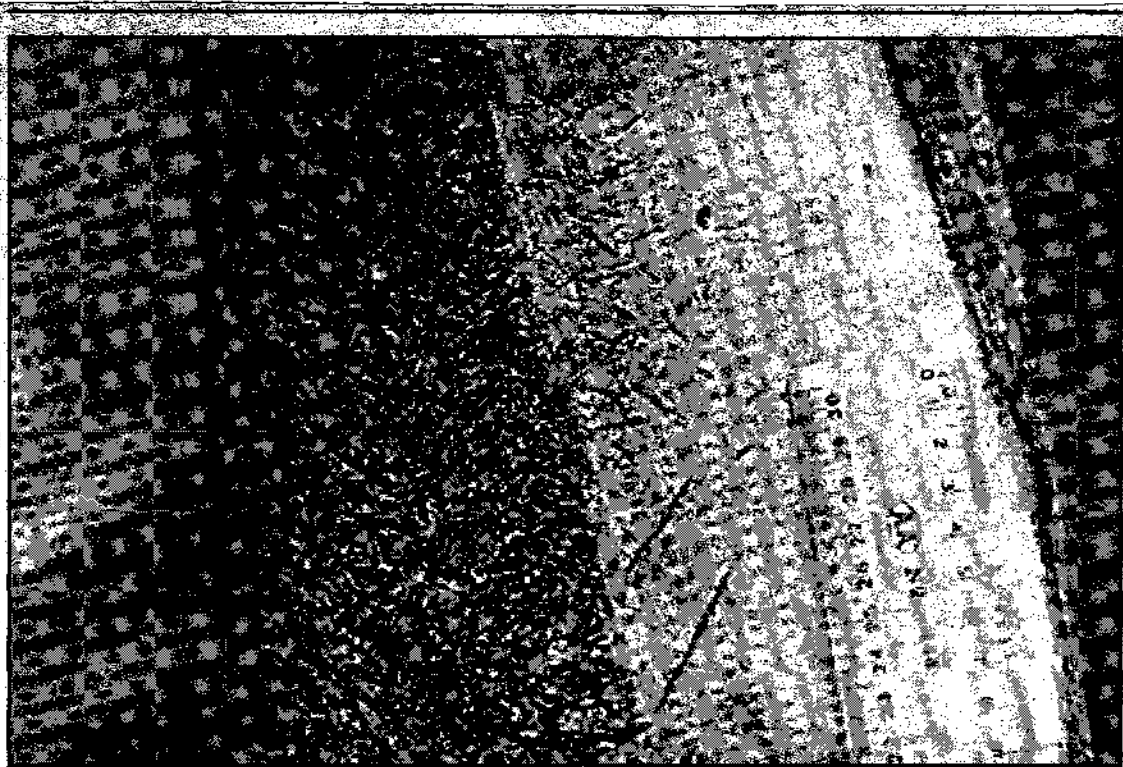
Unfortunately this also means that Molly is unlikely to be able to raise a cub to maturity.

Happily however, Molly is in good condition and weighed 6.5 kg, an increase of 700 grams from August 1995 when she was last caught.

If you sight a koala please contact Robert Close on 203 100 or after-hours on 268 679.

For your coupon to join Mac's Koala Club, turn to page 6.

Steven Ward and Robert Close



SCRATCHES made by koalas on a local eucalyptus punctata tree

Scratched signs

WHILE we humans have four fingers and one thumb, koalas have two thumbs and three fingers on their front "hands".

The two fingers act together like a thumb, as you can see from the accompanying diagram.

This arrangement presumably helps koalas grasp on trees when they are climbing.

It also helps us to recognise koala scratches in trees which typically are two or three parallel lines, as the photograph shows.

On their hind legs, koalas have four digits

mac's koala club column

and four claws; but interestingly, they have two claws in one toe.

This double toe acts like a comb, so that koalas can groom themselves and catch parasites such as ticks and lice.

This is referred as being "syndactyl", which simply means

having the third or fourth toes of the hind-foot fused.

Koalas share this feature with many marsupials such as kangaroos, wombats and bandicoots.

The palms and soles of koala hands and feet are rough and grainy. This allows the koala to

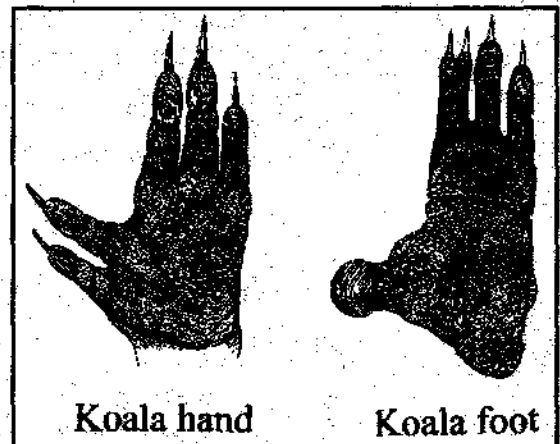
grip the tree better when climbing.

The claws of koalas are long: 1-2cm in length. They are also very sharp - again so koalas can get a good grip.

These sharp claws also mean that koalas can inflict nasty wounds if they are harassed, which is why we recommend that koalas be left well alone.

People who find a koala may contact Robert Close by ringing (046) 20 3100 or after hours on (046) 26 8679.

□ Steven Ward and Robert Close.



Koala hand

Koala foot

Cool seasons take toll

THE seasons are changing and it's moving into the time of year which is toughest for koalas.

In winter the leaves are poor in food quality. In spring and summer the warmer weather allows the eucalypt trees to flourish and to put out new leaves.

In some eucalypts these new leaves are really good eating for koalas. This is because the new leaves are full of nutrients so that the leaves can grow. Some eucalypts are sneaky though and they put toxic chemicals into these new leaves just to stop them being eaten.

A koala's life is tied to these variations in leaf production. This is why male koalas mate with as many females as

mac's koala club column

possible.

Not every year is the same though and the production of these new leaves depends upon rainfall and the weather, just like wheat and other crops.

This means that in some years the eucalypts may produce far fewer new leaves, or perhaps none at all.

As with any other wild animal, koalas

may die when conditions are poor.

Perhaps this is why we have found two adult koalas dying of kidney problems and others dehydrated.

With good conditions the populations should recover, expand and perhaps even recolonise areas where they may have become locally extinct.

□ **Steve Ward and Robert Close**

● PS to club members: Winners of Mac's Koala Club colouring-in competition were Tricia Median, of Ruse and James Taylor of Glenfield (toy packages) with the field trip to track koalas going to Rebecca Kubank, of Tahmoor. Well done to the winners and everyone who participated.

Recovery after disaster Corridors for koalas

WE have mentioned in previous columns the importance of linking koala populations.

A small population is much more likely to recover after a disturbance like fire, if koalas can come in from other unburnt areas.

Koalas can travel long distances, which helps to link isolated populations.

In fact, a koala we tagged at Kentlyn was later found in the Heathcote National Park, which is about 15 kilometres over very rugged country.

Koalas will travel through quite open farmland, but they prefer to use areas with abundant trees, so suburbs and extensively cleared farmland will stop most koalas' movements.

A corridor may help to solve this problem and is basically just a road for animals.

However, the corridor should ideally have feed trees within it, which act like service stations for cars. Then koalas can stop and "re-fuel" on eucalyptus leaves.

Rivers make marvellous corridors because there is usually vegetation on the banks and space below bridges for animals to move, without having to

mac's koala club column

cross roads and fences.

There are two large river systems, the Georges and Nepean, which will do this job.

However, although the two river systems are only separated by four kilometres of bush, farmland and the Appin Road, they are becoming isolated by further development.

Recently a group of concerned and energetic residents in Narellan combined with Camden Council to obtain a promise from Premier Bob Carr to develop a bush corridor from the Nepean River which would link with Mt Annan Botanic Garden.

Such far sighted thinking will help to enhance the Nepean-Georges River link, which will provide an insurance policy for our koala colony.

If you sight a koala please contact Robert Close on (046) 20 3100 or after hours on (046) 26 8679.

□ Steven Ward, Robert Close.



KOALA trackers Steven Ward and Rebecca Kubank on Saturday's field trip. Right: One of two koala sightings during the field trip



Day out for a winner mac's koala club column

ON May 25, Rebecca Kubank, along with her father, collected her prize for winning the colouring competition recently run by the Macarthur Advertiser - a day in the field with me (Steven Ward).

The weather was beautiful and we had no problems tracking the two female koalas we have collared at the moment, Franchesca and Molly.

We found Franchesca first, quite high up in a stringybark. She was resting in a fork, but about 10 minutes after we arrived she moved down to a lower spot and we managed to glimpse her cub, which was protruding slightly from the pouch. The cub is about five months old and will soon fully emerge from the pouch.

We had lunch and then ventured out again to find Molly. After walking right past the tree she was in, we backtracked and soon found her. This often happens when tracking koalas as they are quite difficult to spot in the wild.

Molly was also in a stringybark at

the edge of the ridge by O'Hayes Creek. Occasionally Molly ventures down to O'Hayes Creek gorge, which is very steep and makes finding her even harder. This time, however, there was no such problem. As we have mentioned in a recent column, unfortunately Molly doesn't have a pouch young, but she looked to be in good condition.

Having successfully found Franchesca and Molly, we headed home. I just hope that Rebecca and her father had as much fun as I did.

If you sight a koala, please contact Robert Close on (046) 203 203 (voice mail), or after hours on (046) 269 073.

Steven Ward and Robert Close

Macarthur Advertiser, Wednesday, May 29, 1996

Koalas surviving in a way most other animals cannot

HOW do you digest leaves which have less nutrition than cardboard?

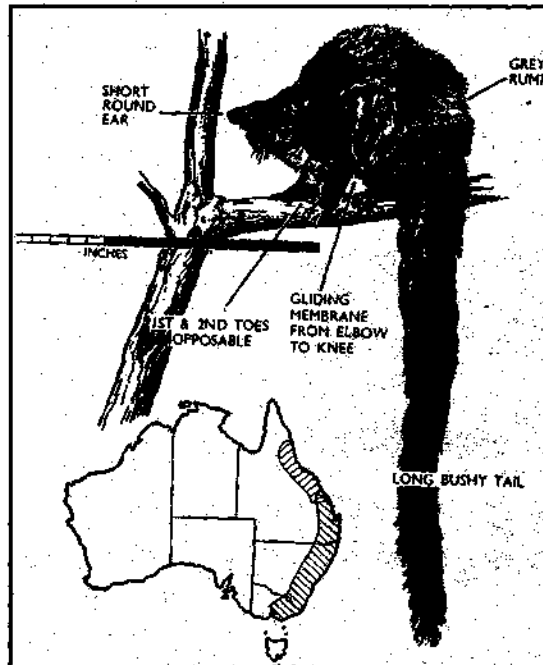
Well, a koala does just that. Not only do eucalyptus leaves resemble cardboard in their nutritive value, but they're packed full of toxic compounds which stop most other mammals from eating them, too.

In fact, apart from koalas only greater gliders (a large possum 1-1.5kg in size) mainly eat eucalypt leaves.

Greater gliders, which also live in the Campbelltown area, use tree hollows for nesting (unlike koalas) and, as trees don't start to develop hollows until they are quite old, greater gliders are most restricted to the sort of habitat they can use.

Greater gliders and koalas digest the tough eucalypt leaves in very similar ways.

To get the most out of the leaves, koalas thoroughly chew them with sharp-ridged molar



A GREATER glider and where it is found

teeth.

This releases most of the moisture and nutrients contained in the leaves, but when the broken-up leaf passes through the koala's digestive system,

relatively big pieces pass through quickly, and small pieces are kept longer.

This allows microbes to work on these small leaf pieces and break

them down producing energy which the koala can use.

The koala also gets almost all of the water it needs from the leaves it eats. It will also occasionally lick dew off leaves.

A koala can survive on this limited water supply by producing very concentrated urine and dry droppings.

This ability to conserve water is very important, as without it a koala would need to carry around extra water in the form of fat, in case of drought.

If you have ever gone hiking, you'll realise that water is really heavy, so carrying all that extra weight would be a big burden for an animal like a koala, which climbs around in trees.

If you see a koala, contact Robert Close on (046) 203 203, or after-hours on (046) 268 679.

□ Steven Ward and Robert Close 42

Macarthur Advertiser, Wednesday, June 5, 1996

Tracing koalas

SOMETIMES research involves unusual methods to answer seemingly simple questions.

One such question is whether koalas are actually feeding from the trees we find them in.

The answer seems obvious, but koalas may shelter in a tree during the day because it is shady or comfortable, and these trees may not have tasty leaves.

At first, this question seems easy to answer – just watch the koalas.

But koalas spend about 20 hours a day resting and sleeping, so you may have to watch a koala for a long time before you would see one eat.

More importantly though, our presence may change their behaviour.

Results from other research in Queensland indicate that koalas shorten their movements between trees when they are being observed and their feeding behaviour could change too.

So how can we get around this?

Well, when a koala chews up a leaf there will be some large fragments in a koala's faecal pellets.

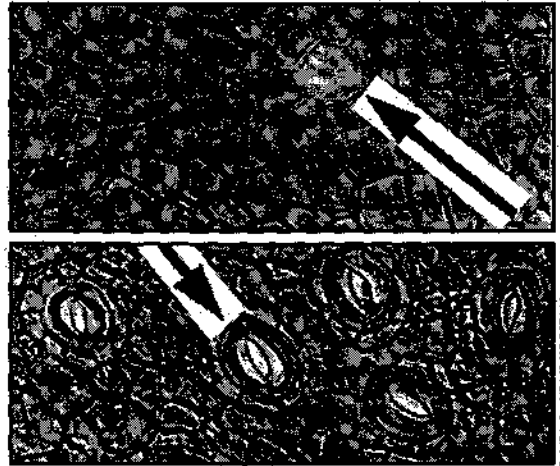
These will then enable you to discover what the koalas have been eating.

First, however, we have to be able to recognise eucalypt species, just from microscopic characteristics of their leaves.

The Australian Koala Foundation has helped by giving the university a grant to employ Beverly Hills to try to solve the problem.

Beverly has now developed a technique by which the waxy outer layer of eucalypt leaves can be examined.

As you can see from the photographs, she has found differences between the leaves of what we suspect are the two most important species for koalas in Campbelltown.



THE grey gum (*Eucalyptus punctata*, top) and stringybark (*Eucalyptus agglomerata*).

Unfortunately not all species are so distinctive and in some eucalypt species the top and bottom layers of a leaf are quite different.

Unfortunately, this will make identifying some leaf fragments more difficult.

We'll keep you informed of Beverly's progress.

A microscopic view of grey gum (*Eucalyptus punctata*, left) and stringybark (*Eucalyptus agglomerata*).

Arrows indicate stomata – essentially 'holes' in the leaf which allow the plants to breathe.

Note that stomata are smaller and a different shape.

They are more numerous in the stringybark and the surrounding patterns are also distinctive.

If you sight a koala, contact Robert Close on (046) 20 3203 (voice-mail).

The after-hours number is (046) 26 8679.

Note:

No column published on this date

Campbelltown Macarthur Advertiser, Wednesday, June 19, 1996

What's in gum leaves

IN the last column we examined leaf fragments in koalas' pellets to find which types of trees they are feeding on.

This week we'll discuss the food contents of the leaves themselves.

If you read the blurb on your breakfast cereal packet you will find how much sugar, fibre, fat, etc, there is. Well, researchers have also calculated similar information for the leaves that koalas eat.

If you look at the diagram you'll see that most of it is water.

Although you might think that this is useless to the koala, it's actually very important, as koalas get almost all their water from the leaves they eat.

There is also a lot of fibre. Some of this is broken down by bacteria in the koala's gut.

However, most of the fibre will pass through without being digested. This is why fibre is said to "keep you regular".

Tannins are toxic compounds that fortunately aren't found in the foods we eat or occur only at very low levels.

Koalas have specialised in neutralising these compounds but as you can see from the diagram there's a lot of tannins, which is why so few mammals eat eucalyptus leaves.

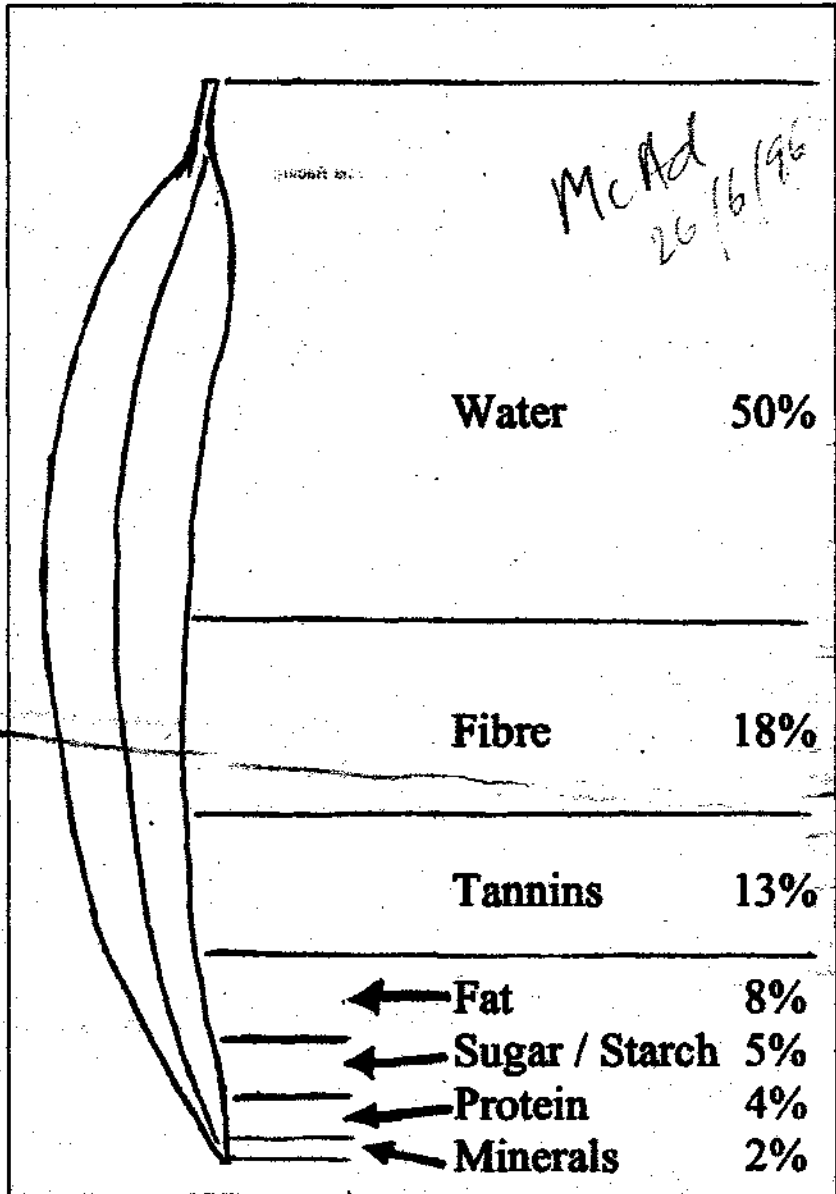
The fat category includes toxic oils and waxes on the leaf surface.

Koalas also get very little nutrition from these compounds.

The last three categories, sugar/starch, protein and minerals, supply koalas with most of their energy but as you can see these three categories only make up about 11 per cent of most eucalyptus leaves.

You might find it interesting to compare this information to the contents of a breakfast cereal.

You'll find that koalas get a lot less nutrition out



mac's koala club

of eucalyptus leaves than we do out of a breakfast cereal. In fact, the leaves are more like the cardboard packet itself.

If you sight a koala please contact Robert Close on (046) 203 203 (voice-mail), or after hours on (046) 268 679.

■ THE Australian Koala Foundation has given UWS Macarthur a grant to employ Beverly Ellis to recognise eucalypt species just from microscopic characteristics of their leaves. She has developed a technique by which the waxy outer layer of eucalypt leaves can be examined.

■ ON June 7, Lyn (the female koala caught at Kentlyn Primary School) was seen on Peter Meadows Road late at night. She sat in the middle of the road for about five minutes and then walked

down the road briefly and then into the bush.

Another koala was also seen this month near the roundabout at the intersection of Appin Road, Copperfield and Kellerman Drive in Rosemeadow at 2am by truckie Wayne Latta. Wayne watched with great interest till it crossed the road to the west.

We would like to remind people to watch out for koalas on the road. Who knows? You might be the next to spot one.

- Steven Ward and Robert Close



Eucalyptus eaters

IN PREVIOUS week's columns, we have mentioned how the koala is one of a few mammals which specialise in eating eucalyptus leaves.

There is, however, another large group of animals which eats eucalypts - the insects.

Insects are a very successful group and are an essential part of the bush. For example, termites (also known as white ants) break down dead wood and help to recycle the nutrients in the dead wood, which are then used by other plants.

Some insects feed off the nectar produced by the flowers and serve an important role in pollinating the flowers, allowing the trees to produce fertile seeds or fruit.

Some caterpillars eat the eucalypt leaves while other insects lay their eggs inside the leaves themselves.

You may have noticed woody lumps on some leaves. These lumps are called galls, which the plant forms around the young insect larvae.

The insect uses the gall as a shelter where it spends most of its life, until it emerges to breed and lay eggs.

In extreme cases, when a plant has a lot of galls, the leaves can appear to be quite knobby.

Other insects live under the bark, eating the wood. In fact, scribbly gums get their characteristic "scribbles" on the bark from insect larvae burrowing around under the bark.

mac's koala club

When the old bark peels off, the "scribbles" can be seen, which are the old path of the insect larvae.

These insects form the main food source for another Campbelltown marsupial (a marsupial is a mammal with a pouch) which lives in trees, called an antechinus or marsupial mouse.

Next week, we will discuss the life of the most common sort of antechinus, which is quite unusual.

On the 24th of June, a koala was seen near the Wedderburn causeway by Vince Hewson. He stopped and encouraged the koala off the road, and it climbed a power pole.

We also recently received another report of a sighting at the Wedderburn causeway in June this year. The same person had also seen a koala on Aberfoyle road about June last year.

If you have seen a koala in the south-west Sydney region and not reported it to us, please do so. It doesn't matter how long ago the sighting was. It will still be useful.

If you see a koala, please contact Robert Close on (046) 263 263 (voice-mail) or after hours on (046) 268 679.

Robert Close and Steven Ward

When a mouse is an antechinus

AUSTRALIA is home to many unique species but the antechinus is probably one of the most unusual.

The antechinus is also known as a marsupial mouse.

Some Campbelltown residents may have seen an antechinus (they are often brought in by cats) and mistaken it for a mouse.

Shown in the photo is one of the most common species, *Antechinus stuartii* or "brown antechinus".

Antechinus species have a flattened head, with a long snout and numerous sharp small teeth rather than large incisors for gnawing like a mouse.

The brown antechinus is common in much of eastern Australia but it is unlikely that you will see one in the bush as they are small, shy, nocturnal creatures.

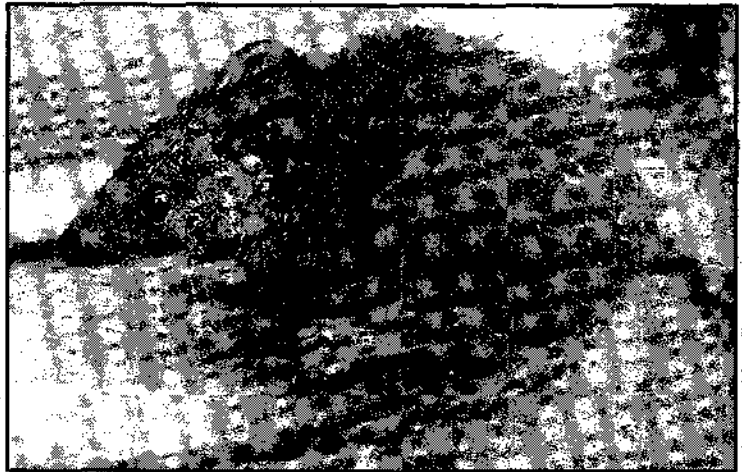
They mainly eat insects but they also eat nectar, plant material and occasionally meat.

They are about the size of a mouse and weigh 20 to 50 grams.

Like the koala, they spend much of their life in trees.

Unlike the koala though they sleep in groups in tree hollows and there may be as many as 20 to 30 in the one hollow.

The young are born in October and the female normally carries six



Macarthur Advertiser, Wednesday, July 10, 1996

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to 10 you in her exposed pouch until they are about five weeks old, when they are left in the nest.

The young grow quickly and leave the nest when two or three months old.

These young will be mature by the breeding season which lasts for two weeks in September.

Mating is intense, with a male and female mating for upwards of

six hours, sometimes up to 10 hours.

After this two week breeding season all the males die. This means that males live less than a year, but there are no males to compete with females for food while the females are rearing their young.

Females live for two to three years but in many places most female die after raising their young.

If you sight a koala please contact Robert Close on (046) 203 203 (voice-mail) or after hours on (046) 268 679.

Sightings of koalas are very important

CAMPBELLTOWN koalas are famous!

We think that the sightings of Koalas which Macarthur Advertiser readers have reported to us are so important, that last week Steven Ward displayed a poster based on these sightings at two scientific conferences.

Scientific conferences are very important for the exchange of information so that scientists can find out about the latest developments in their field.

This exchange of information can allow for all sorts of new innovations.

The two conferences at which Steven's poster was displayed were run by the Australian Mammalogy Society and the Ecology Society of Australia and were attended by experts in mammals (animals with fur) and ecology (the interaction of plants and animals) from all over Australia.

This means the sightings which you have provided us with are famous Australia wide.

We would also like to thank the Macarthur Advertiser for their fantastic support. Prior to the

mac's koala club

publication of the koala column there were seven to eight sightings reported every year.

In the eight months since the publication of the koala column we have had at least 16 sightings.

This is an increase of more than three times in the rate of sightings being reported.

However, we still lack much basic data about our koala population. If you see a koala and report it you will be contributing greatly to what about the koalas, where they are, which areas they prefer and maybe even a rough idea of how many koalas are out there.

So thank you for all the koala sightings, but we definitely still want to hear from you if you see koala.

If you sight a koala please contact Robert Close on (046) 203 203 (voice-mail) or after hours on (046) 268 679.

Steven Ward and Robert Close.

At home on their range

ALTHOUGH koalas are normally seen sleeping in a tree, our studies with radio-collared animals show that they move quite a lot.

But how far do koalas move?

How often do they move between trees?

Can they cross fences, roads and streams?

Well koalas normally move fairly short distances overnight, up to about 100 metres, although sometimes much further.

Koalas can also move long distances in quite a short period of time, certainly 20 kilometres or more when looking for a suitable place to live.

Most mature established koalas use what is called a "home range".

A home range is defined as the area that an animal uses.

Your own home range would include where you live, your place of work or study, where you shop and where you go to meet other people (such as friends' houses, clubs, etc).

A koala tends to use certain special trees and this

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group of trees forms its home range.

Koalas usually move at least once each day between trees in their home range.

In fact, a koala normally moves to two or three different trees each day.

Koalas are very adept at climbing over fences.

They will also cross roads, although when they do so they are in danger of being hit by a car.

Koalas can swim, though often they can't get out and eventually get tired and drown.

If you have a pool you can prevent koalas drowning by leaving one end of a secured rope in the water so that if a koala does fall in, it can climb out again.

If you sight a koala please contact Robert Close on (046) 203 203 (voice-mail), or after hours on (046) 268 679.

■ Steven Ward and Robert Close

The territorial male

LAST week we described how a koala uses a home range.

Briefly, a home range is defined as the area that an animal uses.

So a "home range" for a koala includes all the trees that it normally uses.

Researchers have learnt a lot about the social life of koalas by investigating the overlapping of ranges.

The home ranges of female koalas, especially those of mothers and daughters, tend to overlap a lot.

Male koalas, however, have much less overlap.

From this, and other observations, we can conclude that male koalas are much more territorial than females.

In other words, they protect their territory more than the females do.

We may think that the defence of territory involves fights, but koalas appear to "defend" their territory mainly by advertising their presence to other males.

They do this by calling during the mating season (we will discuss this in more detail in a later column, and we hope to organise a phone number so that you can ring and hear what their call sounds like, so watch this space) and by scent-marking (we'll also discuss this in another column).

The effect of the scent-marking and calls means

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that males who and where their neighbours are.

As male koalas know where the other males' territories are, they can avoid them if they wish.

This may sound strange, but if they invade another male's territory they may get involved in a fight.

This uses up a lot of energy and they might get injured.

So, rather than wasting all that energy, the male koalas generally avoid each other.

Finally, if we look at male and female koalas' home ranges, we see that there is considerable overlap.

A male koala's home range probably overlaps those of three to seven females, while a female's home range probably overlaps those of one to three males (male koalas have a larger home range than females).

This means that a male koala has the chance to mate with as many females as possible, but female koalas have a choice of which male they want.

If you sight a koala, call Robert Close on (046) 20 3203 (voice mail), or after hours on (046) 26 8679.

□ Steven Ward and Robert Close

Scent marks the spot

IN our last two columns we have described koalas' home ranges and how males in particular use scent marking and calls to mark their territory.

This week we will describe how koalas leave messages with smells (scent marking).

Mature male koalas have what is called a sternal gland in the middle of their chest.

This gland secretes a scented liquid.

The secretions actually cause a brown stain on the otherwise white chest of the male koala, and in a large mature male the gland may be about five or six centimetres long and two to three centimetres wide.

The koala normally marks the base of a tree trunk by rubbing his chest against it, leaving some of the strongly scented liquid.

This will last for a number of weeks, and other koalas will pick up the smell.

Both male and female koalas can also advertise themselves with their urine, which also has a strong smell.

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Likewise dogs mark their territory by urinating on tree-trunks, except that the koala doesn't mark anything in particular.

Koala urine also reacts with cotton and turns black.

If we are catching a koala, and are unlucky, we may end up with scent-marked clothes.

Unfortunately this is not particularly pleasant, as the smell is like that of concentrated eucalyptus oil.

You can experience this smell by sealing some koala droppings in a jar overnight, then taking a whiff the next day.

It's good for blocked noses!

If you sight a koala please contact Robert Close on (046) 20 3203 (voice mail), or after hours on (046) 26 8679.

Plane effects on koalas

LOCAL residents are probably now aware the draft guidelines for the Environmental Impact Study (EIS) for Sydney's second airport in the Holsworthy Army range have been put forward.

This EIS should assess how the residents are affected and what effect the airport will have upon the environment.

To minimise the costs "the EIS will be based on the result of available research, studies and data as appropriate, with further studies being conducted where necessary and practicable", (quoted from the draft guidelines).

Unfortunately, few environmental data are available for Holsworthy - for example, we don't know what the impact will be on the koala population as we don't know where koalas exist in the region.

So, if the impact on koalas is unknown, you can see that the situation is worse for unfamiliar species and examples of some species that may be affected (and this is only a selection) are powerful owl, tiger quoll, Gould wattled bat, large bent-wing bat, broad headed snake, giant burrowing frog and red-crowned toadlet.

All of these species are considered to be vulnerable and endangered.

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We worry that these species will not be considered. The EIS will include a survey by the Australian Museum which was completed this year.

However, this was only a baseline study and there is insufficient information to fully assess the impact of the airport.

A much larger study is required but, from the time frame indicated for the EIS, this seems unlikely.

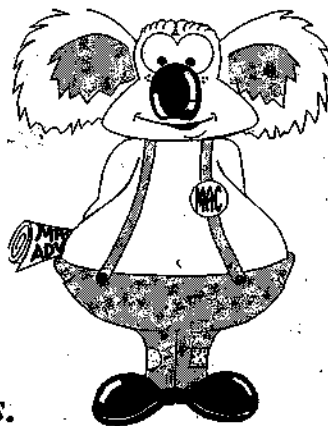
If you wish to comment on the EIS (which must be by August 19), we suggest you ask that the impact of the airport upon the flora and fauna (plants and animals) of Holsworthy is assessed by a comprehensive survey.

Otherwise, if the airport proceeds, we may never know what was lost and it may well include the koalas.

If you see a koala, please contact Robert Close (046) 20 3203 (voice-mail) or after hours (046) 26 8679.

□ By Steven Ward and Robert Close.

Why Not Join MAC'S KOALA CLUB



and help save our Koalas.

Membership cost just \$7⁰⁰ Children, \$10⁰⁰ Adult for 12 months and includes:-

- T-shirt • Ruler • Balloon • Sticker • Fridge Magnet • Birthday Card • Gum Tree Tube
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MAC is now available to visit your local school & conduct talks on research. He will also appear at your local fete or fundraising day (booking must be made).

HAPPY BIRTHDAY THIS MONTH TO:

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Please complete the form below, enclose your Cheque and post to: Mac's Koala Club, P.O. Box 234, Campbelltown 2560.

Name: Date:

Address:

Phone: Date of Birth:

Sign: Child / Adult Membership

Parent/Guardian

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The killers in the bush

WE HAVE mentioned in previous columns that domestic dogs will kill koalas and we have recommended that they should be chained or at the very least prevented from roaming outside the owners property.

However, koalas have natural predators.

Powerful owls, wedge-tailed eagles, diamond pythons, dingoes and Aborigines would have all preyed upon koalas in south-west Sydney.

Of course dingoes and Aborigines no longer prey on koalas in the area – although an animal that looked like a dingo at Wedderburn was recently reported to us.

Wedge-tailed eagles (*Aquila audax*) are large birds which, although uncommon in the Sydney region, still nest in O'Hares creek, and one scared the daylight out of one of our koala researchers.

Powerful owls (*Ninox strenua*) are also uncommon.

This species is also considered to be vulnerable and rare.

Diamond pythons (*Morelia spilota*) are moderately common.

Both of the bird species could take a young koala from the tree-tops.

Diamond pythons are more likely to eat sick, young or injured koalas, or perhaps eat any dead koalas

mac's koala club

they may have come across.

Note that pythons are not poisonous.

Normally they catch their prey and squeeze it to death.

Feral cats have been reported as preying on koalas.

Such cats can be considerably larger than domestic cats, probably up to the size of a medium dog.

Of course, this is not a native species.

The impact upon the koala population from the native predators (the wedge-tailed eagle, powerful owl and diamond python) is probably slight, certainly less than the impact that we know dogs are having, because they are so common in the Campbelltown bush.

So although it seems hard on the koalas, a good local population of them will help maintain populations of these superb predators.

If you sight a koala, please contact Robert Close (046) 20 3203 (voice mail) or after hours on (046) 26 8679.

Steven Ward and Robert Close.

Care for koalas

KOALA are prone to road dangers.

Previously we had cited the details of koala which have been killed by dogs.

However, roads are also dangerous to koalas as they are very vulnerable to being hit by cars.

Koalas do spend time on the ground moving from tree to tree or dispersing from one area to another.

Unfortunately a koala was recently killed on the Wedderburn road close to the causeway crossing the Georges River.

The koala was hit about midnight on Wednesday the 14th of August and was there until 7.30am.

The dead koala was lying beside the road, so people driving into or out of Wedderburn would have seen the corpse, although it may have difficult to discern that it was a koala.

Thankfully we did get a call from someone telling us about the dead koala, but it was surprising that only one person called when many people must have seen the koala.

This was the second koala killed by cars this year - that we know of.

We would hope that if you see a koala, alive or

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dead, that we would get a phone call.

We can get a lot of information from a koala, even if it is dead.

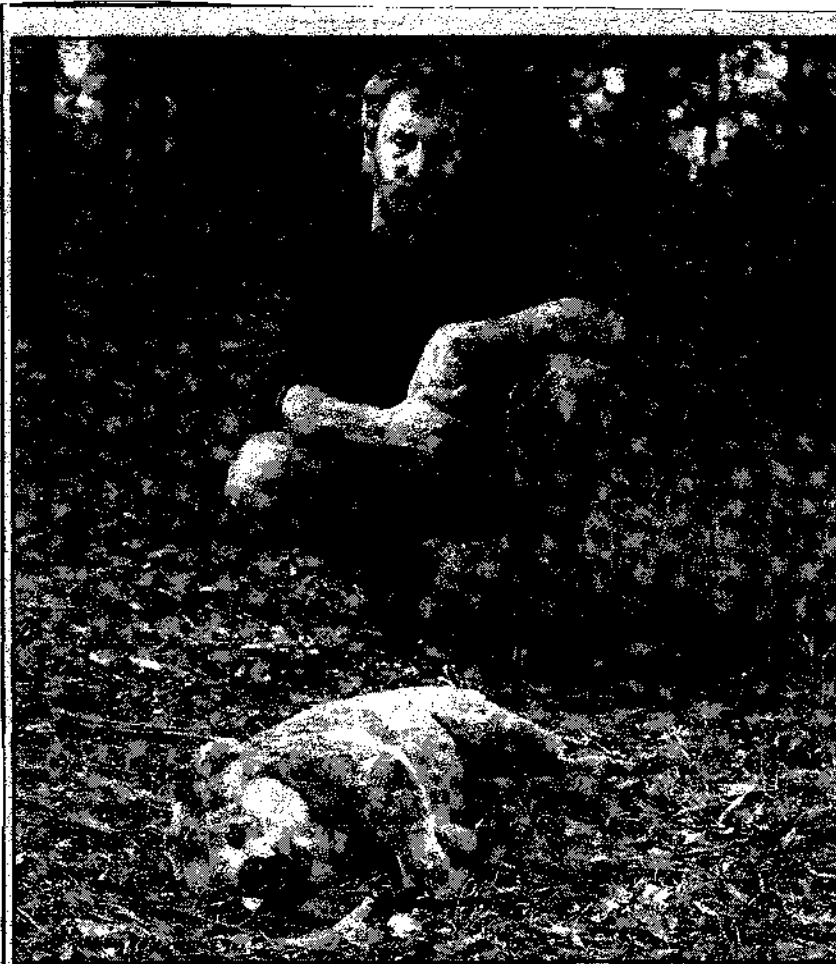
In fact, we pass on samples taken from dead koalas to other researchers for genetic analysis and can examine the koalas for disease, teeth problems and parasites.

The skulls go to the Museum in Sydney as a permanent record.

As we wouldn't go out and kill koalas just to get these samples, we have to take them when we can from dead koalas reported to us.

To decrease the danger for koalas and to increase the community's awareness of the presence of koalas, and who they should call if they see one, we are currently talking to Campbelltown Council about the possibility of putting up koala road signs.

If you see a koala please contact Robert Close on 203203 (voice-mail), or after hours on 268 679.



ROBERT Close with the dead koala found in Wedderburn.

Body to science

THE death of a local koala has provided researchers with new information.

A motorist ran over the full-grown male animal on Wedderburn Road close to the Georges River causeway.

It was the first koala to be sighted in that area in recent times.

Although deaths such as this are tragic, Dr Robert Close from UWS Macarthur said researchers could pass on samples taken from dead koalas to other researchers for genetic analysis and examine the koalas for disease and parasites.

"As we couldn't go out and kill koalas just to get these samples, we have to take them when we can from dead koalas reported to us."

Keep an ear out for breeding bellows

WOULD you like to hear a male koala bellowing to its rivals? If so, ring (046) 203 200. You will find that it's a curious and frightening sound, like an enraged pig.

To give you an idea of what a male koala bellow sounds like, although it's very hard to describe in writing, it sounds like a grunt-squeal.

Male koalas use these calls to advertise themselves to other koalas. The call tells other male koalas to stay away and persuades females of the male caller's charms.

We have set up this call, provided by the Australian Koala Foundation, so that people can become familiar with a male's bellow.

Male koalas call during the breeding season, which is just starting now and lasts until February.

If you do hear koalas we would love to hear about it.

As the calls travel quite a distance, people living in the areas near the Georges River or O'Hares Creek

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might hear the calls on a still night.

If you hear a call, be sure to give us the location where you heard the call, the exact time, and if possible the approximate direction of the call.

We need these details to determine the number of males calling along the river at a given time.

Please make sure that you also give your name and a contact number so that we can get more details if necessary.

You can also phone Robert Close, whose number is at the end of this column every week, and tell him where you heard koala calls.

If you sight a koala please contact Robert Close on (046) 203 203 (voice-mail), or after hours on (046) 268 679.

- Steven Ward and Robert Close

Impact of our native predators on koalas

WE HAVE mentioned in previous columns that domestic dogs will kill koalas, and we recommend that they should be chained – or at the very least prevented from roaming outside the owner's property.

However, koalas have natural predators, too.

Powerful owls, wedge-tailed eagles, diamond pythons, dingoes and Aborigines would have all preyed upon koalas in this area.

Of course, dingoes and Aborigines no longer prey upon koalas in the south-west Sydney area, although an animal that looked like a dingo at Wedderburn was recently reported to us.

Wedge-tailed eagles (*aquila audax*) are large birds, which although uncommon in the Sydney region still nest in O'Hares Creek – one scared the daylight out of one of our koala researchers.

Powerful owls (*ninox strenua*) are also uncommon in the Sydney region, and this species is also considered to be vulnerable and rare.

Diamond pythons (*morelia spilota spilota*) are moderately common.

Both of the bird species could take a young koala from the tree-tops.

Diamond pythons are more likely to eat sick, young or injured koalas, or perhaps to eat any dead koalas

mac's koala club

they may come across.

Note that pythons are not poisonous.

Normally, they catch prey and squeeze it to death.

Feral cats have also been reported as preying on koalas.

Feral cats can be considerably larger than domestic cats, probably up to the size of a medium dog.

Of course, this is not a native species.

The impact upon the koala population from the native predators – the wedge-tailed eagle, powerful owl and diamond python – is probably slight, certainly less than the impact that we know dogs are having because they are so common in the Campbelltown bush.

So, although it seems hard on the koalas, a good local population of them will help maintain populations of these superb predators.

If you see a koala, contact Robert Close on (046) 203 203 (voice-mail), after hours on (046) 268 679.

Or if you hear a male koala bellowing, ring (046) 203 200.

Car strikes down another animal

RECENTLY we have reported koalas being killed on the road.

Now we have received yet another report of a koala being hit by a car, again at Wedderburn Gorge.

A dark car was reported as hitting the koala, then driving off without stopping.

We would like the driver to contact us to verify that it was, in fact, a koala that was hit.

The report came to us several days after the accident and we were unable to find the koala.

Perhaps it crawled away after the accident, or a dog may have dragged the body somewhere.

If your dog should turn up with a koala corpse, or if you see a dead koala somewhere, please contact us as soon as possible.

The longer a corpse is left, the greater the chance that dogs or other scavengers will move it.

We would encourage anyone who thinks he or she may have hit a koala – or any other animal for that matter – to stop and find out if the creature is all right.

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But wounded animals can be dangerous.

We don't advise you to handle a wounded animal.

But we will help injured koalas, and the RSPCA (Royal Society for Prevention of Cruelty to Animals) or WIRES (Wildlife and Information Rescue Services) may be able to send help for other injured animals.

On a happier note, we would like to report that a koala was seen alive and well on the bridge at Broughton Pass (between Appin and Wilton) by Anthony Trompp on September 4.

If you sight a koala, please contact Robert Close on (046) 20 3203 (voice-mail), or after hours on (046) 26 8679.

To hear a recording of male koala bellowing, call (046) 20 3200.

Just a phone call away

THREE weeks ago the Koala Column described a phone line we have at the University of Western Sydney Macarthur with the help of the Australian Koala Foundation. The number is (046) 203 200.

This has led to a great response, and four radio stations have also played the tape.

But we have had some problems in trying to retrieve messages that people left after calling the line.

It took us a while to get around this problem but when we finally managed to access them we found that eight of the 10 messages left had been deleted automatically because they were too old.

If anyone did leave a message, we apologise, and if you would like to leave another message we would like to hear from you and we will get back to you.

We'd also like everyone to watch out for young koala cubs.

This is the time when they move away from their

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mothers, so they may be seen crossing the road or in backyards.

If you do see a koala, we would love to hear about it, day or night (the after-hours phone line is given at the bottom of the column). The sooner we hear about it, the more likely we'll catch it as they move away quite quickly.

Mature males also seem to be more mobile at this time, which is probably why we've had two road casualties this month and another seen on the roads.

If you sight a koala, please contact Robert Close on (046) 203 203 (voice-mail) or after hours on (046) 268 679.

- Steven Ward and Robert Close

Ups and downs of populations

PERHAPS you have never thought about it, but populations of a plant or animal often undergo fluctuations or changes.

An example of this is the rabbit.

When the rabbit was introduced to Australia there was a population explosion and they caused a lot of damage.

When the myxomatosis virus was introduced the population crashed.

The rabbit population numbers slowly increased after myxomatosis but they look like crashing again with the calici virus.

Koala populations also undergo changes.

In a past column we discussed the problem of the Kangaroo Island population, which will soon undergo a population crash, whether the koalas are culled or not, as there will soon be not enough food to feed all the koalas.

Campbelltown koalas will also undergo population changes and this is something we hope to find out about.

Are there large changes in koala population in the Campbelltown region and if so, what causes these changes?

There are a number of possible causes for large population changes, with the most likely being changes by people, disease, weather and fire.

Changes due to humans include things like

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Holsworthy airport (if it is built), roads, dogs, etc.

The most likely disease to affect koalas is clamidia, but this appears to have little impact on Campbelltown koalas.

The weather is likely to have a large impact.

In Campbelltown the rainfall is not strongly seasonal or in other words the amount of rain we get on average is spread reasonably evenly over the year.

However sometimes there is little or no rain for a number of months and this could have a large impact on koalas.

We've mentioned before that koalas get their water from the leaves they eat.

If there is no rain there will be much less moisture in the eucalypt leaves, so they may not get enough water.

Some Campbelltown koalas have had kidney damage, probably due to water problems.

Fire can also have a large impact on koalas and we will discuss this in a future column.

If you sight a koala please contact Robert Close on (046) 203 203 (voice mail) or after hours on (046) 268 679.

- Steven Ward and Robert Close.

Keep a watch on koalas

FIRE plays an important role in the regeneration of the Australian bush, but it can have a negative effect on koala colonies.

At worst, koalas will be burnt to death or suffocated.

To escape the smoke and flames, koalas climb higher in the trees — but may survive only to starve.

If the koalas are lucky, the eucalypts start to sprout a few days after a fire, and the fresh leaves provide sustenance.

The effects of fire on koalas is still being researched, with the temperature and size of a blaze among the factors which determine how colonies are affected.

If Campbelltown experiences a large, hot fire, re-colonisation from the nearest unaffected koala habitat may be needed.

However, if enough koalas survived in unburnt

mac's koala club

gullies re-colonisation would not be necessary.

Since the koala colony at Campbelltown was discovered in 1986, several bushfires have threatened, but the flames were stopped before they could affect wildlife.

The Campbelltown colony depends on the protection of the gullies, which would be under threat from any airport built at Holsworthy.

If you sight a koala, please contact Robert Close on (046) 203 203, or after hours on (046) 268 679.

To hear a male koala bellowing, call (046) 203

200. STEVE WARD and ROBERT CLOSE
Macarthur Advertiser, Wednesday, October 16, 1996

Mac's great party

mac's koala club

YOU may have seen the pictures of Mac's first birthday in last week's paper.

We hope that all Mac Club members who attended had a good time and thank you to all those who donated to the day: Raynor Sports, McDonald's, Foleys Butchers, Willie Cakes, Nepean Distributors and the National Parks Association.

If you would like to go bushwalking you might want to consider joining the National Parks Association (you can find them in the phone book) as they have an excellent walks program.

The Macarthur Advertiser also did a fantastic job of organising the Mac's birthday party.

On a different note, an unusual call came in on our phone last week.

David Mollard had found what he at first thought was a mouse, in the gully of a suburban street in Ruse. On closer inspection he noticed the tail was coiled like a possum.

Sure enough, the tiny animal was a pygmy possum (pictured here). Body length was 6 cm.

These beautiful marsupials (the females have a pouch) share the Campbelltown bushland with koalas and several other native animals, but being small and nocturnal (active at night) they are seldom seen.

Pygmy possums have a special brush-like tongue for eating nectar from flowers (as do lorikeets, a native bird) but also eat insects.

They nest in small hollows in old trees; females may have two litters of four or five young each year between



spring and autumn.

Unfortunately, pygmy possums are easy catches for cats, and this one may have been in trouble if David had not been so sharp-eyed.

So please examine any mouse-like animals that your cats bring home - it could be a pygmy possum, an antechinus (as described in a previous column, antechinus are native marsupial mice with long pointed snouts), or even a feather-tailed glider.

If in doubt give us a call, and strongly consider training your cat to live indoors.

If you sight a koala please call Robert Close on (046) 203 203 (voice mail) or after hours on (046) 268 679. To hear a male koala bellowing ring (046) 203 200.

STEVEN WARD and ROBERT CLOSE

Tough life in bush

ON October 14 a koala was noticed slowly crossing a fire trail near Nepean Dam in the Bargo area.

Obviously something was wrong as the koala slowly climbed a nearby tree with great difficulty.

The koala was captured and taken by a Wingecarribee WIRES member, Gaylene Parker, to a vet experienced in examining koalas.

The koala was found to be a young adult male, eight kilograms in weight.

The animal had what appeared to be a bite wound on its right shoulder. There were two puncture marks and it seems likely that it was a bite wound from another koala, presumably a male.

The wound was already infected when it was found as the wound was seeping pus.

The koala's shoulder was x-rayed and it was found that the humerus (the top arm bone between the shoulder and the elbow) was completely broken.

Presumably the bite caused the break as the broken bone and the bite wound occurred at the same spot on the shoulder. Obviously a very vicious bite.

mac's koala club

As koalas use their front limbs (arms), extensively when climbing trees, broken arms are bad news.

This break was particularly bad because in addition the wound was badly infected.

So, on vets advice, the koala was put down. If the koala had been left in the wild it would have suffered a much longer and more painful death.

This shows that things aren't easy for wild koalas. If you should find an injured koala this is also why we recommend that you leave it and contact us or WIRES.

We wouldn't want your bones to be broken by a savage bite from a koala. If you sight a koala please contact Robert Close on (046) 203 203 or after hours on (046) 268 679.

To hear a male koala bellowing (046) 203 200.

- Steven Ward and Robert Close.



FRANCHESCA the koala, who recently lost her radio collar, pictured with her cub Sarah.

Lyn was collared – but only briefly

IN a previous column about Lyn the koala, who was caught at Kentlyn Primary School in February this year, we mentioned how we fitted a radio-collar so that we could follow her movements.

Unfortunately, Lyn's radio-collar came off a week later and she has only been seen once since then, on Peter Meadows Road.

Despite the fact that she had no radio-collar she was identified from her ear tags.

Every koala we catch gets a coloured tag put in each ear.

If you see a koala with ear tags and note which colour is in which ear we can identify which koala it is.

Another koala which had a radio-collar, Franchesca, also recently lost her collar.

Franchesca had a cub, Sarah, which you can see in the fork above Franchesca in the photograph.

This was taken while Franchesca still had her radio-collar and you may be able to see the small aluminium case for the battery at Franchesca's neck and the aerial pointing out past Franchesca's left ear.

We did manage to ear-tag Sarah before Franchesca lost her radio-collar and she has an orange tag in each ear.

Unfortunately this means that we only have one koala left with a radio-collar, Molly.

We would like to have more koalas radio-collared but finding them is very difficult.

This is why we are keen for anyone who sees a koala to report it to us as soon as possible day or night.

The way a radio-collar works is that it emits a "beep" on a special radio frequency, which we can pick up with an antenna and a receiver.

By scanning around with an antenna we can find the koala's direction from some distance away.

We keep walking towards the koala until, hopefully, we find it.

Unfortunately, this kind of equipment is expensive and we are grateful to the Australian Koala Foundation for supporting our research with money to purchase the necessary equipment.

Tracking a koala with a radio-collar provides us with lots of important information such as the koala's favourite tree species, how big the trees are and where they are (that is are they in a gully or on the top of a ridge?).

When we get lots of locations for one koala we can also work out the home range (the area of habitat a koala uses), which we have discussed in a previous column.

We may also find out if the radio-collared koala is socialising with other koalas.

Remember, though, that to help us catch new animals you must report sightings immediately, otherwise they will move away and we will not find them.

If you sight a koala please contact Robert Close on (046) 203 203 (voice mail) or after hours on (046) 268 679.

– By Steven Ward and Robert Close.

Louts in a low act

OUR koala sighting call-in campaign occasionally produces unexpected results.

We received a call last week from a very upset person who had seen a group of yahoos at Wedderburn throwing stones at a koala in a tree from a battered white Torana.

Fortunately, the tree was tall enough for the koala to climb out of range.

Three weeks ago in the same general area, a koala was reported only two metres up a tree.

Koalas generally cannot climb as high in trees when they are malnourished, dehydrated or generally sick.

We fear that this could be the same animal later harassed by hooligans.

When they are sick, and low in a tree, or worse, on the ground, koalas are particularly susceptible to dogs and irresponsible yahoos.

If you should see any koalas which are low in a tree or staying on the ground it is particularly urgent that

mac's koala club

you contact us immediately so that we can help.

We have had a few sick koalas reported to us and Molly, a female koala who is now doing well, was such an individual.

Unfortunately, as life is not easy for koalas, it is possible that if you see a koala it could be in poor health.

Most will survive if they are given a chance but we hope that irresponsible acts, such as throwing stones at koalas, will stop, so that they have the best possible chance.

If you sight a koala, please contact Robert Close on (046) 20 3203 (voice-mail) or after hours on (046) 26 8679.

To hear a male koala bellowing call (046) 20 3200.

● Steven Ward and Robert Close

Bill's classy eartags

mac's koala club

ON Friday night, November 15, Shirley Williams called to report a koala with a cub was trying to cross Georges River Road in Kentlyn from the bush to the city side.

However the cub became separated and went back towards the bush while the mother continued across the road and climbed a tree.

Shirley and her family tried in vain to persuade the cub to join its mother, then watched with amazement as the mother climbed down the tree right past them and back to the bush in the bush.

Next morning, we caught mum (now named Shirley) and the cub (named Bill) in a tall forest red-gum on the city side of the road – so mum had obviously wanted to cross the road (note: motorists be on your guard).

The forest red-gum is not common on the bush side of the road, so perhaps it is a special dietary treat and worth the risk of crossing the road.

We were excited to find that Shirley was an animal ear-tagged in September 1993 only 300 metres down the road.

She was 4.7 kilograms then, and is now 7.3 kilograms.

We also fitted Shirley with a radio collar.

This will enable us to see if she often uses forest red-gums and give us some indication of how frequently she crosses the road.

The cub Bill is two years old and weighs 3 kilograms, and now sports two different coloured eartags.

When we tracked Bill and Shirley the next day they were back on the bush side of the road, but in trees 10 metres apart.

It's likely that the cub Bill will soon leave his mother Shirley as he'll be old enough for the mature males to force him to move out of the area.

Who knows, perhaps you will see him in the bush.



BILL the cub koala before he got his ear tags.

crossing a road, or even in your backyard.

So look out for a cute little bloke with classy eartags.

If you sight a koala please contact Robert Close on (046) 20 3203 (voice mail) or after hours on (046) 26 8679.

To hear a male koala bellowing phone (046) 20 3200.

■ Steven Ward and Robert Close.

Macarthur Advertiser, Wednesday, November 27, 1996.

Mac was too smart and slipped his collar

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IN last week's column we told you about capturing Shirley and her cub, Bill, and how we put a radio-transmitter collar on Shirley so we could track her movements.

Last Wednesday, while tracking Shirley, we spotted another koala 30 metres away at the top of a tall grey gum.

We thought at first that it was Bill, who has recently become independent of his mum. However this koala had no ear-tags.

After swinging around the tree with ropes and harness, we caught the koala (a young male) and have called him Mac, after his newspaper relation.

Mac weighed 6.5kg and is in good health.

We estimate that he is probably three-years-old and is just starting to develop a sternal gland in the middle of his chest. This gland secretes odours which the male koala uses to scent-mark his territory.

We also wanted to monitor Mac's movements so we fitted him with a radio-collar.

However, it appears that Mac is a slippery little fellow as he somehow slid his collar off while he was still in the holding bag. Only after we released him did we discover the radio-collar still in the bag.

Unfortunately this means that we can't follow Mac's movements. If he is spotted again we can find out how he's going (we'll know it's Mac by the colour of his ear tags), so make sure to keep your eyes peeled to tell us if you spot a koala. It could be Mac (the small one).

If you sight a koala please contact Robert Close at UWS Macarthur on (046) 203 203 (voice-mail), or



MAC, a young male koala, found last week.

after hours on (046) 268 679.

To hear a male koala bellowing phone (046) 203200.

Steven Ward and Robert Close

Molly's now a mum

YOU may recall from previous columns and photos the eventful history of Molly, a female koala living in Wedderburn.

We last reported that she had an unusual "double-pouch".

That is, she had a pouch with two compartments separated by a flap of skin; we were worried that her condition might prevent her from raising a cub.

However, when we caught her on Tuesday, December 3 to change her radio collar we took Molly into Elizabeth Macarthur Agricultural Institute to be checked over by a vet experienced with koalas.

When we examined Molly we had a fantastic surprise - Molly has a cub in the pouch!

The cub was about 5cm long and the head was about the size of a marble.

We estimate that the cub was three to four weeks' old at that stage of development.

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The cub should stay in the pouch for another five months.

We will continue tracking Molly and will eagerly await the cub's emergence, as we are still concerned that Molly may have some difficulties keeping the cub safe with her strange pouch.

Otherwise Molly was in good condition and weighed 7.3kg, an increase from her 6.8kg weight when she was caught in July.

If you sight a koala please contact Robert Close at University of Western Sydney Macarthur on (046) 20 3203 (voice mail) or after hours on (046) 26 8679.

To hear a male koala bellowing call (046) 20 3200.

By Steven Ward and Robert Close

Macarthur Advertiser, Wednesday, December 11, 1996

Time fast running out

YOU may recall that in a previous column we discussed the situation of koalas living on Kangaroo Island off South Australia.

Koalas were introduced to Kangaroo Island and there are now so many that they are overbrowsing trees and killing them.

If something is not done soon the koalas will face starvation.

A special Koala Management Task Force set up to investigate the problem suggested that some of the koalas should be culled (killed).

A web page on the Internet has been set up by the University of Adelaide with information on the various options for managing the Kangaroo Island population.

The recommendations of the Koala Management Task Force are also given on the web page.

They are also keen to find out your views.

The Internet address is

<http://www.roseworthy.adelaide.edu.au/dtyrc/koalas>.

We are also hoping to eventually set up our own

mac's koala club

web page on the results of our research.

We haven't managed to accomplish this yet, but stay tuned for developments.

On a similar subject, we received a dead male koala from the Army after a soldier spotted the animal at the side of the road about 7am on Monday, December 9.

The koala had been hit by a car not long before, but was already dead.

The koala was found near the intersection of Heathcote Road and St George Crescent, near Sandy Point.

If you sight a koala, please contact Robert Close at the University of Western Sydney, Macarthur, on (046) 203 203 (voice mail) or after hours on (046) 268 679.

To hear a male koala bellowing, call (046) 203 200.

□ **ROBERT CLOSE and STEVEN WARD**

Facts on bandicoots

mac's koala club

By STEVEN WARD and ROBERT CLOSE

CONTINUING our series on species that may occur in the Campbelltown bushland, this week we look at the long-nosed bandicoot (*Perameles nasuta*).

This species mainly appear within a few hundred kilometres of the eastern coastline of Australia.

It appears to be relatively uncommon and trapping surveys by Environmental Science classes at the University of Western Sydney have yet to find one.

There are a number of species of bandicoots appearing at various locations within Australia.

All have a long slender face, a pointed nose and dig holes for food, mainly insects.

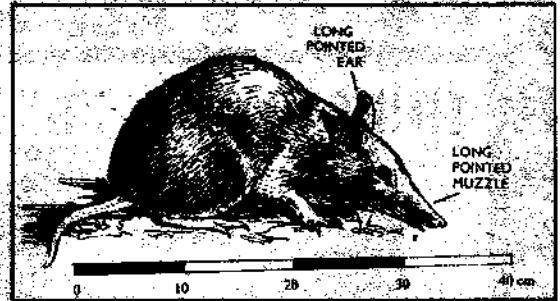
Bandicoots are marsupials and therefore have a pouch.

Unfortunately bandicoots have generally fared poorly after the colonisation of Australia by whites with feral animals and loss of habitat being affected the most.

The long-nosed bandicoot is solitary, except when males and females mate.

They have 8 nipples, but normally they only have two or three in a litter.

Newborn long-nosed bandicoots are about 13mm long and 0.25g in weight about the size of a sultana.



LONG-nosed bandicoot: found within a few hundred kilometres of the eastern coastline.

Adults weigh about a kilogram.

An amazing fact is that the young are born only 12.5 days after mating.

The young stay in the pouch for 60 days, then are weaned within a few weeks.

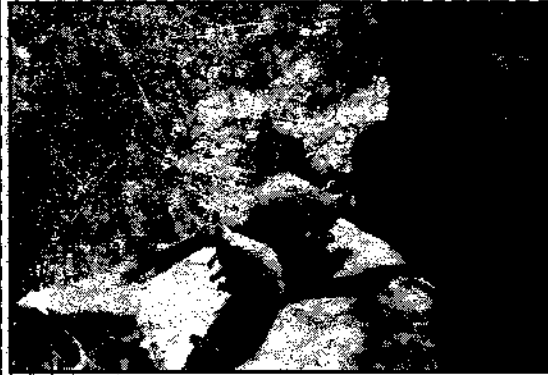
Both authors of this column have a soft spot for bandicoots as Associate Professor Close worked extensively on the genetics of long and short-nosed bandicoots from Cape York to Tasmania.

Steven Ward also worked as a volunteer for Conservation and Land Management in Perth, Western Australia, helping to trap Southern Brown bandicoots to monitor their activities.

If you see a koala please call Robert Close on (046) 203 203 (voice-mail) or after hours on (046) 268 679.

To hear a male koala bellowing (046) 203 200.

Airport threat



THE brush-tailed rock wallaby.

mac's koala club

By STEVEN WARD and ROBERT CLOSE

WE RECENTLY began a series of articles on marsupials that may share the Campbelltown bushland with koalas.

Whether or not these animals are present has suddenly become very important. If they are present, the proposed Holsworthy airport could have a big impact upon them.

In our next column, we will feature a number of small wallabies that have been recorded from the district.

The first is the brush-tailed rock wallaby (*petrogale penicillata*), a handsome animal larger than a cat (up to 10kg) with a long, black bushy tail, reddish-brown rump, grey shoulders, black ears, feet and hands.

Unfortunately their numbers are now critically low in the south-western and west of the State.

A small group of them appeared a few years ago at Warragamba Dam, but recently vanished.

We believe that small colonies may still exist in inaccessible rock-piles along the upper Nepean River catchment.

You – the people Campbelltown – can help.

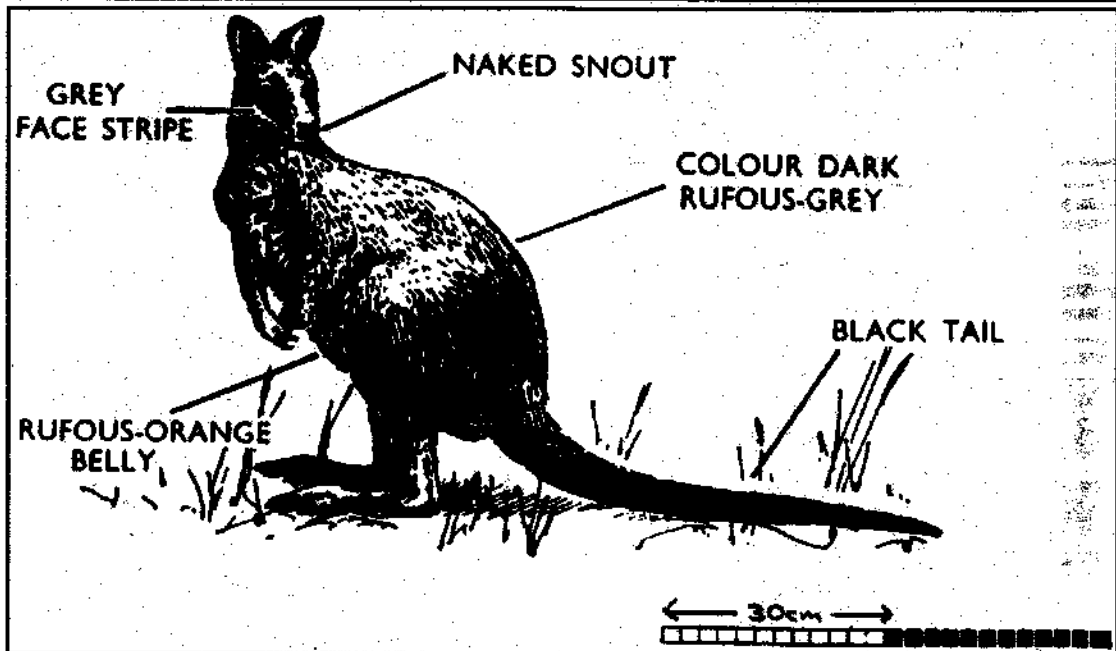
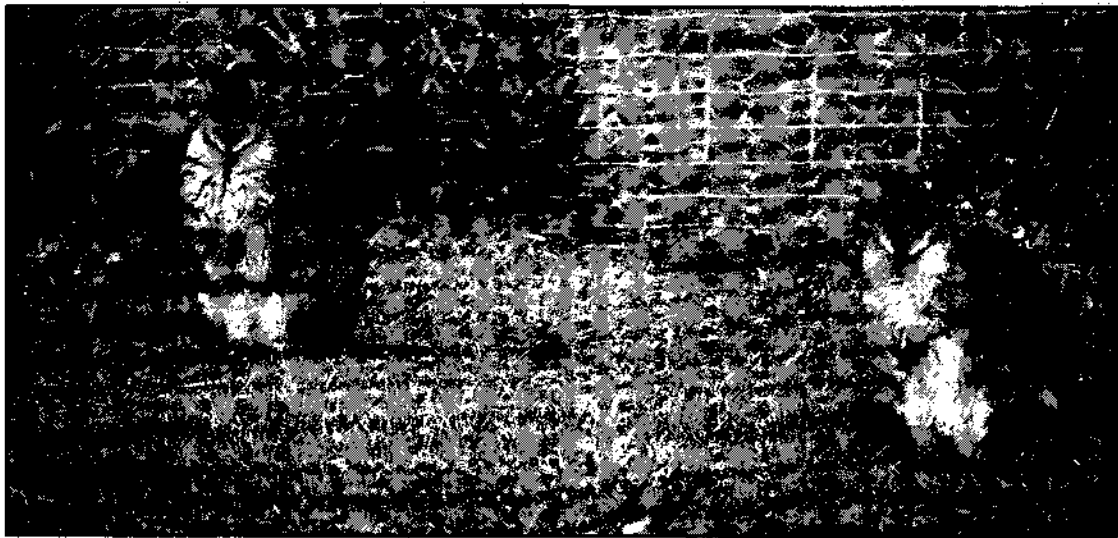
If you see a small wallaby, take careful note of its size, shape, bushiness and angle of the tail, colour of rump and feet.

If you find a dead wallaby, note whether or not toe-nails extend more than 2mm past the pads on the hind feet.

Of course, don't forget to look for koalas too.

If you sight a koala, call Robert Close at the University of Western Sydney Macarthur on (046) 20 3203 (voice mail) or after hours on (046) 26 8679.

To hear a male koala bellowing, call (046) 20 3200.



Hard to spot wallaby

THE second in our series on wallabies that may still live in the Campbelltown area is the parma (*Macropus parma*) – a cat sized grey—brown wallaby that lives in wet forests and gullies.

It has a white stripe along its cheek and some have white tips on their tails.

This specie was believed to be extinct in Australia, although some parmas were known from New Zealand where they had been taken last century.

Some of those were actually being brought back to Australia for release in the wild when parmas were rediscovered in the Dorrigo State Forest.

They have been found at several other places.

Because these animals are small, dark, fast moving, secretive and solitary they are difficult to spot let alone observe long enough to recognise.

This is why any small wallaby road—kills should be examined closely.

There has been a recent report of a small wallaby

mac's koala club

spotted in the Kentyln area, so keep your eyes peeled and let us know if you see anything, particularly a road—kill or a dog—kill.

Note that the rare wallabies, such as the parma, are considerably smaller than the most common species in the Campbelltown area, the swamp wallaby.

These are often killed on local roads and we will describe this species in next week's column.

If you sight a koala please contact Robert Close at the University of Western Sydney, Macarthur on (046) 20 3203 (voice mail), or after hours on (046) 26 8679.

To hear a male koala bellowing (046) 203200.
— Steven Ward and Robert Close.

A wallaby from the swamp

OVER the past two weeks we have described rare wallaby species that may occur in the Campbelltown region.

This week we move on to a common species, the swamp wallaby (*Wallabia bicolor*)

The swamp wallaby received its name because it was first seen in a swamp. However, it lives in a variety of habitats and is one of our most widespread and successful wallabies.

The swamp wallaby is a dark brown to black wallaby and is the largest in this area with females on average weighing 13 kg and the males 17 kg.

They normally rest during the day and come out to feed at night, but if walking through the bush you may sometimes disturb one from its daytime nest, causing it to rush off through the bush.

They are a solitary animal, so you won't come across a large group.

Swamp wallabies are widespread in the district and is the most

mac's koala club

common of local road kills.

A small population lives in Mt Annan Botanic Garden, although rarely seen. Swamp wallabies eat a range of plants, mainly shrubs and bushes some of which are toxic to other species, such as the bracken fern, which is highly poisonous to cattle.

Swamp wallabies tend to charge through the bush when moving, making a "thump, thump, thump" noise as they hop along.

If walking through the bush at

night you will often hear this noise, though it's rare to see the wallaby.

If you have heard them this may explain one of those mysterious noises which occur in the bush at night.

As swamp wallabies hop along their long black tail streams out behind them. The carriage of the tail is important because they are often confused for brush-tailed rock wallabies.

They are similar to brush-tail rock wallabies in colour and the black tail, but the rock wallaby is considerably smaller (6-10 kg) and carries its bushier tail curved upwards.

Although swamp wallabies are not endangered like the brush-tailed, they are still a magnificent sight!

If you sight a koala contact Robert Close at University of Western Sydney Macarthur on (046) 203 203 (voice mail) or after hours on (046) 268 679. To hear a male koala bellowing ring (046) 203 200.

■ Steven Ward and Robert Close.

On lookout for potoroos

mac's koala club

By STEVEN WARD and ROBERT CLOSE

IN OUR last few columns we have been discussing species of wallaby that might be found in the Campbelltown area.

You might wonder what the difference is between a wallaby and a kangaroo.

Basically, the rule of thumb is that if the hind foot is greater than 25 centimetres (10 inches) long, it is considered to be a kangaroo, and if less, it is a wallaby.

In today's column, though, we will be discussing potoroos (also known as rat-kangaroos), which are related to wallabies and kangaroos.

The main difference is that potoroos have a slightly different tooth structure, are very small (weighing about one kilogram) and have a longer snout than other wallabies.

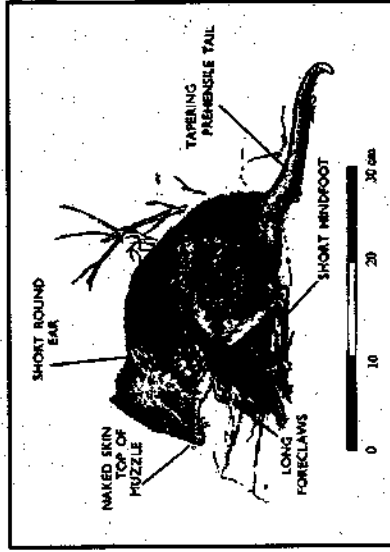
They use their long nose to sniff out roots, tubers, fungi (eg mushrooms, toadstools) and insects.

The potoroo is an attractive, gentle animal with large eyes and beautiful fur.

There are a number of potoroo species, most of which have fared badly since the arrival of whites to Australia.

One species in particular, the long nosed potoroo (*Potorous tridactylus*), may still occur in the Campbelltown area.

The potoroo is vulnerable to land clearing as it is only found in dense ground cover.



POTOROOS have a longer snout

The long nosed potoroo has been recorded from the O'Hares Creek area, Darkes Forest, the Mt Keira to Ousley Road and the Woronora and Cordleaux catchment areas, but the closest recent reports are from the Robertson area.

We would appreciate hearing of any sightings of tiny wallaby-like animals, as the potoroo's present distribution needs to be monitored to prevent further destruction of their habitat.

If you sight a koala, please contact Robert Close at University of Western Sydney, Macarthur, on (046) 203 203 (voice mail), or after hours on (046) 268 679. To hear a male koala bellowing call (046) 203 200.

Call for road signs

THE reporting of koala sightings by the public has proceeded well.

In 1996, we had a total of 28 koala sightings reported. Unfortunately five of these reports were of koalas being hit by a car.

A further 10 reports were of koalas seen cross-

mac's koala club

ing a road. So remember to look out for koalas if you are driving near bushland.

We hope that councils and the Roads and Traffic Authority will put up

koala road signs to alert drivers to the danger of hitting koalas.

The Campbelltown Council is leading the way at the moment.

The council has

already put up a couple of signs in Wedderburn.

Things are going well with people reporting koala sightings, but we are very keen to learn of any koala sightings - past or present, alive or dead.

We have just improved our system for reporting koala sightings.

If you find a koala then you can greatly assist us by reporting your sightings as soon as possible on (02) 9962 9996.

You'll be asked to leave your name and phone number, which will be sent to us via pager, and we'll contact you as soon as we can get to a phone.

This means that if you do see a koala, and you report it as soon as possible, then we have as much chance as possible of catching it.

Why do we want to catch koalas?

So that we can weigh them, find out which sex they are, check for young, estimate their age, and assess their condition. We then attach a coloured ear-tag to each ear so that we can identify the koala later.

If you see a koala with ear-tags, note down the colours.

On some koalas we also fit a radio collar.

We slip the collar right over the koala's head. This ensures that the collar will slide off if it gets caught on something (for example, a stick).

Radio-collaring allows us to locate the koalas again so that we can follow the development of the young and find out the trees and habitat they prefer.

This is important because this kind of information is essential to estimate the impacts of things like the proposed Holsworthy airport.

First, however, we have to locate the koala; but this is very difficult near Campbelltown because the koalas are so hard to spot.

- Steven Ward
and Robert Close

Macarthur Advertiser, Wednesday, February 12, 1997-

Seen a rare wallaby lately?

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By Steven Ward
and Robert Close

THE next in our series on animals which may still live in the Campbelltown bush has an interesting name, the red-neck pademelon (*thylagale thetis*).

Its name pademelon is based on an Aboriginal name for a small wallaby.

The red-neck pademelon is about the size of a big cat (males about 7kg and females 4kg), with brown-grey fur on their back and a white underbelly.

As their name suggests they have a red-coloured neck which distinguishes them from the red-legged pademelon, commonly found in Queensland.

Pademelons generally prefer the forests close to grassy or pasture areas and heath.

They will travel up to 100 metres from the forest edge to the feeding grounds after dark, and return just before dawn.

In areas where land has been cleared for forestry or agriculture and a large amount of forest edge exists, red-necked pademelons may be so numerous as to be a pest at that spot.

However, the red-necked pademelon only occupies a small part of its former distribution.

A related species which was exceedingly common in Victoria last century has now vanished from that state.

In our local area red-necked pademelons were present between the O'Hares and Wedderburn Creeks and in the Woronora catchment in the 1950s but have not been sighted recently.

They may still exist in the upper Avon catchment and Cataract River.

If anyone has sighted a red-necked pademelon (or any cat-sized wallaby) in the local area then we would be most interested to hear about it.

To report a koala sighting please call the University of Western Sydney Macarthur hotline (02) 9962 9996.

To hear a male koala bellowing call (046) 20 3200.

Charting the DNA of koalas' lifestyles

IN a previous column we have mentioned that koala corpses (that is dead koalas) can still provide useful information.

One of the most important things we can get from a corpse is a tissue sample which can be analysed to obtain a genetic fingerprint of that koala.

This technique is the same as that used by forensic experts who search the scene of a crime for traces of blood or tissue from the culprit.

Each human, or koala, has an individual genetic fingerprint which can be seen in the laboratory as a series of bands like a bar code.

This allows us to compare the banding or fingerprint of a koala with others, and to work out which other koalas he, or she, is related to.

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If we could get tissue samples for all the koalas in an area we could work out the entire family tree for the koalas and determine which animals were likely to have migrated from another colony.

When we obtain enough samples from the koalas from the south west Sydney region, we can analyse the data to see how closely related, or inbred, the koalas are.

Inbred animals such as the koalas on French, Phillip and Kangaroo islands off the coast of Victoria and South Aus-

tralia tend to be much less resistant to disease or changes in their environment.

These genetic samples can also indicate whether colonies are isolated from each other.

Thus we can use the samples to investigate whether the Campbelltown area is just a "suburb" in a big "city" of koalas in south-west Sydney (Liverpool to Bowral) or whether these koalas are so isolated that we should think of Campbelltown as a completely separate country town.

If we think of koalas as living in separate suburbs, then koalas will be moving between suburbs, but if they are in separate towns then only a few hardy individuals will be managing to move between the groups of koalas.

The construction of freeways, the clearing of land and the building of suburbs might then prevent all movement between "towns".

These are big questions which can affect the way we plan development of housing (and airports).

The genetic fingerprinting (processed by colleagues at the University of New South Wales) will help us answer these questions.

First though, we have to find the koalas, which is why we need your help in reporting any sighting from south west Sydney.

To report a sighting a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (046) 203 200.

- Robert Close
and Steven Ward

Skulls play role

SINCE the publication of our articles on those sharing the bush with koalas we have received some fascinating calls from people who have spotted unusual animals.

One call reported a small animal with a flat, pointed head which had drowned itself.

This turned out to be an antechinus which we have described previously — a mouse-sized, but ferocious marsupial omnivore (they eat insects, meat and nectar) which comes from the same family as the Tasmanian devil and thylacine (Tasmanian tiger).

The skull of this antechinus will go to the Australian Museum and will serve as a permanent record of the distribution of the species.

As far as the museum is concerned, an animal does not exist in an area unless there is a skull in the museum collection, preferably labelled with the date and the name of the collector.

Records of a sighting do not count, even from reputable observers because even skilled observers can make mistakes.

We had an interesting example of this recently when the biologists preparing the Holsworthy fauna survey called us to say they had spotted a koala near the causeway beside the Liverpool tip on the Georges River.

Excited, we rushed off to capture the koala only to find that what they'd spotted was the grey backside of a big brush-tailed possum.

So even experts can make mistakes.

It's interesting to note that before 1986 there was only one koala specimen from Campbelltown in the Australian Museum.

Now, as a result of your calls to report dead koalas (most being killed by cars and dogs) there are now several more koala skulls to be passed on to the Australian Museum.

These will be used by

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researchers until the end of civilisation, or the end

of the museum, whichever comes first.

Next week we'll discuss the other sightings of unusual animals.

To report a koala sighting call the UWS Macarthur on (02) 9962 9996.

To hear a male koala bellowing call (046) 20 3200.

□ STEVEN WARD
and ROBERT CLOSE

Macarthur Advertiser, Wednesday, March 5, 1997

Domestic dogs that kill

A RESPONSE to our request for small wallaby sightings took us to Wedderburn, where a small dead wallaby had been found.

This turned out to be a young female swamp wallaby (a joey).

She was fully furred and in a week or two would have been out of Mum's comfy pouch.

The joey's leg was broken and we suspect that a dog had killed her.

Wallabies with a large joey in the pouch are very vulnerable to dogs because their speed and agility are reduced.

Sometimes a ruthless escape plan must be used: when Mum is tiring and the dogs are about to seize her, she relaxes the muscles of the pouch and ejects the joey.

While the dogs are occupied with the unfortunate joey, Mum makes her escape.

However, 30 days later there is often a new baby in the pouch, because many wallaby species have a tiny embryo in the uterus waiting its turn.

In another six months, this new joey will be ready to emerge.

So in the long run, it is better for the mother to lose her young and survive than for both to die.

The problem, of course, is that if dogs are always about when the joeys grow big, then no young will survive and the wallabies will eventually disappear.

On the edge of the bush, house dogs are numerous,

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have no diseases and are well fed.

They are fit and strong all year round, and in drought conditions the bush creatures (including koalas) often lack the strength to escape.

Don't believe that your trusty Rover is a stay-at-home-sook.

A recent study of domestic dogs which were tracked by means of radio collars at Jervis Bay showed that they formed a pack after their owners were asleep, spent the night hunting, then returned home to eat and sleep all day!

Their owners were completely unaware of their pets' savage adventures.

So the moral is: if you want to have a dog *and* large wildlife in your bushland retreat then you must confine your dog at night.

Dogs can roam over several kilometres at night so even if your house is some distance from the bush your dog can still have a serious effect.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (046) 20 3200.

- Robert Close and Steven Ward

Equipment was stolen

UNFORTUNATELY, this week's column is of a depressing nature.

Equipment used for our koala work was stolen recently from the Woodbine area.

An old red and green backpack that we use in the field and a large blue antennae (see picture) about one metre long which is used to help locate koalas with radio-collars was taken.

The backpack was dumped close to the site of the theft in Woodbine.

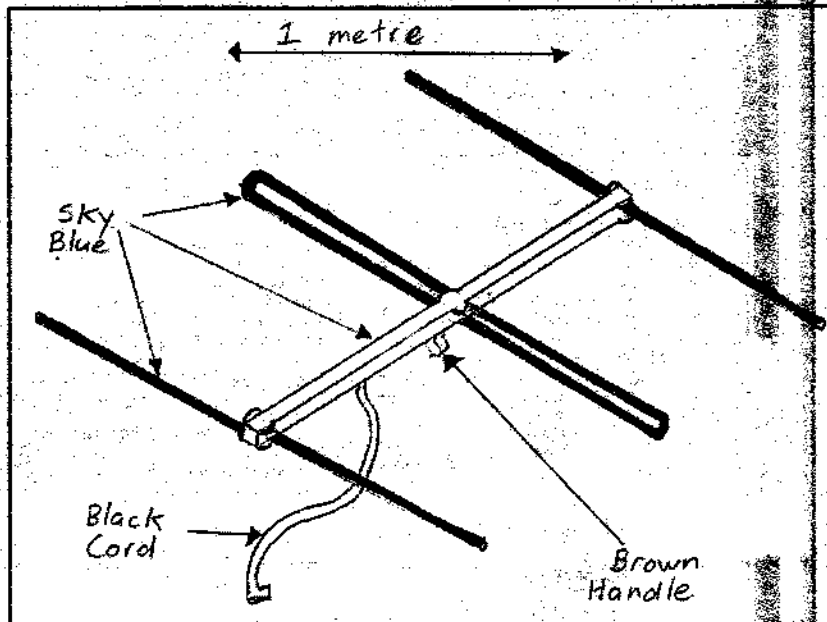
The inspiring part of this story is that the occupants of the house, where the backpack was dumped, reported their find to the police.

Members of the Eagle Vale police station quickly picked up the backpack and called a phone number they found in the backpack.

The number was that of a volunteer who had helped us.

This volunteer gave the police our pager number, and we were soon informed of the find, even before we discovered the theft.

We would like to thank the people who reported the equipment that they found and the Eagle Vale police.



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Unfortunately we have not yet recovered the large blue antennae and a pair of green binoculars, which were in the backpack.

This equipment is not covered by the university's insurance policy.

We would appreciate the return of this property and anyone who has any information can call

Robert Close at the university on (046) 20 3203 (voice mail).

The antennae is quite distinctive. It has sky blue colour, somewhat similar to a TV antennae, but the "arms" sticking out to the sides of the antennae can be folded down, making it much more compact.

It works very well for helping to locate koalas, but couldn't be used for

any other purpose, so the thieves may well have dumped it somewhere.

Next week, we'll tell you whether or not we managed to obtain the missing items and we'll also tell you how the missing antennae is used to help find koalas.

To report a koala sighting call University of Western Sydney, Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (046) 20 3200.

Binoculars and antenna stolen

IN last week's column we reported that a pair of binoculars and an antenna that we use to track radio-collared koalas had been stolen.

Unfortunately it is still missing, so we would have to find over \$200 to replace it.

The antenna picks up a signal emitted by a small transmitter attached to the collar.

We slip the collar over the koala's head and it is kept in place by the thick and fleshy ears.

This means that if the collar gets caught on a branch, the collar slides off, freeing the koala.

Our new collars have a "mortality switch" which changes the signal if the collar hasn't moved for 12 hours (because the collar had been thrown off or if the koala has died).

We then know to look on the ground rather than in the trees.

The radio-collar constantly emits a beeping on a certain radio frequency which is different for each of the collars.

We carry a special receiver, attached

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to the antenna, which changes the radio-signal to a "bleep" noise.

We find the direction of a collared koala by sweeping the antenna around in a full circle.

The beeping signal from the radio-collar is loudest when the antenna is pointing at the koala.

We walk in the direction indicated, searching until we find the koala.

Although this sounds quite simple in principle, it is actually very difficult.

Next week we'll discuss problems we encounter whilst tracking koalas.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

- STEVEN WARD and
ROBERT CLOSE

Caller must ring us again to tell more

By STEVEN WARD and ROBERT CLOSE

AN interesting message came on our new pagers at 10.30am on Friday, March 21.

The message said: "Have seen three koalas driving down Henry Lawson Drive, along Picnic Point."

We immediately thought of koalas driving along in a convertible, off to enjoy a picnic.

Unfortunately, the caller did not leave any more details, name or phone number, so we would like them to call again.

We need to know whether all three koalas were seen at the one time or separately, and whether any young ones were present.

If you know anyone who may have left the message, you can ask them to call again, as the mystery caller may not read our koala column.

On a completely different topic, we were pleased to recapture Franchesca and her cub Sarah at Wedderburn.

Franchesca threw off her radio collar in October last year and we could not find her till last week.

Sarah, now one-and-a-half-year-old, was on a tree 10 metres away.

The koalas were spotted by Jane Thompson, working for the Australian Koala Foundation, who was being given a guided tour by local historian and raconteur, Keith Longhurst.

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We recaptured both Franchesca and Sarah and took them for a veterinary inspection at Elizabeth Macarthur Agricultural Institute.

Franchesca has improved in condition from September 1996.

It's likely that the recent rain over the past few months, which has encouraged new growth in the gum trees, is making things much easier for koalas.

Franchesca didn't have a cub in the pouch, and Sarah was no longer suckling, so Franchesca's life will be easier with one mouth less to feed.

Sarah has grown in the last six months, increasing from 1.8kg in September 1996 to 3.8kg now.

Both are now wearing new radio collars and we will report their progress from time to time.

● To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

● To hear a male koala bellowing call (046) 203 200.

Macarthur Advertiser, Wednesday, April 2, 1997

Echidna in district

ONE of our readers recently reported an echidna on Victoria Road at Wedderburn our second record from the district.

The echidna is a monotreme and like all mammals has fur (the fur occurs between the spines) and suckles young, but it also lays eggs.

When the egg hatches the baby is carried in a temporary pouch and drinks milk that oozes from a pore in the pouch. The mother echidna does not have any nipples.

The echidna's diet consists of termites which it obtains by breaking open the termites' mound with its strong forepaws.

Although it has no teeth, the echidna's tongue is long and covered with sticky saliva which entraps the termites.

Echidnas weigh 2-7 kilograms, occur widely across Australia, and survive in a variety of conditions.

Another species, the larger Long-beaked Echidna, lives in Papua New Guinea.

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Like koalas echidnas are solitary and are often killed by cars.

As the echidna's defence is to curl up and expose its spines, it is particularly susceptible to being run over.

However its spines may well take revenge on your car tyre.

The echidna will be one of the mascots for the Sydney 2000 Olympic Games.

It is nice to note that Campbelltown also has the other two mascots, the platypus and kookaburra.

To report a koala sighting call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (046) 203 200.

- STEVEN WARD and ROBERT CLOSE

Report koala sightings

By STEVEN WARD and ROBERT CLOSE

IN a previous column we reported the theft of an antenna (still missing) that we use to track radio-collared koalas.

In today's column we describe the difficulties of using the antenna to find these koalas.

To briefly recap: special equipment on the radio collar transmits a special radio frequency, which we detect with our portable receiving equipment and tells us the direction of the koala.

We walk in the direction the receiving equipment indicates until we find the koala.

While this may sound easy, the steep terrain of some koalas' habitat is dangerous for walking, particularly when burdened with receiver, pack and antenna.

The signal emitted by the collar can be blocked or "muffled" by the ground.

That is, if the koala was down in the bottom of a gully, and we were standing back from the edge of the gully, the rock between us and the koala would stop us from finding out which direction the koala is.

To make matters worse, rocks can "bounce" the signal, so that our equipment would indicate more than one direction to the koala.

Even when the signal strength tells us that the koala is close, sometimes it takes a lot of searching to spot it.

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This ability to blend in with the bush is what makes it so hard for us to find koalas without radio-collars, and why it is so important for you to report any koalas you have seen, or see in the future.

Other, more mundane problems that we sometimes encounter are: prickly bushes, wasps (Steven was once stung twice in about five minutes), loose rocks and slippery leaves (sometimes resulting in undignified tumbles and minor injuries).

We have also seen a number of snakes (including the endangered broad-headed snake and are always on the lookout, particularly for the death adder, which unlike most snakes doesn't move when it feels our approach.

However, snakes are just as important as koalas and that we feel lucky to have seen them and let them go on their way.

● To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

● To hear a male koala bellowing call (046) 203 200.

Please fill in survey form

By STEVEN WARD and ROBERT CLOSE

THE Australian Koala Foundation (AKF) and Campbelltown City Council are jointly conducting a postal survey of people living close to the Holsworthy Army Range.

This survey is a necessary part of preparing a Management Plan for koalas in the district.

Although we are not conducting the survey, we have arranged with the AKF and Campbelltown Council to have access to the data collected.

We will be contacting those people who report seeing a koala and have given their permission for us to contact them.

It is important that you fill in the survey form, even if you have not seen koalas.

This will help to determine the density of koalas in the Campbelltown area.

Historical sightings are also particularly important as they will provide details of the little known history of koalas in the Campbelltown area.

It is also extremely important to indicate whether or not any koala sightings you describe have been previously reported to us.

Otherwise the sighting might be recorded twice.

This would give a false picture of koala numbers.

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Although the survey form is only asking for koala sightings in the Campbelltown Council area, we would encourage respondents to indicate if they have seen koalas elsewhere in the region.

Very little is known about koalas anywhere south of Sydney and your information is important.

On the front of the survey form you will see a paragraph including our contact number in case of any koala sightings.

We would like you to note that number down (stick it to the fridge perhaps) so that if you do see a koala in the future you can let us know about it.

We would also like to thank the AKF and The Macarthur Advertiser for supporting our research.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (046) 203 200.

What do we know about the koala?

THIS week we shall review what we know and what we don't know about koalas in the southern Sydney region, from Sydney south to Mittagong.

We know that these koalas are scattered very thinly through the bush (one per 10-30 hectares in "good" areas).

This low density means that it is extremely hard to find koalas in the bush - we've tried.

However because there is so much unexplored bushland (40,000 hectares) there would be quite a few koalas depending on how much "good" habitat there is.

We know of only two locations where koalas are breeding in the Campbelltown-Holsworthy area.

These locations are close to Wedderburn and Kentlyn, suburbs of Campbelltown.

We have also received reports of koala sightings throughout much of the southern Sydney area.

Unfortunately these sightings don't mean that koalas are breeding in these spots.

We need to confirm reports of female koalas with you to be certain that koalas are breeding.

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This is where your reports of koala sightings come in - they provide valuable information that would otherwise take us years of searching to obtain.

Other things we would like to know about the southern Sydney koalas are: the habitat they prefer, the density of koalas, how much of an impact chlamydia has, how long koalas live for, how many young a female can produce during her lifetime, how well they do after a fire and how much of an impact the proposed airport options at Holsworthy will have.

We will discuss likely problems the proposed airport will cause the local koalas next week.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (046) 203 200.
By STEVEN WARD and ROBERT CLOSE

Animals come first

WHENEVER wild koalas are captured it will cause them (and their captors) a certain amount of stress.

We use a capture method we believe causes the koala a minimum amount of stress. This consists of "chasing" the koala to the ground with a flapping flag attached to a long extendable pole and then placing it in a big hessian bag.

To obtain approval from the university to conduct research on animals, full details of the research and expected stresses to the animals must be presented to the Animal Ethics Committee.

This committee consists of a vet, an animal welfare representative and an independent person, as well as researchers. The committee discusses the project and then approves or rejects it.

The committee has to decide whether the value of the research and the long-term benefits outweigh the short-term stresses for the animals involved.

The long-term benefits of our study are that our results will provide details on the population numbers, distribution, movements, tree choice, disease status, reproduction rate, cause of death and genetic health of local koalas.

Without this information, effective management is impossible and impacts such as the Holsworthy airport cannot be fully assessed.

On Sunday, April 27 we attempted to capture a young male koala at Kentlyn but we were unsuccessful because the tree was large and we could not climb above the koala to be in a good position to

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By STEVEN WARD and ROBERT CLOSE

flag it to the ground. On our second attempt to capture the koala, it began to "cry".

The sound is very distressing because it sounds so similar to a baby's cry. We don't really know what this "crying" means.

It seems to be made only by young koala, and only when they are in the tree. They do not "cry" when in the hessian bag nor when being handled.

We suspect that the "cry" may be a submission response to indicate to another koala that they "give up" and are not a threat to the other's territory; perhaps similar to a dog rolling on its back when faced by a larger dog.

We would like to assure all the watchers on Sunday that the koala was probably no more agitated than if he had been chased by a large dominant koala.

This is in fact the fate of all young male koalas, before they can establish a territory of their own.

To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (046) 203 200.

Enter another Olympic mascot

By STEVEN WARD
and ROBERT CLOSE

PREVIOUSLY we have described the presence in the local area of one of the Olympic mascots, the echidna.

Today we look at another mascot, the platypus.

Like the echidna, the platypus (*ornithorhynchus anatinus*) is a monotreme.

This means that the platypus has only one external opening for urine, faeces and reproduction.

This one hole, called a cloaca, is a feature of all three Olympic mascots.

All three mascots also lay eggs.

The female platypus lays its eggs in a long burrow near a stream bank.

After it emerges, the young platypii feed for four-five months on milk secreted from the mother.

Male platypus, when they become adults, have a spur on each ankle, which is connected to a gland with venom in the groin.

The venom can cause

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excruciating pain in humans and is used in fights between male platypuses.

Also, like the other mascots, the adult platypus has no teeth.

Young platypuses do have poorly developed teeth, but quickly lose them.

A platypus uses its heavy duck-like bill to eat a large variety of insects, and sometimes small animals.

It also uses the bill to sift insects from silt on the stream bottom.

Unlike a duck's, the bill of the platypus is very sensitive and can pick up electrical impulses.

A platypus generally uses a mudbank to dig its burrows and the Sydney sandstone soils found in

the local area are not particularly suitable.

However, there have been a number of local platypus sightings.

They have been seen in the O'Hares Creek in Wedderburn and the Georges River.

Overall the number of sightings is few, but this is not surprising when you consider that often local streams and rivers where platypuses might be found are at the bottom of deep gullies or gorges.

Often these have steep sides with loose sandstone rocks which can be dangerous to walk over.

Despite reported local sightings, there are no specimens in the museum.

If you should find a dead one by the river, call us or the museum immediately.

To report a koala sighting, call the University of Western Sydney Macarthur hotline on (02) 9962-9996.

To hear a male koala bellowing, call (046) 20 3200.

A really angry critter!

LAST month three workmates were driving north along the freeway near the Bargo turn-off after work.

They spotted a koala, which was lying by the road and stopped to investigate. They discovered that the koala was still alive, but had apparently been clipped by a car and was stunned.

Being good samaritans they decided to pick up the koala and take it to a vet.

So, they placed the koala in the back of their van and continued on their way.

However, about 18 km further on their way, near Allens Creek, the koala woke up, objected to its forced migration, and proceeded to tear the back of the van to shreds.

Perturbed by the damage to the van, and amazed at the transformation of what was previously a poor stunned koala into a ferocious beast, the captors stopped and opened the back of the van. The koala burst out and took off

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With STEVEN WARD
and ROBERT CLOSE

for the nearest bush.

Although this story is quite amusing, it does effectively demonstrate an important point.

That is koalas are wild animals and if you approach one, even if injured, it will try to escape or attack you. Koalas are strong and have sharp teeth and claws. Remember koalas that you see in zoos or wildlife sanctuaries are tame and are used to people.

So if you should come across a sick or injured koala please do not

try to pick it up.

Call us as soon as possible.

For other wildlife you can call WIRES on (02) 9975 1633 or the Sydney Metropolitan Wildlife Service on (02) 9413 4300 who are licensed by the National Parks and Wildlife to look after sick or injured native fauna.

If you feel you absolutely must pick up a koala (although we recommend against it) try to use a thick blanket.

Once the koala is wrapped up it should calm down and the blanket provides the human assistant some protection from the koala's teeth and claws.

Finally, displaced koalas, when tracked, have moved up to 40km. We hope this one makes it home!

● To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

● To hear a male koala bellowing call (046) 203 200.

Planes' long term effect

mac's koala club

KOALAS that have been reported by the community have allowed the University of Western Sydney to successfully catch and release the animals in the Campbelltown area.

This information has enabled the university to map areas where koalas are breeding.

When the flight paths for the proposed second Sydney airport at Holsworthy were published last week, the university was able to match koala breeding areas with the flight paths (see attached graphic).

With the northern Holsworthy airport options, it appears that three of four aircraft routes will directly affect the Wedderburn colony.

A further two of four aircraft will affect the Kentlyn colony.

For the southern airport option three of four aircraft routes will affect the Wedderburn colony and three of four aircraft routes will affect the Kentlyn colony.

If the koalas survive the building of the airport, roads and railways, then the aircraft noise will be likely to disrupt koalas' communication.

Male koalas bellow to advertise their presence to rivals and lovers.

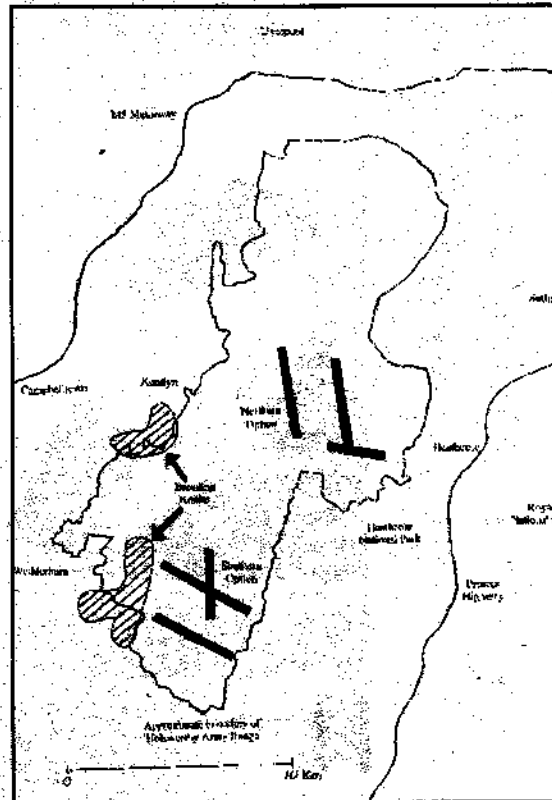
However, noise from aircraft will probably drown these calls.

The male koala's calls help to maintain a territory as the bellowing sound can travel 500 metres on a still night.

The knowledge on breeding areas is limited at present and the university relies on the general public to inform them of koala habits.

The information will help in planning how to ensure the long-term survival of koalas in Sydney's south.

If there are no other breeding areas, then the university will suffer dramatically with the building of a second airport.



By STEVEN WARD and ROBERT CLOSE

will suffer dramatically with the building of a second airport.

Koala research is valuable, however, there are still many questions left unanswered.

To hear a male koala bellowing call (046) 203 200.

To report a koalas sighting call the University of

Wedderburn and Kentlyn koala

6.

Young one failed to survive the night

By STEVEN WARD
and ROBERT CLOSE

ON Sunday, April 25, Robyn Hansen was walking with her son, Carl, and friend Aaron, in bushland by Peter Meadows Creek.

They were surprised when Carl spotted a koala sitting in a tree.

Once home, Robyn rang our pager number (see below) to report the sighting and mentioned that the koala was sitting low in a tree.

Steven immediately went out to investigate, and Robyn, Carl and Aaron kindly came out to show where the koala had been spotted.

However, the koala had moved, but we spotted it lying on a rock in the bottom of a small gully.

Steven immediately feared the worst, as the koala was scarcely moving and normally a wild koala would have moved away from us.

The koala had ear tags, which told us this koala was Mac, a young male koala caught six

mac's koala club

months previously near Georges River Road in Kentlyn.

He had therefore moved across Ruse, a distance of at least two and a half kilometres.

We wonder what happened to Mac on the way.

We consulted a vet and a WIRES carer about the best method to care for the koala overnight, before a veterinary inspection the next day.

Our hopes were raised slightly by the fact that the koala was managing some movement, but we were still very concerned.

Unfortunately though, the koala passed away overnight.

Steven took Mac to a vet at Elizabeth Macarthur Agricultural Institute (EMAI) for a post mortem.

The cause of death is unclear, but it seems that the koala was probably very sick for some weeks previously, and was severely dehydrated.

EMAI is in the process of a detailed examination of the damaged organs and we will provide further details when possible.

We would like to thank Robyn Hansen for reporting the sighting and despite the unhappy ending, information on the cause of death will be important in helping to understand problems by koalas in this area.

To report a koala sighting please contact the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (046) 20 3200.

Lyn and her cub sighted

By STEVEN WARD
and ROBERT CLOSE

LAST Monday, we received a message from Eric Pace that he had spotted two koalas in his backyard, with one koala being larger than the other.

Eric had recently received the Australian Koala Foundation (AKF) koala survey for the Campbelltown City Council, and called us because our number is given on the front of the survey.

Eric and his family had never had koalas on the property before.

Eric's property, however, is close to Kentlyn Primary School and his son remembers the great excitement when we caught Lyn there, a young female koala, in February of 1996.

At that time, Lyn had a hairless cub in the pouch.

If all went well, that cub should now be approximately 18 months old.

We hoped therefore that the two koalas were Lyn and her cub, with the smaller younger koala looking about the right size.

Robert eagerly climbed up the tree to flag (waving a piece of material on a long extendable aluminium pole) the two down.

Unfortunately, the koalas had other ideas.

Mum disappeared into a thick clump of foliage and refused to budge.

mac's koala club

The cub meanwhile had swung through the same clump onto a neighbouring tree, and away to safety.

A little while after these frustrating developments we decided to abort the capture attempt so that we wouldn't cause too much stress to the koalas.

Unfortunately, the mother kept her ears covered by foliage, and although she did appear to have ear tags, we couldn't get a good enough look to be confident of who she was.

Steven went out again the next day to try and spot her, but the two had vanished.

However, it does seem likely that it was Lyn and her cub after checking through our list of ear tagged koalas.

Perhaps if they are spotted and reported again we will be able to catch them and tell you how they are doing in this column. We also remind you to fill out our AKF koala survey.

Your reports will be of great value for planning and protection of the local koalas. To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (046) 203 300.

Macarthur Advertiser, Wednesday, June 11, 1997

Feisty Kevin in top health

By STEVEN WARD
and ROBERT CLOSE

LAST week we described how two acrobatic koalas avoided our capture attempts.

Since then, Eric Pace and his family, who spotted the koalas, and their neighbours, have had more excitement in their patch of bush.

On the night of Monday, June 9, the Paces heard a bewildering racket like wild lions going berserk. They remembered our description of a male koala bellowing and realised that it must have been koalas!

You can also hear a recording of this noise if you call (046) 20 3200.

On investigation, the Paces found a large koala bellowing and a smaller one "squeaking". The next day their neighbours spotted a koala and the Paces called to let us know.

Steven, with the help of a couple of university volunteers, managed to catch this koala: a strong, feisty, 10kg male.

Despite his flashing claws and gnashing jaws he was identified as Kevin, caught previously in October 1995 on Old Kent Road, Kentlyn.

Kevin is in excellent health, and we fitted him with a radio collar and released him in his capture tree.

The bellowing and squeaking could mean two things: either Kevin was bullying the juvenile (which avoided our capture) or romance was in the air.

mac's koala club

We suspect bullying, because the breeding season in other areas of NSW does not begin until September.

Moreover, we now have records of several sightings of young animals coming into Campbelltown's gardens at this time of year, possibly to avoid the stress of male bullies.

So keep your eyes and ears open.

Listen for strange sounds, check the ground beneath trees for "olive pip" koala droppings, and look for scratches on gum trees with hard, smooth bark.

The night after Kevin was captured, the mother and cub were spotted again.

However, the cub was in too difficult a tree to attempt a capture and the mother disappeared before we arrived.

So we've had a busy week!

We would also like to thank the Pace family and their neighbours for all their assistance and putting up with us coming and visiting to check out koalas at all hours of the day and night.

Both families have been very hospitable and great assistance.

Next week: news of Molly and her beautiful cub.

■ To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

Macarthur Advertiser, Wednesday, June 18, 1997



■ MOLLY with her six-month-old cub Gaylene. It mishaps didn't stop Molly becoming a mother.

Molly, Gaylene both fit and well

By STEVEN WARD
and ROBERT CLOSE

OUR subject this week is Molly, a koala with a long and chequered history.

We first mentioned Molly 20 months ago in our second-ever column. Molly was first found in a Kentlyn garden on May 8, 1994.

At that time she was 18 months old and badly dehydrated.

Gaylene Parke, a WIRES (Wildlife Information and Rescue Service) worker, nursed Molly back to health and after 10 days in care, Molly was released at Wedderburn with ear tags and a radio collar to follow her movements.

In December 1994 Molly was found in the field with a broken hind leg.

She went back into Gaylene Parker's care and after six weeks the bone had mended without surgical help and Molly was pacing the cage and eager for freedom.

Last year, when Molly was caught to replace the batteries in her radio collar, we were amazed to find she had a membrane down the middle of the pouch dividing it.

We thought at that time that Molly would be unable to raise a cub to maturity because of this

mac's koala club

division. However, as you can see from the photo, Molly proved us wrong and now has a 6½-month-old female cub weighing 280g.

In recognition of the crucial role Gaylene Parker has played in Molly's life we have named the cub Gaylene.

Molly and Gaylene were held overnight after they were captured and inspected by a vet at Elizabeth Macarthur Agricultural Institute the following day.

The photographs of Molly and Gaylene were taken in the enclosure – both are in good health.

We made sure Gaylene was safely inside Molly's pouch when they were released.

We hope that both Molly and Gaylene stay healthy and we will continue to follow their movements.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (046) 203 200.

How koala Mac died

A FEW weeks ago, we reported that Mac, a young male koala caught six months earlier in Kentlyn, had been found but had been very sick and had died overnight.

Mac's body was taken to Elizabeth Macarthur Agricultural Institute for an autopsy to determine the cause of death.

The vets now believe that the cause of Mac's death was a blow to the head, perhaps up to two or three days before he was found.

Being hit by a car would be the most likely cause of such a blow. Mac was found about 100m from Peter Meadows Road.

However, on a brighter note, university researcher Steven Ward was delighted to observe a small paw sticking out from Shirley's pouch, a female koala being radio-tracked in Kentlyn. Obviously, Shirley currently has a pouch young, although there was no-one at home in the pouch when she was last caught in mid-November last year. We assume that this cub must have been born soon after being caught.

When Shirley was last captured, a two-year-old male cub called Bill, also an offspring of Shirley, was reported

mac's koala club

Shirley being located by radio-tracking frequently over the past two months, Bill has only been seen twice.

Bill was last seen in December in a tree about eight metres from Shirley. It's likely that Bill moved away from mum because of Shirley's new baby. One cub to support is quite enough for a mother koala.

It's been an active week for koalas. While tracking Kevin, a male recently caught in Kentlyn, Steven spotted a koala without ear-tags. With the help of volunteers from university, the koala was captured and they discovered that it was a three to four-year-old female, which has been named Kath.

There was no pouch young, but it is believed that Kath may breed this year, especially as she was spotted only 40m away from Kevin.

Kath has also been radio-collared, bringing the total number of koalas being followed to six (not including cubs).

■ Steven Ward and Robert Close

Searching for species

AT the end of June, both Rob and Steven attended a camp at Bargo organised by the National Parks Association. The purpose was to gather volunteers and experts to assess Bargo's bio-diversity. Bio-diversity means the total number of species present in an area. For example an area with 500 species would have a higher bio-diversity than an area with 100 species.

Rob and Steven were leading volunteer teams looking for mammals, which of course, includes koalas. Unfortunately no koalas were found. We did capture some small mammals however: the brown antechinus (*Antechinus stuartii*). Both the black rat and house mouse are introduced species and were found close to areas where people are living. The brown antechinus (discussed in a previous column) and the bush rat are both native to Australia.

We used Elliott traps to capture small mammals. These are rectangular metal aluminium boxes 30 x 8 x 8 cm. The Elliott traps were baited with a peanut butter, oats, honey and cat food mixture. When an animal enters to investigate the smelly bait, it trips a lever which closes the door behind it.

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The animal is not harmed but is caught inside the trap which were left out overnight (because most small mammals are nocturnal) and checked in the morning, just after dawn. The traps also had some nesting material, in this case shredded paper, placed inside so that the animals would be fairly comfortable until released in the morning.

Our dream was to catch a bettong, a small wallaby like animal once found by the Bargo River and we had hoped to find a koala. However, the weekend was a great success and groups investigating other plants and animals made some important finds including the rare broad-headed snake. Most importantly everyone had a good time thanks to fantastic organisation by the National Parks Association.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (046) 203 200.

■ Steven Ward and Robert Close

Stuffed, but poor Roger carries on

RECENTLY, a large (10kg) male koala we have nicknamed Roger has been receiving a lot of publicity.

Apart from becoming well-known in local papers, Roger is at present on display at Campbelltown City Library and has been a hit with a number of school groups where we have given talks.

Unfortunately for Roger, however, he is not out roaming in the bush with other koalas.

Roger met an unfortunate end near the Wedderburn causeway, where he was hit and killed by a car.

So why is Roger now getting so much attention?

Well, Roger has been 'taxidermied' or preserved, or as it is more commonly referred to - stuffed - and has featured in some protests against the second Sydney Airport.

As Roger has attracted so much attention, this week we look at what is involved in preserving an animal like Roger.

First the skin must be taken off the main carcass and the hide (all the skin of the animal) is tanned in a salt, borax and alum (aluminium potassium sulphate) bath.

The time that the hide is left in the tanning bath depends on the type of hide and its thickness, but for a koala it is approximately one week.

The hide is then removed, rinsed in water, drained, and the inside of the skin is rubbed in vegetable oil.

To get the right body shape, a papier-mache plaster

mac's koala club

mould is prepared from the corpse.

The mould is dried and removed.

A two-part expanding polyurethane foam is used to fill the mould, which produces a body cast.

Some parts, such as the nose and eyes, are built up to the proper shape with clay.

Getting the right shape is actually very difficult, and Roger the koala ended up looking somewhat similar to a wombat.

Once the body cast is ready, the tanned hide is fitted around it and everything is left to dry, which takes approximately one month in summer.

Plastic eyes are added, a final painting touch up, and the preserving is complete.

Roger Carrus, a part-time taxidermist (that is someone who preserves animals), kindly did the work free of charge. We are very grateful, because it is obviously a time-consuming process.

Judging by Roger the koala's popularity, we think his work has been worth it.

To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing, call (046) 20 3200.

- Steven Ward and Robert Close

Enter a hefty specimen

RECENTLY, while jogging along a fire trail in Kentlyn, Gary White spotted a koala.

He'd received the koala survey from the Australian Koala Foundation on behalf of the Campbelltown City Council and found our number on the survey form.

He called to let us know about the koala, mentioning that he didn't know whether it were important.

Steven Ward, from the University of Western Sydney Macarthur, assured him that the sighting was indeed important.

Mr White kindly came out to show Steven where he has seen the koala and while searching for it with spotlights they heard the now famous male koala grunting sound. Call (046) 20 3200 to hear a recording of this sound.

As the koala called for a few minutes, they were quickly able to locate it.

Mr White, however, thinks this animal was not the only the one he'd spotted earlier, as this male koala had ear-tags whereas the other had no ear-tags and was smaller.

Steven then rallied university volunteers to help catch the tagged koala.

He turned out to be the largest koala we have caught yet, weighing in at a hefty 10.5kg.

He has been named Gary and was in

mac's koala club

excellent condition and has been fitted with a radio-collar in order for his movements to be followed.

Paul Durman (son of local celebrity Pat Durman) first sighted Gary the koala in April of 1995.

When Robert Close arrived on the scene in 1995, Gary the koala was running down the road by Kentlyn Primary School and Robert had to quickly grab him before he hightailed it into the suburbs.

The 1997 sighting is the first time Gary the koala has been seen since then and we were happy to find out that he is doing so well.

Gary is the second capture resulting from the Australian Koala Foundation survey.

The foundation reports that it has had a good response to the survey.

The official date for submitting replies has passed, but still send in a survey if you have not already done so, as the foundation would love to get more responses. Or phone us on the number below if you've seen a koala.

To report a koala sighting, call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

- Steven Ward and Robert Close

Creek koala haunt?

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A GREEN and tree-filled part of Campbelltown in which we're hoping to find koalas is the Smiths Creek Reserve.

Smiths Creek runs through masses of vegetation, rock crevices and past hollow logs and dense piles of leaf litter.

Local reptilian land agents describe it as a top class area and say it is in high demand from a variety of lizards, snakes, tortoises and frogs.

Phillip Teschke, a graduating science/teaching student from the University of Western Sydney Macarthur, is fascinated by the reserve and has just completed a reptile and frog survey of the area for the Friends of Smiths Creek.

He found more than 30 reptile and frog species, although he had to look hard to find some.

Phillip is highly trained and only began handling snakes after much experience. He warns not to try and catch or kill brown snakes because they are highly poisonous and can be aggressive. Furthermore, all snakes are protected by law.

Phillip says that in addition to his large brown friend, he was dismayed to also see a large number of piles of rubbish by adjoining property back fences in the Smiths Creek Reserve.

This rubbish shelters the introduced mouse and rat, which are a favourite food for snakes. Composting piles of lawn clippings also provide heat for the snakes and their eggs and a sheltered approach to fences.

So if you live near Smiths Creek, please think twice before dumping rubbish over your back fence. Protecting the natural environment of the Smiths



■ PHILLIP Teschke and an eastern brown snake at Smiths Creek Reserve.

Creek reserve will protect all the animals, including koalas.

To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (046) 20 3200.

■ Phillip Teschke, Steven Ward and Robert Close.

Koala is doing fine

mac's koala club

With **STEVEN WARD**
and **ROBERT CLOSE**

ON Save the Koala day, July 25, with the help of several local people, we probably saved a young male koala from a fatal accident with a car in Wedderburn Road.

The story actually started on July 22, when a koala was spotted in Wedderburn Road. The sighting was reported the next day, and Steven went out that Tuesday afternoon to look for the koala, but his search was fruitless.

On Thursday night, another caller rang to report a small koala near the Wedderburn Road causeway.

Robert went out to investigate and found not a koala, but a severely wounded brush-tailed possum.

The possum had a young in the pouch, which was dead, and despite care the possum died overnight. Life in the bush is sometimes not very pleasant.

When Rob arrived home his phone was ringing, with another report of a koala in the same general area, but at the top of the gorge.

Rob and Steven both went out with spotlights, but despite looking carefully, again had no luck.

About 1pm on Friday, July 25, we received within a period of about 10 minutes three calls about a koala crossing Wedderburn Road and climbing a small tree at the side of the road.

We quickly gathered our equipment and arrived to find a



small group of onlookers admiring the koala, who is pictured here.

After explaining what we were going to do, we quickly managed to catch the koala.

A veterinary inspection at Elizabeth Macarthur Agricultural Institute showed the young male koala in good health and weighing 4.5kg.

He was fitted with ear-tags and after some consideration, with a radio-collar as well. Now named

Steve (after the first person to report seeing him on Friday), he was released about 300m from Wedderburn Road and appears to be doing fine.

It is fantastic to note that so many people reported sightings, and all their reports help us to understand the local koalas.

To report a koala sighting, please call the UWS Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (046) 20 3200.

Koala tales tall but true

With **STEVEN WARD**
and **ROBERT CLOSE**

LOCAL residents sometimes call in with surprising koala stories such as the report from St Helens Park resident, Brian Ward.

Mr Ward told the University of Western Sydney that while walking with his dog through the bush beside the Georges River in July he heard a violent crash and thump about 20-30 metres away.

Restraining his well-trained dog, he watched, fascinated, as a grunting, presumably male, koala chased a smaller koala towards the river.

While the first koala hopped across some rocks, over the river, the male koala walked fearlessly to within a metre of Brian and his dog, and stood there for a few minutes apparently checking them out.

Satisfied with his inspection he then returned to the riverside, climbed a she-oak and enjoyed the midday sun.

This was a new koala location for us but we were also fascinated by the koalas' behaviour.

The observation is consistent with our suspicion that large adult male koalas may be quite prepared to take on dogs and perhaps people too!

Brian's report of the two koalas

mac's
koala club

being together matches other such sightings this year and suggests that the breeding season may have already started.

This is unusual because other studies have found September to be the start of the breeding season for New South Wales koala populations. September is when male koalas normally start romancing females.

Perhaps this year's rain has stimulated all the recent frantic koala activity, or maybe spring starts earlier in Campbelltown?

The reporting of koala sightings will help us answer this question and discover more about the fascinating lives of the local koalas.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (046) 203 200.

Steve collared by radio

By **STEVEN WARD**
and **ROBERT CLOSE**

RECENTLY we reported capturing a young male koala, now named Steve, which was sighted moving up and down Wedderburn Road for a few days.

We decided to place a temporary radio collar on him, but only after quite a lot of discussion.

Why were we so concerned about putting a radio collar on this koala when we have radio collars on a number of other animals?

Well, koala Steve is about two years' old, and is still growing rapidly. This meant that we had to be careful when fitting Steve's radio collar to allow room for his neck to grow.

The period when the koala leaves the safety of his mother's territory and is pushed out is a difficult time. We have found several young koalas in poor condition, including Molly in her

mac's koala club

earlier days. Molly was a regular subject of these columns. We were concerned that the collar, although it weighs only 80 grams, may have been an added burden.

Also young koalas, especially males between two and four years old are normally moving away from the area where they were born. Because young koalas are moving long distances, radio tracking becomes very difficult. Extra care must be taken to ensure the koala does not move out of range of our receiving equipment. If it does, locating could be very difficult.

What finally persuaded us to put

a temporary collar on however was that we were extremely worried about the danger to koala Steve from cars on Wedderburn Road. So we collared him to make it easier for us to move him if he returned to the road and we are locating him frequently. The information being collected from koala Steve's movements and from observing the type of bushland he is using will also help us to understand how koalas live in Campbelltown.

As things turned out koala Steve appears not to be interested in the road now and seems to be quite happy living in bushland a short distance away. However we will continue to monitor his progress until his temporary radio collar falls off in a month or two.

To report a koala sighting please call the University of Western Sydney Macarthur on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.

Go-ahead for video

THIS week we have some great news.

We have been filming a video to show the public the biology of Campbelltown's koalas and what our research is achieving.

Unfortunately, funding for the editing and soundtrack proved to be a problem. Our approaches for help were turned down and we doubted whether the video would ever appear.

However, local benefactors, who wish to remain anonymous, have donated \$7000 so that the video can proceed.

This is fantastic news, and as we already have some great footage, we are hoping that, in perhaps three to four months the video, which we expect to be about 20 minutes long, will be available for distribution.

Our video will concentrate on local koalas and what we know about them.

However, we want the video to be easy to understand and a good teaching aid, particularly for local schools.

While on the topic of school, we would like to mention that the University of Western Sydney, Macarthur, will be running the Siemens Summer Science School for Year 9 and 10 students from January 13 to 15, 1998.

There will be a host of science activities and short talks on interesting topics in science, technology and design,

mac's koala club

plus a number of talks and workshops, including a talk by Steven Ward on koalas and a field trip for interested students to locate a koala with a radio-collar.

Other activities will include playing Sherlock Holmes in the science lab, designing a message to send to SETI (the Search for Extra-Terrestrial Intelligence), making a Web page, learning how to surf the Internet, seeing how the universe began with a big bang, learning about the physics of music, finding out about inheritance, doing creative chemistry, making nylon stockings, discussing whether the universe will freeze and why dinosaurs disappeared, and perhaps even winning prizes with UWS Macarthur's own Science Sale of the Century.

To find out more, contact Dr Ragbir Bhathal, Department of Physics, University of Western Sydney, Macarthur, PO Box 555, Campbelltown 2560.

To report a koala sighting please call our hotline on 9962 9996. To hear a male koala bellowing call 4620 3200.

■ Stephen Ward and Robert Close

Enjoy the sight of old brushies

By **STEVEN WARD**
and **ROBERT CLOSE**

RECENTLY we mentioned finding a badly wounded brush-tailed possum at the Wedderburn Causeway.

She and her baby both died and we suspect that she had been shot.

This made us ponder the fact few Australians would weep for an "old brushie," but would probably be outraged at anyone shooting a koala.

Yet the possum, like the koala, is a distinctly Australian marsupial.

Those fortunate enough to have hand-raised baby possums know that they are beautiful and fascinating animals.

So why aren't possums treasured the way koalas are?

Part of the reason may be the brush-tailed possums' tendency to climb into roofs in the middle of the night often making quite a lot of noise.

What's more, they do tend to stain the ceilings as well.

However, roofs can be possum-proofed and possum houses can be constructed and installed in nearby trees.

Possums may also be undervalued because they are so common in some suburban areas.

In New Zealand, which has no native land mammals, possums were introduced from Australia and are so plentiful that they are now seriously damaging forests (like the koalas on Kangaroo Island).

Consequently, some people think that

mac's koala club

there are so many possums in some areas that there is no need to worry about them.

But in some places, possum numbers have declined rapidly over the past few years.

So although brush-tailed possums are still common in many areas we should not be complacent.

Only 20 years ago bandicoots were common in many parts of Sydney.

Today they are rare and the long-nosed bandicoots on North Head have recently been declared by State Government to be a threatened population.

Interestingly, the State Scientific Committee is now deliberating on whether our Campbelltown koalas should also be declared a threatened population.

So enjoy the sight of a brush-tailed possum.

Give them a go and see them for what they are a beautiful, if slightly cheeky Australian, that is as much part of our wildlife as is the koala.

■ To report a koala sighting, call the UWS Macarthur hotline on (02) 9962 9996.

■ To hear a male koala bellowing call (02) 4620 3200.

Mum and cub safe

By ROBERT CLOSE
and STEVEN WARD

AT 10pm one night last week Amanda Harris noticed a moving shape on Junction Road beside Leumeah High School.

Thinking it was a cat she slowed right down and was amazed to watch a koala with a back young walk onto the road in front of her.

She tried to ring us, but found that the pager number was "out of service".

Amanda persisted, leaving a message for us via the University and eventually made contact.

We went out to investigate and found the mother and cub in a tree about four metres away from Junction Road and caught them both just as the High School dismissal bell rang.

A veterinary inspection at Elizabeth Macarthur Agricultural Institute showed that both were in good health.

They were then ear-tagged, mum had a radio collar fitted and they were released together not too far from the capture point. Mum, now nicknamed Amanda, weighed 7kg, and the cub, now nicknamed Andrew, weighed 800gm.

The sighting of a breeding female at Leumeah was particularly interesting.

Although we have had three sightings reported on or near Peter Meadows Road we thought they were young males on the move.

We have never previously thought that koalas might be breeding along Peter Meadows Creek, so we will be following Amanda's movements with interest.

All students and staff at Leumeah High School should therefore keep their eyes open. They may occasionally have koala visitors!

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The pager company had cut off the service on August 12 due to a paperwork error.

We were unaware of the problem until Amanda found another way to contact us.

The hotline number is now operating again and we apologise for any inconvenience.

If anyone else tried to call us between August 12 and August 30 please try again now. It is important

that we record all sightings, especially during this busy time of year for koalas.

Special thanks to Amanda for her persistence in reporting this valuable find.

■ To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

■ To hear a male koala bellowing call (02) 4620 3200.

Macarthur Advertiser, Wednesday, September 10, 1997

Closer than we think

With STEVEN WARD
and ROBERT CLOSE

LAST week we discussed the capture of a new female koala called Amanda and her cub Andrew.

They were both caught beside Junction Road close to Leumeah High School.

Because we were concerned that they might be hit by a car we moved both koalas away from the road when we released them.

Since then Steven has tracked Amanda and Andrew from the signals emitted by Amanda's recently-fitted radio-collar.

From this work we know that they have travelled over a kilometre and are now close to Old Kent Rd, Kentlyn.

This is quite a long movement

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for a female koala with a cub riding on her back.

There are two likely explanations why they have moved so far.

The first is that our moving them away from Junction Rd may have disorientated Amanda so she is now searching for her new home.

Second is that Amanda may have moved out of her normal home range when we captured her

and has now moved back to that area.

This last possibility seems more likely as Steven has observed old koala pellets by Old Kent Rd indicating past use by koalas of habitat in that area.

The really exciting implication from these observations is that koalas may be breeding closer to Campbelltown than we thought.

These koalas will be doing it tough though because of dogs (which can kill koalas), traffic and trees being cleared.

So remember to keep your eyes open and tell us of any koala sightings.

■ To report a koala sighting please call the UWS Macarthur hotline on (02) 9967 9996. To hear a male koala bellowing call (02) 4620 3300.

Jacob's safety ladder

By STEVEN WARD
and ROBERT CLOSE

OUR pager number ran red-hot on Friday, September 12, when a koala was reported in a tree – dogs clamouring below – at the north end of Georges River Road.

When we arrived a little while later, the dogs were gone and the koala was safe in a larger tree – a sort of ladder to safety – about 10m away, tucking into his breakfast leaves.

We soon captured the koala and nicknamed him Jacob. He weighed 9.8kg and is probably about eight years old. After we fitted him with a radio-collar and blue and yellow ear tags, we released him well clear of the road and dogs.

Jacob's story illustrates why dog owners should not allow their dogs to roam the streets and the bush. Jacob was lucky. The dogs have killed other koalas.

That same evening, a different koala was seen crossing Georges River Road closer to Campbelltown. Steven searched the area the next morning but could not find the koala.

Later on Saturday, Steven was called by the National Parks and Wildlife Service, which reported a koala north of Waterfall.

With the help of a WIRES worker, Margaret Rasmussen and her son Scott, Steven quickly

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caught the koala.

This koala was also male, about four years old. He weighed 6.9kg and was ear-tagged. We released him and have nicknamed him Scott.

Special thanks go to the Rasmussens in being so patient in waiting for Steven to arrive and helping to capture the koala.

This is the first koala we have tagged in that area and we look forward to hearing about future sightings.

After all that, Rob and Steven attended what turned out to be a false alarm at Wedderburn on Sunday and also received details of another koala seen crossing Heathcote Road.

It is fantastic that we are getting so many reports coming in. All sightings provide important information and help us to understand how koalas survive in Campbelltown.

■ To report a koala sighting please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.

Best defence is invisibility

By **STEVEN WARD**
and **ROBERT CLOSE**

SINCE we asked Mac Club members to send in any koala questions we have received several.

This week we will answer two questions together.

The first question is from Timothy Ruledge - "Do koalas like people?"

The second is from Bianca Cooke - "Is there anything in particular that the koala does to ward off any unwanted visitors?"

Koalas have had to live with humans hunting them thousands of years so now koalas have a lifestyle which largely avoids contact with humans.

However, most koalas raised in captivity soon learn not to be afraid of their handlers.

These captive koalas live in quite a different situation to wild koalas, though.

The best way wild koalas can avoid predators (i.e. things which might kill them) is not to be seen.

Steven suspects from his work so far that female koalas, in particular those with a young cub which is out of the pouch, choose locations in trees where it is very hard to spot the koala.

If the koala can't be found then people or dogs will most likely just walk past.

The reason that female koalas with young may look for spots where they are hard to see is because the young koala is very susceptible to being attacked by dogs, owls and other predators.

If a koala is actually attacked by dogs (or people), then it will use its sharp teeth and claws to defend itself.

Robert learnt the hard way how sharp

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their teeth are! He needed three stitches to close a gash in his finger.

One male koala in Kentlyn (where there are many dogs), when released by Steven, flipped onto his back and presented all his teeth and claws ready to attack.

We think that this response would allow him to rip at an attacking dog's face.

However, this wouldn't work so well against a pack of dogs.

This is why we ask people not to let their dogs wander the streets and to restrain them at night, which is the main time when koalas will move about.

So, Timothy, we don't really really know, but wild koalas probably don't mind a visit from humans as long as they leave them alone and Bianca, koalas avoid visitors by making themselves hard to find, which they do very well indeed!

Thank you both for your great questions and we will try to answer more questions from Mac Club members in future columns.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.

Clues on spotting the elusive koala

By STEVEN WARD and ROBERT CLOSE

LAST week when answering two questions from Mac-club members we said koalas' ability to avoid being seen is their protection from predators. This leads directly to a question from Alexandra Ruff: What is the best way to spot koalas?

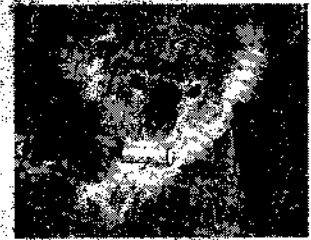
Well, Alexandra, we can tell you that around Campbelltown it is very difficult to spot koalas and we would be lucky to spot one every 15 days of searching.

Our method is to first look for "clues", like the distinctive scratch marks that koalas make on smooth-barked gum trees. If we find the scratches we then look around the base of the tree for the koalas' droppings (like large, brown olive pips). If we find these, we know we're in the right area to start looking in the trees.

Koalas use all sorts of different positions in trees, from close to the ground to amongst the top leaves. They often sit in a fork facing the trunk of the tree and their grey fur blends in well with the grey or brown bark so you often have to look closely to spot them. You might search each branch and try to imagine all the possible shapes that a koala might take.

We also sometimes use a technique called "spotlighting". For this we use a portable battery and a bright spotlight and search the trees looking for

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"eye-shine". This is the light reflected from the back of the eyes and looks like two glowing red coals in the dark. Interestingly, different species eye-shine occurs in different colours (cats are green). Spotlighting can help to find a koala but you still need to do a lot of searching to find one.

So, apart from staying alert and looking in trees when walking in bush it's very hard to find koalas. This is what makes our study of local koalas difficult and explains why we are always asking for help with sightings from the community.

Good luck with your koala spotting, Alexandra.
■ To report a koala sighting, please call the UWS Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing, call (02) 4620 3200.

Bush rats aplenty

By STEVEN WARD
and ROBERT CLOSE

BOTH Robert and Steven have been busy looking for mammals recently.

First there was a camp assessing bio-diversity in the O'Hares Creek catchment and then another teaching Environmental Science students.

On both camps small metal traps called Elliot or box traps were used.

These are a rectangular box with a front door that folds down.

When the animal enters the trap to get at the peanut butter and oat bait inside, they stand on a small treadle which shuts the front door.

The animals remain in the trap until the traps are checked the next morning and then released.

This method is used to assess which small mammal species are present in an area.

On both camps a species of native rodent, *Rattus fuscipes*, commonly called the bush rat, were abundant.

Bush rats are common throughout much of eastern Australia.

They eat a variety of food including fungi for eg. mushrooms, insects, fruits and seeds.

Bush rats are of course a rodent species (rodents include rats and mice).

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Australia has a high diversity of species of native rodents, but unfortunately most have fared badly since the white colonisation of Australia due to the introduction of cats, foxes and competitors such as the black rat and house mice.

Because of these pressures many native rodents species have become extinct.

Unfortunately, despite lots of looking we didn't manage to find a koala on either camp, despite having a lot of people to help us search so if you do see a koala, please let us know!

■ **To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call 4620 3200.**

Sad news to report

By STEVEN WARD
and ROBERT CLOSE

UNFORTUNATELY this week we have sad news to report. A car at Wedderburn Gorge recently hit a koala.

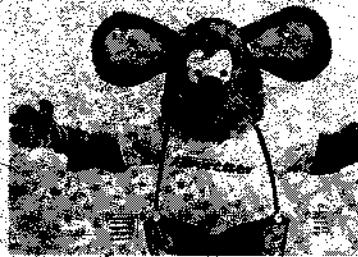
The koala was male, weighed 7.8kg, probably about eight years old, and was in good condition before being hit by the car.

The force of the collision broke his top jaw and smashed his front incisors, which are used to bite off leaves. So, although the koala was alive, when we received the call, he had to be put down because he would never be able to eat properly and could not survive in the wild.

These incidents are always a sad occasion and we urge all drivers to look out for and avoid native wildlife (including snakes!) while driving.

The Wedderburn Gorge is a black spot for koalas, as this is the second koala killed there and we have received other reports of koalas being hit and quite a few reports of koalas crossing Wedderburn Road.

If you should hit a koala please do not stop to investigate. Often, wildlife will run away from the scene of an accident, even with



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broken bones or other wounds. For wild animals the urge to flee will over-ride the pain from injury if it is at all possible for them to move.

If anyone should hit a koala, please contact us and we will respond as quickly as possible. If for any reason we cannot respond or be contacted please call a group such as WIRES that cares for native wildlife.

Even if you cannot find the koala please call as soon as

possible so that we can search for the animal to ensure that it has no injuries. Some injuries, such as those to the koala described above, will not kill straight away, but will take days, or even weeks, of great pain before the animal dies.

Even if the animal cannot be saved we can make sure that it is put down quickly so that it will not suffer more.

On a brighter note, the koala hit by a car did not have any ear—tags. This means that all the local koalas have not yet been caught. So far we have tagged 30 koalas in the Campbelltown area, but about half the sightings reported to us by you, the community, are of untagged koalas.

We have also sent a tissue sample from the koala killed to the University of New South Wales for genetic analysis, and we hope that in the near future these results will provide some important clues as to what is happening in the local koala populations.

■ **TO report a koala sighting please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.**



■ RICHARD, the koala, after being released at Yerrinbool.

Koala alert in Camden

By STEVEN WARD
and ROBERT CLOSE

THERE is a koala alert in Camden.

We recently received a report of a koala seen from a moving car on the Elderslie side of the Nepean River.

Both the driver and the back-seat passenger, Tessa Johnson, are confident that it was a koala. However, they can't be 100 per cent positive as it was a dark night.

Steven went out to look for pellets to confirm the koala's presence, unfortunately without success.

So this week, we are particularly asking for people in Elderslie and Camden to check the trees in their gardens for koalas.

It would be exciting to locate and capture this animal because we would then be able to ear-tag it and possibly fit a radio-collar.

If the colours of the ear tags (there is one in each ear) are noted in koala sightings, it tells us a lot about the koala movements.

Obviously though, we have to first catch the koala so that it can be recognised later on.

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Perhaps, this koala will manage to link up with other populations to the north of Sydney.

We also received a call from WIRES (Wildlife and Information Rescue Service) about a male 6.7kg koala found on the freeway watching the traffic go by. RTA workers picked it up and passed it on to WIRES worker Judy MacMaster.

Apart from a small cut at the side of his mouth, the koala is in good health.

Rob and Steven also managed to catch Shirley and her cub, now nicknamed Orin, last week. We will provide an update in next week's column, hopefully with pictures.

■ To report a koala sighting call the University of Western Sydney, Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing, ring (02) 4620 3200.

Shirley catches on

By STEVEN WARD and ROBERT CLOSE

IN KENTLYN recently, we recaptured Shirley to change her radio-collar, because the batteries were running out.

The old collar had been fitted when we last captured her in mid-November last year. We also needed to record details for the cub and give it ear-tags, so that it could be identified later.

Steven found Shirley and cub about 3m high in a small wattle tree and it looked to be an easy catch.

However, Shirley cunningly crossed to a large grey gum via the branches of the wattle, leaving the cub behind.

We knew this would make the catch harder, but decided that we would try to capture the cub, and quickly release it back to mum after recording details.

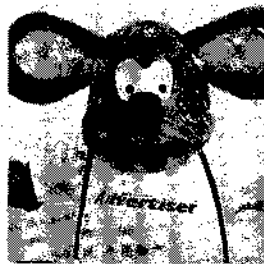
We decided to catch the cub separately, because it was semi-independent and we knew that mother and cub would soon link up once it was released.

We waved a flag above the cub to move it down the wattle tree. However, the cub was merely curious about this strange object and simply wanted to sniff the flag.

We eventually had to climb an adjacent tree, reach over and catch the cub while it was in the wattle.

When the cub was safely in the bag, we were surprised to find that Shirley had climbed most of her way down her grey gum and was clearly concerned about her cub.

We think that Shirley was coming to "rescue" the cub (although of course we were not harming it). We soon



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captured Shirley and changed her collar, and she was reunited with her cub.

Shirley was in good condition and a healthy 7.4kg.

Her cub proved to be female and is now nicknamed Orin (after the volunteer assistant). She was also in good health and weighed just under 2kg.

Orin now has yellow and purple ear-tags and Shirley has a new radio-collar with fresh batteries.

Shirley has provided fascinating information about her use of trees in the Kentlyn area and we will continue to follow the movements of both her and Orin.

■ To report a koala sighting please call the UWS Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200. And, don't forget, if you should hit a koala please do stop to investigate.

Koalas or Wombats?

By STEVEN WARD
and ROBERT CLOSE

TWO weeks ago we asked Camden residents to be on the lookout after a koala sighting near the Camden bypass bridge over the Nepean River.

We thank a South Camden resident who called to tell us about a large wombat recently seen near her home.

It seems probable that the earlier koala sighting was in fact a sighting of this wombat.

Confusing wombats and koalas while on the ground would be very easy, especially in the dark as from behind both are almost identical in appearance.

The similarity of koalas and wombats is for good reason, because the wombat is the koalas' closest living relative.

Both koalas and wombats have pouches that open to the rear and their sperm have a characteristic



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“hooked” tail shape.

However, it is feasible that a koala could be found in Camden. In 1972 people constructing the bridge saw a koala in the area and not far away in a road-kill was reported near the golf

course on the Camden to Picton road. Thus koalas were present in the Camden area in the past and we confidently predict that if bush corridors that now link the Wedderburn koala areas and the Neapean River are maintained they will again be seen at Camden.

They may also reach Mt Annan Botanic Gardens, where they will find a eucalyptus smorgasbord.

So remember to keep on the lookout for koalas, and if you have seen a koala in the past (or know someone who has) we would like to know about it.

As you can see from this story historical information is important to help work out what koalas are doing in this local area.

■ **To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.**

To hear a male koala bellowing call 4620 3200.

Koalas on the go lately

By STEVEN WARD
and ROBERT CLOSE

THERE has been a lot of action among the koala set in the Peter Meadows Creek/Old Kent Road area lately.

A new kid on the block, Ray, has arrived to give big old Kevin a challenge. Amanda and her cub Andrew, who was caught last September, are also nearby and no doubt watch with interest. We received three calls on the same weekend about these animals.

Ray was first noticed by the Laird's dog, who alerted the family, on the Campbelltown side of Darling Road, just north of Old Kent Road.

Glenda Laird reported the sighting at 9am but unfortunately the message did not come through on our pagers. However, she was persistent and called again at 9am when Steven finally received the message. We captured Ray, fitted him with ear-tags and a radio collar and released him.

He was in good condition, weighed 6.6kg



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and is probably close to four years old.

About 30 seconds after Ray scampered up a tree a dog came wandering past on the loose. Luckily the dog didn't seem to take an interest in Ray. However, dogs will attack koalas and other wildlife, so they should not be allowed to wander off, and should be kept on a lead, especially in bush areas.

Steven found Kevin only about 1.50m away. We guess that Kevin will give young Ray a hard time as Kevin is bigger. Steven

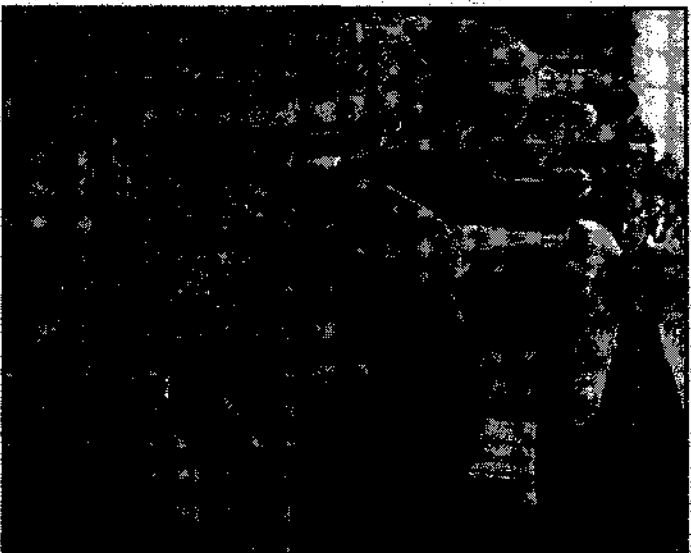
has since tracked Ray's movements and found he's moved much further north, about 300m from Peter Meadows Road.

It will be interesting to follow Ray to discover what bush he is using and whether Kevin is in pursuit.

Ray brings to 10 the number of koalas that we have fitted with radio collars. This is fantastic, as it will allow us to accumulate much more information on the activities of local koalas. It will, however, also keep Steven very busy.

Finally, our pagers are not receiving messages sent out. The pager company, Hutchinsons are trying to work through the problems, however, if you leave a message and we do not contact you within 10 minutes it may be because of these problems, so please try again.

■ To report a koala sighting please call UWS Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.



STEVEN Ward with new chum, Ray.

Joeys, cubs and babies

With STEVEN WARD and ROBERT CLOSE

THIS week we will answer three questions from Monique Miletto: How often can a koala have a baby? How long does it take? And how many babies can a koala have? We also have a question from Jakob Lang: How long does a koala live?

Once a female koala is old enough (3-4 years) to have babies (also called cubs, joeys or pouch young), it can have one a year. Because female koalas have two nipples in their pouch, it is possible, but very unusual, for them to raise two cubs together. In fact, koalas have been known to raise twins only in captivity. However, many female koalas raise a cub only two out of every three years because of the demands of supplying milk to one cub in the pouch and to

inside the mother until it reaches the size of a large grape. All the books say this period is 35 days.

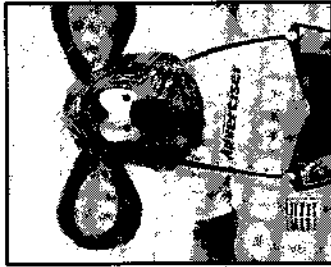
However, some researchers recently suggested that the time is actually 50 days. After the baby is born, it climbs into the pouch where it grows for about six months. It then climbs onto mum's back and gradually becomes independent. It will normally leave its mother when 1-2 years old.

And to answer Jakob's question: a koala can live for up to 17 years or so in captivity. However, we aren't sure how long Campbelltown koalas normally live. Our oldest koala of known age, Molly (whose picture appeared in the November issue of National Geographic to celebrate the Heilswoorthy airport win), is now only four and a half years old.

So it's going to take us quite a while to find out. However, we can tell the approximate age of a koala by the amount of wear on the teeth. For this reason, dead koalas and skulls found in the bush are very important to us. This is why we would like you to notify us about any koalas, dead and alive.

From looking at skulls of koalas that have died naturally in the Campbelltown area, we guess that 10 years would probably be good age for a local koala. So we expect that a female koala would probably raise about four or five cubs in its life-time. Shirley at Kentlyn has raised two in the last three years.

To report a koala sighting, please call the UWS Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing, phone (02) 4620 3200.



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another outside. Perhaps this is why Franchesca, a koala at Wedderburn, last year raised Sarah, but this year has not had a cub.

After mating, which is stressful and dangerous business for a female koala, the embryo (immature baby) grows

A new member joins the club

WE RECENTLY signed up a new member to Campbelltown's club of ear-tagged koalas.

A local resident spotted a young koala as it climbed a small tree at the eastern end of Old Kent Road in Kentlyn.

The resident noticed the koala at 6.45am, called us and Steven was soon on the spot.

The koala had moved to another tree about 15m away, it was quickly located and two volunteers helped Steven to catch it.

The koala, now nicknamed Megan, weighed just under 5kg, and was in good condition, but her pouch was empty.

Megan is probably about three-years-old so she may have a cub next year.

She was given purple and white ear-tags, but did not receive a radio-collar because Steven is already busy tracking the 10 koalas that already have radio-collars.

This means that we will not be following Megan from day to day.

However, we would still like to plot her movements.



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All local residents can help by calling us whenever they spot a

koala, including those with ear-tags.

If the koala reported has purple and white ear-tags then we will know Megan's location.

We found it interesting that Megan was close to the area where Kath, another young female koala was found.

It's possible that there are more koalas out there than we initially thought.

So we need your help with koala sightings to estimate the actual population.

It helps if you report a koala sighting as soon as possible because koalas are so hard to spot that they move more than 50m or so we may not find them.

Also if you have seen a koala in the past and not yet reported it we would love to hear about it.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962-9996.

To hear a male koala bellowing call (02) 4620 3200.

Koalas make us keep our place

By STEVEN WARD
and ROBERT CLOSE

THIS week was a frustrating one for us, we found three new koalas but the score for this week is koalas three, researchers nil.

The first koalas were found by Steven and a volunteer who were out at night trying to record a male koala's bellow.

They had already visited two radio-collared male koalas that were obviously not in a bellowing frame of mind.

However, when they checked a third male koala, Gary, they were surprised to find he was sharing his tree with a female with back young.

We then climbed the tree and waved a flag on a long extendable aluminium pole above the female koala's head.

This normally scares the koala enough so that they will move down the tree and into our arms.

However, the mother climbed past the flag and ventured far out along a slender branch, with the cub on her back.

At this point we were afraid that she would either jump or fall so we called off the attempt.

The next day we again found Gary sharing a tree with both mother and cub.

Before we could try to persuade the mother and cub to move down



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the tree with the flag they climbed out on another slender branch, so we called off this attempt as well.

Three days later when Steven

was radio-tracking Franchesca at Wedderburn he found that she too was sharing her tree.

The visitor was a tagged male koala with an injury to his right hind leg so we wanted to catch him to check the wound as well as to ear-tag him.

Again the koala ignored the flag and moved to a precarious perch high up in the tree, so we had to call off this capture attempt as well, despite being keen to have the koala's wound treated.

We were unsure how bad the male koala's injury was so Steven searched the bush next day but the koala had already moved on.

We are intrigued that, on three occasions in the same week, male and female koalas were sharing the same tree.

Normally they live quite separate lives so we assume that these koalas were together to mate and that November is the peak of the breeding season.

So bit by bit we are piecing together the stories and biology of our koalas.

We thank you for your continuing support.

■ To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call 4620 3200.

Glider bullied by cockies

By STEVEN WARD
and ROBERT CLOSE

GREG Lees from Oakdale called us recently with a fascinating wildlife story.

One morning he noticed three sulphur-crested cockatoos, obviously interested in something dark and furry in a tree.

Intrigued, he investigated and found that the cockies were tormenting an animal about the size of a cat with a long, thick tail and smallish head.

To avoid its tormenters, the animal launched itself from the tree, spreading a membrane connected the fore and hind limbs (i.e. skin between its arm and legs) and glided some



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distance, losing altitude all the way, till it landed in another tree.

Apparently the cockies enjoyed this game, because they chased the

glider while it climbed higher for another glide.

Greg watched the hapless animal while it made three such glides in the hope of avoiding the bullying birds.

Informed readers may realise the tormented animal was a greater glider.

Like the koala this animal is a marsupial (it has a pouch) and the greater glider's diet consists almost entirely of eucalypt leaves.

Unlike the koala, however, it spends the day in a tree-hollow.

Tree hollows form inside trunks and limbs when the central wood rots or is burnt away.

Hollows often do not

develop in trees until the tree is quite old, perhaps 70 years or more.

Why would the cockatoos have been attacking the glider?

Firstly, cockatoos are naturally mischievous birds; they chase free-ranging guinea pigs in Robert's back garden apparently for the fun of it!

Secondly, the glider may have been unwell; sick animals are generally treated poorly in the wild.

Normally, glider will only emerge at night.

However, Greg thought that the glider looked to be in good condition.

Thirdly, the cockies may have actually been evicting the glider from its

hollow so that they could use it themselves for nesting.

Nesting hollows are vital to many species in the bush for dens or nests; so there is a lot of competition for these valuable resources.

Too often, unfortunately, the valuable old trees are not recognised and they are cut down without a thought for the many species which depend on them.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 463 3200.

Search on in wake of fires

By STEVEN WARD
and ROBERT CLOSE

PEOPLE have been asking us how the recent fires have affected our koalas.

Koalas react to fire by climbing higher up their tree.

If it is a small fire this tactic normally works well, but if the fire burns through the very top or "crown" of the tree, then the koala can be killed, injured or suffer from smoke inhalation.

Of the koalas that we have fitted with radio collars, only a male koala, named Gary, at Kentlyn has been affected.

The day after a fire burnt along part of the Georges River bank, Gary was located in a large half-burnt blackbutt tree and showed little reaction to our presence.

Although it seems as though Gary has not been affected badly by this fire, we do not know how the female and young that Gary visited a week or so earlier are faring.



mac's koala club

Those reading our column a few weeks ago may remember that we had to call off two capture attempts for these animals.

We may attempt to find these two through spot-lighting, but locating them will be difficult.

This episode demonstrates the value of the radio-collars - had the animals been collared we

could have checked their condition.

Ironically, despite the fact that fires can kill koalas, the areas burnt recently will probably soon be very attractive to koalas.

As the Australian bush is well adapted to fire, most trees will soon be responding with what is called "epicomic growth".

This is where new shoots and leaves start growing from the trunks and koalas apparently find this flush of growth appetising.

So, if bush close to you was recently burnt, please be on the lookout for both injured animals and the distinctive olive-pip faecal pellets which stand out on burnt ground.

■ To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.

Bill survives pawful perils

By **STEVEN WARD**
and **ROBERT CLOSE**

WE HAD an exciting end to 1997 when we were called out to Alford's Point, near Menai, where a koala was perched in bloodwood (a type of gum tree) in a suburban garden.

Fortunately, the koala responded to the flag and was soon captured.

To our great delight, the koala had green and white eartags which identified him as Bill, Shirley's cub from Kentlyn.

Bill left Shirley about a year ago and has obviously had some adventures, having crossed the Georges River, Heathcote Road and at least 19km of bush to reach Alford's Point.

This gives Bill the record among our eartagged koalas for distance travelled, beating Wilhelmina, a female koala who also left Kentlyn and travelled about 12km to the Heathcote National Park.

Once inspected and weighed, we released Bill in a close unburnt patch of bush.

However, within a day, Bill had crossed the busy Alford Point and Old Illawarra roads and we had a number of calls from residents concerned about Bill.

This situation was a real dilemma for us.

Bill's location was definitely not a good one and he faced dangers from both cars and dogs.

However, we were reluctant to put Bill through the stress of another capture so soon after the last one, and due to the recent fires we would have to move him some considerable distance to get him away from these dangers.

In the end, we decided not to try and capture Bill and asked those who reported his presence to monitor his situation.

The next day we received a call from a wildlife carer belonging to AWARE.

She told us that a woman saw Bill cross the road the previous night and thought he was limping.

The wildlife carer used a blanket and borrowed a ladder to capture Bill, and informed us that Bill was in her laundry



mac's koala club

and trying to tear down her door. We took Bill for a vet inspection and he came through with flying colours.

We then contacted National Parks and Wildlife to find out what areas had been burnt in the fires and together it was decided that the best option would be to release Bill into the Heathcote National Park.

This meant moving Bill 7km south of Alford's Point but this was the closest unburnt bushland.

Previously, we had hoped that Bill would avoid the roads and houses, but his movements across these busy roads made this seem unlikely.

National Parks rangers kindly came and escorted us to about 1km south of Heathcote road, close the Woronora River, where Bill was released.

So far, breeding female koalas have only been found in the Campbelltown area.

However, if Bill and Wilhelmina have anything to do with it, all that may soon change.

■ To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.



■ AMANDA is back - photo courtesy of Allan Chisholm.

Young koalas facing danger

By **STEVEN WARD**
and **ROBERT CLOSE**

THIS week we are happy to report the reappearance of another ear-tagged koala - Amanda.

Amanda was originally captured, together with her son Andrew, opposite Leumeah High School and she was fitted with a radio-collar to follow her movements.

However, late last year Amanda lost her radio-collar so we could no longer locate her.

At the end of December, Amanda was spotted at a property on Junction road, Ruse.

The residents watched with amazement as Amanda ran across the back yard and climbed a tree.

They called us and then took the opportunity to take photographs.

Before we arrived Amanda came down the tree and moved towards the side fence before the

mac's koala club

residents lost sight of her.

When we arrived, we soon located her in a small tree in the neighbouring property.

After obtaining permission from the neighbours we managed to capture Amanda, who was in good condition and weighed 6.6kg.

We were also delighted to find that Amanda had a three week old, 7cm long female cub in her pouch.

Amanda's son, Andrew was not with her as he would recently have set off to start his own life.

During this time of year, many young koalas will be leaving their mothers and

travel long distances.

These young koalas can end up in suburban gardens and face dangers from cars and dogs on their travels.

Remember to keep a lookout for these youngsters and to report any sightings as soon as possible.

On a different note, we are pleased to report that in November 1997, the University of Western Sydney signed the Talloires Declaration.

This declaration states the environmental concerns that university leaders have, and outlines 10 strategies signatories will undertake in order to address the world's environmental problems.

We look forward to the University of Western Sydney moving to meet the 10 strategies.

To report a koala sighting please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996.

Koalas attracted to our native trees

By STEVEN WARD
and ROBERT CLOSE

PEOPLE often ask us what trees can be planted to attract koalas into gardens.

This is an important question for the many Campbelltown people whose houses are near the bush and the Georges River.

Many koalas use this area and will visit suburban gardens.

Garden trees may be particularly important for Campbelltown koalas, because those trees may have a better water supply than trees in the bush.

As koalas obtain all their water from the contents of the gum leaves or dew, gardens may be a vital source of water, particularly in this extremely hot, dry year.

So it helps koalas if trees are planted that they can use.

So what should you plant?

mac's koala club

First, find out whether your house is built on shale (clay) or sandstone (sandy) soils.

These are the two main soil types found in the Campbelltown region and often different plants are found on them.

In a future column we will discuss the differences between these two soils and what it means for koalas.

If you are on clay, then a good local koala feeding tree is the Forest Redgum, *Eucalyptus tereticornis*.

If you are on sandstone good trees would be the grey gum, *Eucalyptus punctata*, or one of the stringybark species.

If your garden is limited in space, a smaller eucalypt that koalas like is the peppermint, *Eucalyptus nicholli*.

Although this tree is not a local species, it is hardy, grows well in many soils and koalas love it.

By planting eucalyptus you will not only please koalas, but also flying foxes and a great variety of birds.

If you are going to plant a tree make it a native!

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call 4620 3200. Stephen Ward and Robert Close.

Plea for caller on Koala to ring again

"URGENT - koala hit by car on Hansens Road - left hand side of road in front of the Bush Fire Brigade - caller would not leave his name or number."

This was the message that came to us on our paper via the koala hotline.

Steven immediately raced out to Minto Heights to investigate, but although he searched up and down Hansens Road and talked to nearby residents, he finally had to give up.

Unfortunately, because of the lack of information we don't know when the koala was hit, what condition it was in, or what happened to it afterwards.

The koala could have been injured but still able to run off into the bush.

The koala may still eventually die from its injuries, because it may not be able to climb or feed properly, or able to defend itself against dogs.

We would like to hear from whoever made the original report, or anyone who may have information.

We do not need to know names.

mac's koala club

On another topic, a male koala, which we have now nicknamed Houdini after the famous escape artist, recently left the comfort and security of the protected environment at El Caballo Blanco, a local entertainment centre.

Officials at the scene marvelled at the skilful escape which would have required a prodigious leap to clear the enclosing barrier, or some help from a well meaning, but misguided visitor.

After being contacted by the park we came and scoured the nearby trees with spotlights hoping Houdini would stay close to his koala friends back in the enclosure.

Unfortunately, the search proved fruitless and we fear Houdini has

left his mates and is now on the run.

Houdini has only 10 kilometres to move to make contact with our Campbelltown koalas, and as males can trek for considerable distances, the good lady koalas of Campbelltown are not safe!

Seriously though, Houdini is not a wild koala; he is a tame animal and so he is used to being looked after by humans.

Because he won't know how to look after himself in the same way a wild koala would, he may find it very difficult to survive, and will be especially susceptible to cars and dogs.

Residents close to El Caballo Blanco can help by looking out for koalas and reporting any sighting as soon as possible. Houdini can be identified by a small metal ear-tag.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call 4620 3200.

● Steven Ward and Robert Close.

Macarthur Advertiser 18 Feb 1998

Rover's return

Houdini, the male koala who left his comfy enclosure at El Caballo Blanco to explore the tourist attraction for himself, was spotted by a visitor in a small tree not far from his enclosure and Houdini is now back with his koala friends.

We recently recaptured Sarah, Franchesca's two-year-old cub to change the fading battery of her radio collar.

With the assistance of a volunteer school student, Brad Harper, we located Sarah and flagged her quickly all the way down the tree into Steven's waiting arms. Sarah was soon at Elizabeth Macarthur Agricultural Institute and checked over by an experienced wildlife vet.

We were intrigued to find that the fur on Sarah's back and head was fine, soft, and a bleached brown colour. Normally our local koalas are a dark grey and the outside fur is very coarse.

We have previously seen some local koalas whose fur has been partially brown on their back but not to the same extent as Sarah. Rob thinks that for our local population, brown fur may indicate that a koala is in poor condition.

Sarah's condition, in fact, was poor; she weighed in at just over 5kg and was not bulging with muscle. When koalas lose weight they tend to lose muscle tissue as they have almost no fat, so lots of muscle indicates good condition, while

mac's koala club

little muscle suggests poor condition.

Sarah's poor condition may support Rob's theory, however, we have previously seen some koalas whose condition was worse than Sarah, but were not as brown.

The fur may also be affected by summer bleaching or may indicate a "moult" (replacement of old fur with a new coat).

We think this is an intriguing question that may have practical applications. Perhaps in the future we will be able to more accurately find out a koala's condition by taking a small sample of fur and analysing it.

We hope to soon recapture Sarah's mother Franchesca, as she also needs to have her radio-collar replaced. This will be an excellent opportunity to see if Franchesca's fur is similar to Sarah's and we will let you know what we observe.

To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.

■ Steven Ward and Robert Close.

Lyn survives the environs

IN one of our earliest columns (6/3/96), we described how Lyn, a koala captured in Kentlyn Primary School, had dislodged her collar and disappeared. To our great delight Lyn was recently spotted opposite the school by a Mrs Ferrara.

We called the property owners and obtained permission to enter. Lyn responded quickly to the flag and was soon safely in a catching bag.

We then took Lyn for a veterinary inspection to Elizabeth Macarthur Agricultural Institute and were pleased to find that she had a three month old cub in her pouch. We were also amazed at Lyn's fantastic condition. She weighed in at 5.5 kg, had thick healthy muscles and a wonderful light ash-grey coat.

This contrasts with Sarah, a young koala from

mac's koala club

Wedderburn caught recently, who was doing poorly. Lyn's excellent condition and coat colour further supports Rob's theory that a koala's condition is reflected in the colour of their fur.

It is fascinating to discover that despite Lyn's contact with suburban houses, she is doing so well, mainly thanks to residents keeping local native trees on their properties and controlling their dogs. Of course she will still face dangers from cars especially on Georges

River Road, and dogs and even cats are still a threat, especially when her cub is older.

It is also amazing that Lyn was found less than 100 metres from where we caught her two years ago, yet we know of only two other possible sightings of her in that time - June 1996 and June 1997. This means that even with all the sharp eyes of Kentlyn Primary students, she is remaining well hidden.

We fitted Lyn with a radio-collar and will be following her movements, so people near Kentlyn Primary School may often see Steven roaming the streets waving around an antenna to locate Lyn.

To report a koala sighting please call UWS Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing phone (02) 4620 3200.

**Steven West and
Robert Close**

Dan leads us a merry chase

RUSE resident Dane Howard was delighted recently to find a koala scampering towards her neighbour's front garden and up a tree about 10pm.

Responding to the phone call, we easily found the spot because of a small group of residents watching the koala by torchlight. Things were not looking good for a catch as the tree was tall and too thin to climb.

Also, the branches were so close together that it was hard to get the flag on the end of our long extendable aluminium pole above the koala's head.

If the flag does not flap effectively, the koala will ignore it and stay in the tree.

Because we could not climb the koala's tree, we were considering climbing a tree close by and using the pole with the flag from there.

While we decided what to do next, we were delighted to see the koala start to climb down by himself.

He soon reached a reachable flagging spot and with the assistance of volunteer Brad Harper we soon had him in the catching bag.

The koala was an untagged one-year-old

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male, now nicknamed Dan. He weighed just under 4kg and was not in good condition.

He was released a short distance away in the bush next to the Darling Road fire trail with a pink tag in the left ear and a white one in the right, but no radio collar.

This young fellow and other young koalas, especially males, will currently be on the move (which makes them hard to radio track) and can turn up in strange places.

The community can help by looking out for these animals and by being careful on the roads.

Of course, if you should see any koalas we would love to hear about it.

To report a koala sighting please phone UWS Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing phone (02) 4620 3200.

■ Steven Ward
and Robert Close

What the devil?

WHEN Robert was in Tasmania recently, he was amused to find a vendor at Hobart's famous Salamanca Markets displaying T-shirts emblazoned with a picture of a koala and the caption Tasmania. When Robert said to the vendor "I didn't think there were any koalas in Tasmania", the man replied: "Yeah, well plenty of mainlanders sell T-shirts with Tassie devils on 'em."

It is certainly curious that there are no koalas in Tasmania, nor devils on the mainland.

Relatively recent fossils of devils show that they were once here and possibly disappeared after the arrival of dingoes. Why the koalas are not in Tasmania is a trickier question.

There is fossil evidence that koalas were present in the forests of Western Australia as recently as 40,000 years ago and Aboriginal hunting may have led to their disappearance. As yet, there is no

mac's koala club

evidence that Tasmania ever had a koala population, despite the fact that it was only 10,000 to 20,000 years ago Tasmania became separated from the Australian mainland (because the sea level rose). So it is a mystery why there are no koalas in Tassie!

Tasmania certainly is a good place to be if you are an Australian marsupial. Their success is indicated by the extraordinary numbers killed on highways. While he travelled Robert noticed more than 20 devils killed on the highways where they had come to devour the other animals killed by cars. Robert also found countless numbers of dead possums, many

bandicoots, red necked wallabies, pademelons (a small wallaby), some potoroos and two quolls (also called native cats although they are not a cat).

By contrast, Robert counted only three roadkills of native mammals on a trip from Melbourne to Sydney - an echidna and two grey kangaroos. Why is Tasmania so rich in native mammals? The answer appears to be that although there are cats, there are no foxes or dingoes. Luckily, the English immigrants did not bring their fox-hunting mania to Tasmania and there were no successful releases of foxes. Lets hope Tassie remains fox-free.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call 4620 3200.

■ ROBERT CLOSE
and STEVEN WARD

A search for some ticks for research

In one of our columns last year we mentioned that when we captured a young male koala called Scott, just north of Waterfall, he had a tick on his right ear.

We removed the tick and sent it off to Janey Jackson at the University of Melbourne.

Although there is still a lot to learn about koalas there is even less known about other groups such as ticks.

This is why Janey is studying ticks throughout the east coast of Australia.

Ticks, like spiders and mites, have eight jointed legs and are part of the group called arachnids.

Both ticks and mites, however, have a sharp point mouth with which they puncture skin to suck blood.

They also inject an anticoagulant to stop the blood clotting, and the blood then flows into their body which swells up like a little balloon.

Some ticks inject a toxin which causes paralysis, while others can transmit diseases such as scrub typhus and Lyme's disease.

However, who knows, a tick may be discovered whose anticoagulant could be used for medical treatment.

Janey identified Scott's tick as *Ixodes tasmani*.

This tick is widespread has also been found on small native land mammals, bats, domestic animals and people.

Janey is interested in receiving tick specimens from people in the general community too.

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Ticks are closely related to mites and they can be hard to distinguish.

However, ticks are generally larger, often more than 2-3mm long and before feeding have larger, flat bodies.

Any ticks found can be sent to Janey Jackson at: Department of Veterinary Science University of Melbourne, Werribee, Victoria, 3030.

Janey would prefer the ticks alive, in a small sealed container with some slightly moist paper or cotton wool and some air holes in the lid.

Please also include the location where the tick was found and date, the species of animal it was found on (eg. human, dog, cat) and your name, address, phone number and e-mail address if available.

We feel that all animals are important, including ticks, and it would be fantastic if you, our readers, could help Janey to find out more about this neglected group by sending her any ticks you find.

To report a koala sighting please call the University of Western Sydney Macarthur helpline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.

- Steven Ward and Robert Close.

Appeal to track Kevin

THIS week we have a special request for Kentlyn residents to help find Kevin, a local koala heavy.

We have been following Kevin's movements and have found that he ranges over a large area of Kentlyn.

We track him via signals emitted from a radio transmitter in his collar.

The batteries in the radio-collars should last for 10 months, but unfortunately Kevin's battery has run out two months earlier.

Although we realised Kevin's collar was running

mac's koala club

low we couldn't find him in a tree suitable for a catch.

Now we fear he is in the Georges River gorge where the already weak signal is very hard to locate.

So we would like Kentlyn residents and visitors to be on the lookout for Kevin.

His large home range means that he probably visits many backyards.

Also look out for coloured ear tags, one in each ear, which will help us to identify him.

With your help we hope to find Kevin soon, but if not, the radio-collar will not harm him.

He will probably eventually shed the collar because we leave it slightly loose around the neck.

Kevin is fully grown, so the collar cannot tighten and become a problem.

We are unsure why the battery failed but when we catch Kevin and replace the collar we will bring this battery problem to the attention of our equipment supplier.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

■ Steven Ward
and Robert Close.

Alan plays hard to get

ABOUT two months ago we received a call from residents on Hansens Road, Minto Heights.

They reported a koala had been enjoying their garden for several days.

At that time, because catching assistants were not available, we tried to catch the koala by erecting a metal fence around the tree and putting a strip of metal around the trunk.

This method has been used by other researchers and depends on the koala climbing past the metal sheath and then being trapped between the fence and the sheath.

The koala was too clever for us, however, and must have leaped to another tree or somehow climbed over the fence.

Since then these residents have had two further sightings. One was of Jacob, an old male caught at the northern end of George River Road who is still being radio-tracked.

The last sighting was of another male at the top of a large grey gum, about 25 metres up and too far out to catch.

However, the next day the koala was lower and a catch was possible and although the koala proved very resourceful and cunning we eventually managed to get it safely into a catching bag.

The koala, now nicknamed Alan, was

mac's koala club

taken to Elizabeth Macarthur Agricultural Institute for a veterinary inspection.

Alan is an adult male, three years old, 7.5kg and in excellent condition.

Alan now has his own coloured ear-tags and was released back into the same tree he was caught in.

We would like to thank the residents at "Alan's place" who have been extremely helpful.

They tell us that prior to the first sighting two months ago they had never seen a koala in their 12 years of residency.

Are koalas on the increase?

If you have bush in your backyard you might help us answer this question.

Keep your eyes peeled!

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala belowing call (02) 4620 3200.

■ Steven Ward and Robert Close

Reunion with Franchesca

LAST week we recaptured Franchesca, a female koala who is probably six years old and whom we have been radio-tracking for three years at Wedderburn.

Last year (1997) Franchesca did not have a cub, but in 1996 she successfully raised a daughter, Sarah, whom we are still studying and who has taken up part of her mother's area.

The two spend most of their time within 500 metres of each other.

Other researchers have suggested that in areas where koalas find it hard to survive, a female will probably raise a cub only two out of every three years.

Perhaps this is what we are seeing with Franchesca,

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but most other adult females we have caught have had young.

Only after we have studied many females will we understand how well Campbelltown koalas are reproducing and this is why it is necessary to catch as many koalas as possible.

Franchesca's adult weight seems to fluctuate around seven to eight

kilograms: in September 1995 when she was first captured she weighed about 7kg; in April 1996 7.9kg; in September 1996 7.4kg; in March 1997 7.3kg.

The drop in weight through 1996 and into 1997 could be due to the effort of raising Sarah.

When she was checked over after the last capture Franchesca seemed to be well and in reasonable condition, weighting 7.6kg.

We changed Franchesca's radio-collar because the battery had almost expired.

We were also delighted to find that Franchesca had a cub in her pouch which was about three to four months old and weighing about 200 grams.

We were not able to determine the sex of the pouch young or fit ear-tags because it was too young, but we should be able to ear-tag and name the young koala when we next catch Franchesca to remove her collar.

We hope that Franchesca has now recovered from the stress of raising Sarah and that her new cub will survive to join the breeding group at Campbelltown.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

Steven Ward
and Robert Close.

North-south links needed

FOR some time now we have been collecting small samples of koala tissue for analysis by Dr Bronwyn Houlden who works at the University of New South Wales and Taronga Zoo. Corpses, often reported to us by community, most being road kills, have provided many samples.

Dr Houlden has now analysed most of the samples and we were excited to find that the genetics supported our suspicions that southern Sydney koalas to the north (from in and around the Holsworthy Army Range) are genetically similar, but different from, the koalas to the south (Wilton, Bargo, Nepean, Avon and Cordeaux dam catchment area).

This finding is important because it suggests that there is little movement between the two populations.

Increased housing

mac's koala club

development between the two populations, such as along Appin Road, will increase the separation between the two populations.

Should fire wipe out either population, then the chances of replenishment will decline with increasing separation.

Therefore, leaving adequate bushland corridors between developments is necessary if the grandchildren of our current Mac Club members are to see koalas in Campbelltown.

We will be

investigating the question of two populations further.

We have heard of a group of koalas in the Oakdale area and we hope to capture two or three animals and obtain a small tissue sample from each (and will then release them), to see if these koalas are a separate group, or closely related to the northern or southern koalas.

Residents in the Oakdale area can greatly assist us by ringing to tell us if they have seen a koala, or see one in the future.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

Steven Ward
and Robert Close

Breeding puzzle

ARE koalas breeding outside of the Kentlyn and Wedderburn suburbs in the Campbelltown, Liverpool and Sutherland Shire areas?

There have been several sightings beyond Kentlyn and Wedderburn, however, only one is known to be of a female.

She was Wilhelmina, who was caught and ear-tagged in Kentlyn.

She was later sighted in the Heathcote National Park and identified from the ear-tags.

Wilhelmina was sighted in January, which is a few months before the young leave the pouch to travel on their mother's back.

So although no youngster was spotted, there may have been one riding in her pouch.

However, to provide conclusive evidence that breeding is occurring, we would need a sighting of a koala with young

mac's koala club

From the other reported sightings there have been two captures: Scott at Waterfall and Bill at Alford's Point near Menai (who was also first caught at Kentlyn), and both were males.

We know of two roadkills where Heathcote Road crosses Deadmans Creek, and both of these were also male.

There have been a number of other sightings, but none where the sex of the koala could be positively identified.

Two interesting recent reports are from areas where we have not previously heard of

sightings: Apple (probably a male) and between Stanwell Tops and Maddens Plains (sex unknown).

So despite the fact that we continue to hear of koalas from far and wide, we cannot yet say that koalas are breeding in the Campbelltown, Liverpool or Sutherland council areas outside of Kentlyn and Wedderburn.

However, it may be that you could change all that by telling us of your koala sighting. We don't care whether it was a long time ago, or if you should see one tomorrow. Keep your eyes peeled.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing phone (02) 4620 3200.

■ STEVEN WARD
and ROBERT CLOSE

Water rats: Cop a look

mac's koala club

This week we look at a beautiful Australian animal, the water rat.

The water rat or *Hydromys chrysogaster* would not be familiar to most members of the community, but Sydney has its very own colony at Five Dock in Sydney Harbour.

A student at the University of Western Sydney (UWS) Macarthur, Kylie Dwyer, is studying the nature of these animals.

Unfortunately, little is known about this animal. Although sporadic sightings have been reported, we know of no other water rat colonies within 100km of Sydney.

This is where you can help. Water rats, like koalas, are easy to recognise if you know what to look for.

They are much larger than the introduced species of rat, the black rat



(*Rattus rattus*), that you may possibly see around houses (see diagram).

The water rat does indeed live in water and appears very similar to an otter.

The hind feet are partially webbed and the animals have a beautiful water-repellent coat which was much prized by trappers earlier this century.

The water rat is carnivorous and its prey includes crayfish, crabs,

fish, mussels and large insects.

The water rat is native to New Guinea, but was introduced to the island poorly after white settlement of Australia.

We would love to hear of any sightings, especially near Sydney so that Kylie can continue her research and compare the genetics of the population at Five Dock to another.

Remember that the water rat is large, very

similar in appearance to an otter, and usually with a white tip on its black tail.

Thank you for your help and please report any sightings on the Koala number below.

To report a koala sighting please phone UWS Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing phone (02) 4620 3200.

STEVEN WARD and ROBERT CLOSE

Roger now models for students

MANY of our readers can remember Roger, the stuffed koala who has been seen at Campbelltown Council Library and Quandong display and played an important part in the Holsworth Airport Campaign.

Roger is now serving as a model for a class of design students at the University of Western Macarthur.

As part of their program, the students have to design a trap for capturing a koala safely and efficiently while it is still in the tree.

This is not an easy task, and the students first located Shirley, a female koala, with the radio tracker to find out what sort and size of tree they would have to plan for.

They then asked a lot of question, for example:

How far can koalas jump?

Would the trapped koala be vulnerable to dogs?

Do they climb down forwards or backwards?

Would koalas be put off by shiny materials?

Would they be attracted by smells, sounds etc?

Would koalas suffer from stress in a trap?

The students are now at their drawing boards designing the actual trap,

mac's koala club

with Roger providing dimensions and inspiration.

Sasha Alexander, their lecturer, says the design students have a unique opportunity to improve the method of catching koalas for research purposes.

The research capabilities provided for the Bachelor of Design and Technology at the University of Western Sydney Macarthur means the students are well placed to provide a practical solution.

We'll provide details of the best design and our comments on it at the end of the semester.

To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

—Steven Ward and Robert Close.

Tree provides nifty nursery

AS students approach the University from Macarthur Station, they pass beneath a huge, old forest red gum.

Few of the students notice the tree, and even fewer notice a fire-blackened hollow branch that has broken off about five metres above the foot-path.

This hollow, however, has a series of fascinating tenants which use the hollow as a maternity hospital, resting place or larder.

We have seen sulphur-crested cockatoos, wood ducks, galahs and a nankeen kestrel all use the hollow from time to time.

The wood duck, one of the few species of ducks to nest in trees, does not keep its chicks in the hollow for long.

Soon after hatching, the tiny ducklings step out of the hollow and are so light and downy that they float to earth like midget parachutes.

The parents then lead them 100 metres across car parks to the safety of the university dam.

Some chicks are not so lucky. One morning we spotted the head and



mac's koala club

forelegs of a large goanna poking out of the hollow.

On its face was a splattering of small feathers and what we thought was a large smile.

Such large trees as this are vital for the nesting of many species of birds and shelter for several species of marsupial.

These trees only develop hollows when

they are quite old. This means bird populations depend on their being many large trees of a range of ages.

Unfortunately, there is little regrowth of old trees around Campbelltown and every development involves the destruction of hollow-bearing eucalypts.

Often ornamental, small, foreign trees are planted instead.

These trees have little value for our native birds.

It is the responsibility, therefore, for people and institutions with the space to grow large trees, to plant local, large species such as the forest red gum to try and make up for the losses of old hollow-containing eucalypts.

This planting would certainly please our koalas which relish the leaves of the red gum.

To report a koala sighting please call the University of Western Sydney hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

■ Steven Ward and Robert Close

Practice on Roger made a better Alby

mac's koala club

THOSE of you who saw Roger, the stuffed Koala, when he was on display at Campbelltown Council, the Quandong Tourist Centre or anti-airport rallies, would agree that although he had a friendly face he did look a bit like a wombat in shape.

The truth is that converting an empty skin into a shape resembling the original animal is an extraordinarily difficult task.

The taxidermist (someone who "stuffs" an animal) must be a naturalist, sculptor and upholsterer with a real feeling for the animal.

Practice is also essential. To obtain the correct shape and proportion of the koala, a mould is made of the body



before the skin is removed.

The taxidermist must then fill the skin with light material to match the shape of the mould - not an easy task.

Roger, who is now showing some wear having lost a claw to an

over-enthusiastic admirer, was the practice model for our new koala, Alby.

The taxidermist, Roger Carrus, has done a fine job on Alby, and we anticipate that Alby will be seen frequently around Campbelltown at displays and educational gatherings.

At present, he resides in Robert's office to the delight of passersby.

Alby, like Roger, was killed by a car near the Wedderburn Causeway.

With increasing population and improved road conditions at Wedderburn, such road kills can be expected to become more frequent.

So Wedderburn residents and visitors, please be wary and drive slowly, especially when driving through the gorge and over the causeway. Roger Carrus doesn't need any more practice.

Remember, too, that corpses will still provide us with a lot of information and that injured animals should receive veterinary

■ THE Wedderburn koala named Alby has been stuffed after being killed by a car. Soon he will be seen frequently around Campbelltown at displays and educational gatherings.

attention as soon as possible.

To report a Koala sighting please call the University of Western Sydney Macarthur hotline on (02)9962 9996.

To hear a male koala belowing call 4620 3200.

■ Robert Ward and Steven Close.

Another koala road-kill

AFTER last week's column about Alby, this week we must report that another koala was fatally injured by a car on May 10, on Heathcote Road to Sandy Point, to the north of the Holsworthy Army Range.

The koala was a healthy adult male weighing 8.6kg.

The impact of the vehicle did not kill him outright, but broke his right arm and damaged his leg and lungs.

Unfortunately, the lung damage was too serious and he died despite the efforts of vets at Crossroads Vet Hospital

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and our tireless WIRES koala expert, Gaylene Parker.

As with all other road-kills, we will obtain DNA from the corpse for genetic studies, record measurements, and

prepare the skull to determine the male's age.

Eventually, the skull will be lodged with all the others in the Australian Museum in Sydney.

Before our work, there was only one skull from the Campbelltown area in the museum.

The road kill is hardly surprising as the bush at Sandy Point looks like perfect koala habitat.

It is surprising that although we now know of three roadkills near Sandy Point (two where Heathcote Road crosses Deadmans Creek), we have not heard of other sightings in the area.

All three road-kills were males, which means that we still have not found breeding females anywhere close to the southern Sydney suburbs, except Kentlyn and Wedderburn.

We would be very interested to hear of other sightings of koalas in this area.

To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a koala bellowing, call (02) 4620 3200.

■ STEVEN WARD
and ROBERT CLOSE

It's your chance to make a difference

SOME of our readers may know that Cumberland Plain woodland (the natural vegetation for most of Campbelltown west of the Georges River) has been declared by the National Parks and Wildlife Service as a threatened vegetation type.

Less than seven per cent of the original Cumberland Plain woodland remains after clearing for farming and houses.

A scientific committee is investigating whether another vegetation community, shale/sandstone transition forest, should be protected.

So what is shale/sandstone transition forest?

Cumberland Plain woodland occurs on shale soils, while sandstone soils underlie the Holsworthy area east of The Georges River. Common tree species found in Cumberland Plain woodland (shale) include forest red gum, grey box and ironbark and on sandstone soils grey gums, blackbutts, scribbly gum and stringybarks.

The transition forest occurs where the soil changes from Sydney sandstone, to the more fertile shale.

Plant species from both

mac's koala club

shale and sandstone areas can be found in the shale/sandstone transition forest.

Some animals actually prefer areas where the forest type changes, because of the greater variety of plants providing a wider range of food and shelter.

If the shale/sandstone transition forest is declared as a threatened vegetation community, then it will be harder to obtain permission from councils to clear or develop land that contains this type of forest.

We will make a submission based on the fact that several of our radio-collared koalas – Shirley, Ray, Kevin and Jacob – all include transitional forest as part of their home ranges.

The committee is interested in receiving written submissions from anyone.

If you too would like to make a submission to the scientific committee on whether or not shale/sandstone transition forest should be declared as threatened, now is your chance.

Mark your submission to the attention of the Executive Officer, Scientific Committee and addressed to the Director-General, National Parks and Wildlife Service, PO Box 1967, Hurstville, NSW 2220, by June 12.

In last week's column we described a male koala injured on Heathcoate Road, near Sandy Point, to the north of Holsworthy Army Range and taken in to Casula Veterinary Hospital by an unknown person.

Because the hospital does not have this person's contact number, we cannot contact them for further information on where the koala was found.

If you know the person who brought the koala in, we would be grateful if you could contact us.

To report a koala sighting, please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

■ STEVEN WARD
and ROBERT CLOSE

Dogs signalled alert for koala in reserve

WE are excited to report that at last a koala has been sighted in the Smiths Creek Reserve.

The koala was seen by Ruse resident Marcia Pain in her backyard one evening after she was alerted by her dogs' strange behaviour.

Once the dogs were inside, the koala descended the tree it had climbed and headed towards the back fence, which backs on to the Smiths Creek Reserve.

However the koala found the fence to be a tough one to cross and after a few attempts had still not managed to climb over.

Concerned that the koala might be stuck, Marcia and her son went to help.

Using a towel, they grabbed the koala and after a brief struggle managed to place it over the fence in the Smiths Creek Reserve where it quickly moved off and climbed a nearby tree.

We advise not to



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handle wild koalas as they will fight if necessary, and are well armed with sharp teeth and claws.

From Marcia's description, the koala

may be Dan, a young koala caught in Ruse close to Peter Meadows Creek in February.

Marcia observed that the koala had ear tags but unfortunately couldn't tell us what colour the tags were as it was too dark.

There is a suitable koala habitat in the Smiths Creek Reserve although a koala's journey there would be difficult.

There are only a few spots where the Smiths Creek Reserve comes close to linking up with Peter Meadows Creek bush.

This means that the koala would probably have travelled through many Ruse residents' backyards as well as crossing busy Junction Road.

If you are a resident of Ruse, please be on the lookout for Dan. He may pass through your property or you might even see him on the roads.

If you have dogs, they may spot Dan before you so investigate if your dogs are barking.

You might also consider looking through the trees in your backyard. Check the trees for fresh scratches and faecal pellets and perhaps use a bright light to see if Dan is around.

Eye-shine, which is light reflecting off the back of the eyes, will help you to detect if koalas and other animals are present.

If you should spot any koala, lookout for the ear tags and record which colour tag is in which ear, left or right, and call us as soon as possible.

To report a koala sighting, call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing, call 4620 3200.

By STEVEN WARD and ROBERT CLOSE.

Sandy joins family

WE recently welcomed a new member to the koala ear-tagged clan – Sandy.

This animal was reported to us by AWARE (Australian Wildlife Ambulance Rescue Emergency), a wildlife carer group in the Sydney area.

Sandy was up a small grey gum adjacent to the main road through Sandy Point, which is to the north of the Holsworth Army Range and overlooks the Georges River.

When we arrived, there was a crowd of local residents amazed to find a koala in their area.

We set up our climbing equipment and our volunteer climber Brett Tyler was soon up in an adjacent tree trying to persuade Sandy to descend.

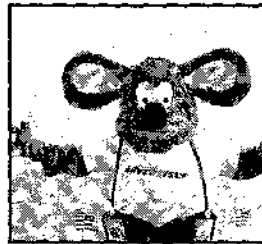
Sandy, unlike most koalas, was initially not inclined to move away from our "flag" (a piece of material on the end of a long extendable pole). In fact, he was determined to take a big chunk out of it and almost pulled the pole from Brett's grasp!

We persisted and after a minute or two Sandy started down the tree.

Things were proceeding well until when three metres from the ground, when he turned and launched himself up and on to the trunk of a larger tree about three metres away.

However, this was our intrepid climber Brett's tree and he managed to keep the flag above Sandy's head to stop him from climbing too high.

We quickly repositioned and with a second pole managed to flag Sandy down to ground level when Steven



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Agricultural Institute discovered Sandy weighed 6.6kg, was in excellent condition and is probably three years old.

He was ear-tagged and then released close to where he was caught, but away from roads.

However, we expect Sandy to keep on moving until he finds some females to keep him company.

This may mean that he could end up in the backyards of houses at Sandy Point, or perhaps, if he's a survivor, even to the north of the Georges River.

He could also cross Heathcote Road, where there have already been three male koalas killed.

So if you drive along Heathcote Road, look out for and avoid wildlife, particularly near Deadmans Creek, which is close to Sandy Point.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala

Bush clearing to put bandicoots at risk

RECENTLY a building development was proposed at St Helens Park to partly clear the bushland.

A firm of biologists was hired to examine the site to ensure that no endangered species (plant and animal) would be affected by the clearing.

The biologists listed all the plant and animal species that they could find and reported that they had seen a short-nosed bandicoot.

Bandicoots are marsupials weighing up to two kilos and are closely related to the bilby.

However, their eyes and ears are smaller and most species are less colourful than the bilby.

Bandicoots eat insects,

mac's koala club

worms and some fruit and generally help farmers by removing insect pests from pastures.

Around the cities, however, in their search for lawn grubs, they often make small conical holes in lawns.

Some ignorant gardeners get upset about these holes, and don't

realise that the bandicoots are after grubs.

Bandicoots, like koalas, are marsupials and therefore have a pouch.

They have up to six young at a time, which are born after a pregnancy of 12 and a half days, which is the shortest known of any mammal.

The young stay in the pouch for 60 days and are soon independent.

The sighting of a short-nosed bandicoot at St Helens Park is unusual.

We have not captured bandicoots in any of our trapping surveys in the district and considered that they were probably gone - victims of cats and clearing.

It is especially unusual

to find a short-nosed bandicoot.

None have been found in the southern side of Sydney.

Long-nosed bandicoots use to be relatively common in Sydney, but in the last 20 years numbers have plummeted.

To have bandicoots in Campbelltown then, is a cause for celebration.

So if you have little pointed holes in your lawn, let us know!

■ To report a koala sighting please call the University of Western Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.

- Steven Ward and Robert Close.

A fast train a'comin': Furry friends face risk

HOW did the koala cross the road?

There have been some recent publicity for the proposal to build a very fast train link from Sydney to Canberra.

This raises the interesting question of how to prevent mobile koalas from being vaporised by a train travelling at 200km/hr.

It is important for populations of animals to maintain links, that is, animals must be able to move between populations.

This allows "new blood" to be introduced so that genetic diversity is increased.

Consequently, if disease, fire or some other cause should wipe out animals in one area, dispersing animals can repopulate that location.

Roads, railways, housing development and other clearing all tend to separate populations so it is important to minimise separation.

mac's koala club

One technique is to build tunnels under roads or railways so animals can pass through.

These can work but because many animals may pass through the same tunnel, predators such as foxes can also take advantage of them, preying on a passing smorgasbord of native animals.

Bridges over streams and rivers provide more room to allow animals to move through underneath the road or railway.

If native vegetation is still in place, animals can also take cover from predators.

Of course, animals, just like people, will try to take the shortest route, so fences or other barriers are needed to stop the animals trying to cross the road or railway and to divert them to tunnels or under bridges.

The fence must work effectively as a barrier but because koalas are good climbers this can be difficult.

A wire mesh fence with a loose overhanging flap has been used to direct koalas.

When the koala climbs the fence the loose top part will fall back, preventing the koala from climbing over.

Locally, koalas seem to be most prone to being hit on roads where a well-used road crosses a gully.

Examples are the causeway where Wedderburn Road crosses the Georges River, where Heathcote Road crosses Deadmans Creek and Peter Meadows Road.

So drive carefully and be particularly careful in these spots.

To report a koala sighting, call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing, call 46203200.

■ By Stephen Ward and Robert Close

Natural history still in making

SEVERAL long-term residents of Kentlyn and Wedderburn tell us that they have never seen a koala.

Some don't believe that koalas lived in this region until recently.

They are even those who suggest that koalas were brought into the area by humans, perhaps as a political trick!

However, we are sure that koalas have always been in the area.

The first koala was recorded by white settlers who came from the Bargo area 10 years after Sydney was settled.

More recently, up till 1920, koalas were hunted for their skins.

It is said that Mick and Kirk Rixon, who lived near where Campbelltown tip now stands, kept a pack of 90 dogs or more for hunting koalas and wallabies.

mac's koala club

The price of a koala skin in those days was one shilling.

Local historian Keith Longhurst tells us that his father, born in 1898, roamed the bush at Kentlyn as a child and would see 50 to 60 koalas over a year.

Unfortunately, the combined effects of hunting and fierce fires of 1929 probably knocked koala numbers to a low level.

In 1967, however, a koala was seen west of the railway line at Minto, and since 1986, when David

Homer spotted a koala at Wedderburn, there have been many sightings.

We are interested in any reports of koalas but we specially like reports from the period 1920 to 1986.

This will help us fill in the missing history and understand more clearly how the koala population has changed over the years.

So, if you have lived on the southern Sydney area for a long time, or have a relative or friend who has, we'd like to hear your koala stories.

Happy hunting – for photographs only of course!

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call 4620 3200.

— By ROBERT CLOSE and STEVEN WARD

Devilish Dan escapades

Devilish Dan

Recently we received a call from East Campbelltown resident, Ian Gooda. Ian lives on the western side of Smiths Creek Reserve, not far from the Campbelltown East primary school.

Another local, Bryan North had spotted a young koala on the suburban street and watched as the koala walked down the street and climbed a liquidambar in Ian's front garden.

Ian reported that the koala had coloured ear tags and we identified the koala as being Dan, a young male caught in February this year in Ruse. He was next spotted in June in a backyard on the eastern side of Smiths Creek.

Ian was understandably concerned about Dan's

mac's koala club

welfare. We were reluctant to move Dan because koalas are part of the Campbelltown environment. They have to learn the tricks to survive dogs, cars and people and have to become familiar with the layout of the bush and suburb.

We advised Ian that he shouldn't try to capture Dan as koalas are very strong for their size and have sharp teeth and claws.

In a suburban

environment the biggest threats to koalas are dogs and cars. You may think that your dog is mild and would "never harm a fly" but dogs do attack and kill koalas. Roaming dogs (i.e. those that get out or are not confined to a yard) are particularly dangerous to dispersing koalas. You can help by making sure your dog doesn't wander off and by immediately investigating any barking.

Ian reported that a small group of residents were admiring Dan in his tree. We suggested that if the watchers stood about 15 metres away from Dan's tree he might descend. A little while later Ian called again and reported that Dan had come down and that another resident had managed to "herd" Dan down the street and back

towards the bush, by staying a few metres behind him.

There was a frightening moment when a car came flying around a nearby corner, but luckily Dan was not in the way. Dan then crossed the road back towards the bush, and swamped up a nearby tree.

Being a young, adventurous male, Dan is likely to keep wandering and could well turn up again on someone's property. If so, please call us so that we can follow Dan's movements.

■ To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call 4620 3200.

- By Steven Ward and Robert Close

Waterway goes to waste

RECENTLY we were out at Wedderburn checking on our radio-collared koalas.

We walked down a fire trail to have lunch by O'Hares Creek and found it beautiful, clear, cold and unpolluted.

Fortunately, the catchment of the O'Hares Creek has been protected by the Water Board and the Army and is one of the few clean creeks in the Sydney basin.

It is more than a creek, as it supplies 70 per cent of the flow into the Georges River.

Its clean water allows swimmers at the Woolwash, Freres Crossing and Jimmo's Beach to enjoy themselves.

What a contrast it was, on our way home to stop at Wedderburn crossing, two kilometres upstream from O'Hares Creek, meeting with the Georges

mac's koala club

Instead of clear water we found brownish grey soup, and masses of bulrushes - a sure indicator of excessive nutrients and sediment.

We were moved to look back to a photograph taken by the Advertiser in 1989 at the same location. There was no bulrush in sight.

At that time, Robert was warning about high bacterial levels in the river, and the sediment load arising from the construction of housing developments at St Helens Park.

Those warnings remain

just as pertinent today.

More nutrients flowing in to the river allow algae and plants such as bulrushes to flourish.

This growth can lead to blockage of the river, production of toxins and loss of oxygen in the water when the organisms die and decompose.

High sediment levels tend to block out sunlight shining through the water.

Nutrients and sediment moreover cause problems for native fish and other animals.

A high bacterial level in the water can mean that people swimming in the river have a higher chance of contracting diseases.

All sediment and nutrients (oil, feces, food, detergent, fertilisers, grass clippings) will eventually run into the Georges River.

We are all guilty to some extent of such pollution.

You can minimise the

impact by using as little fertiliser and pesticides as possible - preferably not at all - composting grass clippings, washing your car on the grass instead of the road and using fewer cleaning agents.

Put your rubbish in a bin or a canister, yet, recycle it if possible.

Remember that all the rubbish and oil on the roads will eventually wash down into the storm drains and then into the waterways.

It will take a concerted effort from all of us to protect the Georges River so that future generations can enjoy it.

To report a koala sighting, please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 2200.

Steven Ward
and Robert Close

Bulrushes clear water

IN a recent column we highlighted the differences that can be seen between O'Hares Creek and the Wedderburn Road causeway over the Georges River.

In the O'Hares Creek the water is clear, whereas at the causeway over the Georges River the murky brown water flows through lots of bulrushes.

We were making the point that bulrushes can be an indicator of polluted water.

A reader called us soon after, however, concerned that we were disparaging bulrushes.

He rightly pointed out that bulrushes act as a very efficient filter and help to remove sediment and nutrients.

The catchment of the upper Georges River, however, has changed over the past 10 years.

With the development of St Helens Park, Rosemeadow and Ambarvale, bushland has been cleared and houses erected.

Roads, houses, and concrete driveways stop the soil from absorbing the water which then flows towards the river picking up all the rubbish on the streets as well as fertilisers, pesticides, dead leaves, detergents, oil on road, and feces from dogs, cat and other pets.

The bulrush uses all of these materials as nutrients to grow and its thick root system catches a lot of sediment.

Fewer nutrients means less food for bacteria in the swimming holes and less sediment means clearer waters!

So the bulrush actually improves the water quality of the Georges River, making it safer for swimmers downstream. Ideally, all our drains and

mac's koala club

channels should be filter beds of bulrushes and native aquatic plants.

This is the trend overseas.

Unfortunately many of Campbelltown's channels are still concrete spillways.

The idea was to channel stormwater immediately to the river and so diminish chances of local flooding.

The result of the recent suburban growth, however, means that huge amounts of water that previously would have been absorbed, will now run off roofs, driveways and roads and into the river.

If heavy rainfall and the consequent rapid run-off to the Georges River coincides with high tides below Liverpool, then the area near Henery Lawson Drive will flood.

Increasing urban development combined with concrete channels means that for a given heavy rainfall floods will become more likely.

It is time to bring back the bulrush - they won't stop flooding, but they will help by slowing the water down.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

- Steven Ward and
Robert Close

Pop along to open day

ON Sunday, August 23 the University of Western Sydney, Macarthur will be hold an Open Day at its Campbelltown Campus between 10am and 4pm.

This means the University will be open to the public and you will be able to come along, look in the labs and see what goes on and join in the activities.

This day gives people a chance to see what the university has to offer and is obviously important for those thinking of further study. The staff and students at the university are doing all sorts of interesting things so this is your chance to check us

mac's koala club

out. The koala research group will have a display in Building 18 based on our studies.

We will be demonstrating how we radio-track the koalas that we fit with radio-collars and there will be a map

showing the location of any sightings and other material on display.

We will also be available to answer any questions you may have and Mac the Koala will also be on campus between 11am and 1pm to help entertain the youngsters and those young at heart.

Also featured will be the results of Design students' efforts at designing a koala trap.

One of their assignments this semester was to solve the tricky problem of efficiently, safely and humanely catching a koala.

The students have invented a fascinating

range of interesting and sometimes zany ideas and their scale models of the koala traps will be displayed. Anyone with a handyperson streak will find the ideas fascinating.

We are hoping that those with construction skills will be able to suggest improvements or construct a prototype for testing.

If, with your help, we can transform the students' ideas into practice, the result will be a safer, less stressful and more successful capture technique.

Of course there will also be many other displays by other departments

throughout the University such as SETI (Search For Extraterrestrial Intelligence), chemistry you can eat and genetically engineered carnations to check out.

There will be talks by lecturers at various times through the day too.

So note the date down in your diary and we'll look forward to seeing you there.

To report a koala sighting please call the UWS Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call 902) 4620 3200.

- STEVEN WARD
and ROBERT CLOSE

Jacob's hidden harem

RECENTLY we recaptured Jacob, a male koala that we have been radio-tracking since September 1997.

We first captured him at the northern end of Georges River Road when he weighed 9.8kg.

We estimated that he was about 7 or 8.

Jacob uses Peter Meadows Creek as his home range and moves from Kentlyn through to Minto Heights and East Minto, an area of approximately 200 hectares.

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He often proves tricky to locate because the bush and terrain in the Peter Meadows Creek gully can be quite difficult.

Normally we would

recapture a koala only when it was in a tree that was "suitable" - that is, easy to climb, easy to carry equipment to, not too tall and isolated so that the koala can not jump from tree to tree.

However, as the batteries run down we risk not capturing the koala to remove the \$200 collar if we are too choosy.

Such was the case for Jacob this month when we found him in a She-oak.

After carefully assessing the situation we decided to go ahead.

Fortunately he responded explosively to the flag and bolted down the tree into Steven's arms without thinking of leaping into the nearby neighbouring She-oaks.

Jacob then went to Elizabeth Macarthur Agricultural Institute for a vet checkover and proved to be in excellent health.

Probably due to all the recent rain he weighed in at a hefty 10.3 kg.

He was then released. He had been captured with a new radiocollar.

Obviously Jacob is doing very well but unfortunately we don't know of any breeding females in Jacob's area which might be keeping him company.

This seems strange as we would expect him to be a dominant male.

Perhaps his females just haven't yet been seen.

So all residents in the north of Kentlyn, Minto Heights, East Minto and bushwalkers in the Basin area should keep a close look out for koalas.

Surely Jacob must have female companions!

Remember, this Sunday between 10am and 4pm at the University Open Day, so come down to the Campbelltown campus and see our koala display in Building 18 and enjoy the other activities.

To report a koala sighting, call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

■ By Steven Ward and Robert Close

Sugar gliders a great sight

WE have often mentioned that useful indications of the presence of koalas are the characteristic parallel scratch marks in the soft bark of the grey gum.

Often we see the much smaller and fainter marks of a beautiful animal that often shares the treetops: the sugar glider (*Petaurus breviceps*).

The sugar glider occurs along the east coast of Australia and into Tasmania and Papua New Guinea. Sugar gliders are small marsupials, females weigh about 115g and males weigh about 140g.

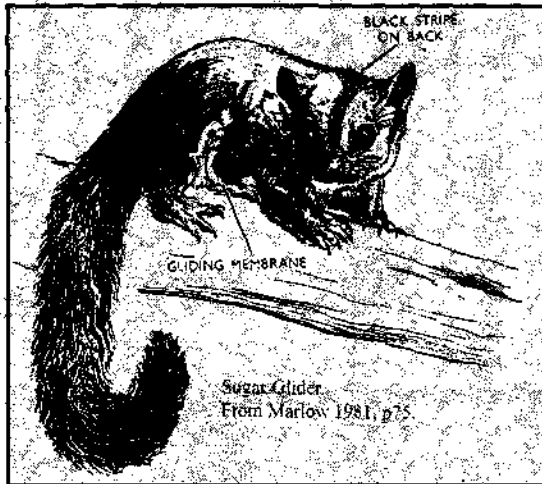
Both males and females are normally 17cm long with a 19cm tail.

They are normally grey with a black stripe in the middle of the head extending to halfway down their back.

A thin membrane, or flap of skin, connects the 12cm finger to the toe.

When the glider stretches its limbs the membrane becomes taut and the glider resembles a small rectangular kite.

Sugar gliders live in the treetops and glide from one tree to the other by launching themselves and



Most people will never see these attractive animals because the gliders are nocturnal.

During the day they sleep in a communal tree hollow with other sugar gliders.

It is a thrilling experience to watch sugar gliders scuttling about their favourite trees in their social groups of up to seven adults and young.

They are amazingly quick and it is incredible to see them sailing from tree to tree.

So if you're abroad in the bush at night, listen for gliders' shrill yapping calls.

Other calls are sharp screams and "a definite gurgling chatter" (*The Mammals of Australia* 1995, p230).

If you hear these sounds search for the cause of the calls. You'll be richly rewarded.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call 4620 3200.

- By Steven Ward and Robert Close

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spreading the membrane. The sugar gliders can then steer their flight to some extent by altering the tightness of the membrane.

When the gliders approach the landing tree

they bring up their hind legs and land with all four feet on the tree.

They can glide for distances of at least 50m in this way. Sugar gliders eat insects, pollen, nectar and tree sap.

To get tree sap they will chew horizontally through the bark and lap up the sap that oozes out.

In Campbelltown, bloody woods (eucalypts with rich, red sap) seem to be favoured and we have seen some trees covered with glider grooves.

Shirl and cub are well

LAST week we recaptured Shirley and her latest cub, Leslie at Kentlyn.

We first caught Shirley as an adult in 1993 and have been radio-tracking her since 1995.

Following Shirley's movements has been particularly interesting because Shirley lives adjacent to and sometimes even crosses the Georges River in Kentlyn.

Shirley has survived the threats of cars, dogs and fires.

In fact she has thrived, and we know she has successfully raised two

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cubs, Bill and Orin, prior to Leslie. Also, despite raising Leslie, Shirley has put on 600g in weight since her last capture in October 1997, quite a considerable increase, and now weighs a matronly 8kg.

We hope Shirley's other young are doing as well as she is.

We know Bill travelled 19km northeast across the Holsworthy Army Range, Heathcoate Road, and other impediments to cause great excitement in the Menai Area.

Since Orin became independent from Shirley, we have not seen her or heard of any sightings.

We suspect, however, she may still be using part of Shirley's home range.

Even though Shirley has survived, dogs and cats pose particular threats to her young as they move around to try

and find a spot in Campbelltown's marvellous bushland where they can survive and mature.

Leslie was given an orange tag in the left ear and a white one in the right.

Now, if someone reports seeing a koala with this particular colour combination, we will know it is Leslie.

Such information is important because it means we can follow Leslie's movements, without the need for a radiocollar.

We are also pleased to report Lyn and her baby

have returned to Kentlyn Primary School to the great delight of the students.

Lyn has crossed Georges River Road to get to the school so remember to drive carefully, especially near bushland areas, and if you are a dog owner make sure it doesn't roam.

To report a koala sighting please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200. — Steven Ward and Robert Close

Sighting confirmed

THIS week we are delighted to report a koala sighting on the western edge of the Woronora Cemetery in Prince Edward Park in Sutherland.

This is a fascinating sighting because it is so close to Sutherland but with many other residential areas to the west.

It is also close to the northern end of the Royal National Park, so perhaps it's a route koalas use to get in and out of the Royal.

We received the report of the sighting about 2.30pm but teaching commitments at the

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university meant that we didn't arrive until 7pm, by which time the koala had moved.

We used spotlights in an attempt to locate the koala, but the understorey was too thick and after an hour or so, we had to admit defeat.

However, we did

manage to find koala pellets underneath the tree in which the koala has been seen, thus confirming that it was, in fact, a koala.

It is valuable to confirm a sighting. Once we were called out to a reported sighting only to find the animal was a big grey brushtail possum (with its head and tail hidden).

We would have liked to catch the koala to determine its sex, condition and whether it was carrying young. We would also have fitted a coloured tag in each ear so that the koala could later be identified.

We strongly suspect that this koala was a male and had probably moved along the Woronora River. So far we have captured only males in the Sutherland Shire.

However, because koalas are so hard to locate, some koalas may be breeding there and we have just been unable to find these females.

For this reason, we will be sending out approximately 18,000 postal surveys to residents in the Sutherland area asking for reports of any sightings in the southern Sydney area.

We hope that the survey - being paid for by both the Georges River and Hacking River catchment management committees - will provide further insights into just how common koalas are in the Sutherland area and to help answer the

important questions as to whether or not they are breeding.

A report on the survey will be given to both Catchment Management Committees and Sutherland Shire Council and the survey results will also form part of the information considered by Steven in writing up his PH.D thesis.

His thesis should be finished by about midway through 1999.

This recent sighting will form an important part in working insight into the lives of koalas in southern Sydney.

To report a koala sighting, call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing, call 4620 3200.

■ By Steven Ward and Robert Close.

Onto the unknown

IS there a previously unknown endangered animal in the Campbelltown area?

A group of Wedderburn residents out for a stargazing walk hope there is.

Walking along an old fire trail, they spotted either a greater glider or a yellow-bellied glider.

Both are similar in appearance, but the yellow-bellied glider has a light yellow belly and is slightly smaller, with the head and body combined 28cm and a 43cm tail.

We have described the greater glider in an earlier column as the only other mammal which eats large amounts of eucalypt leaves like the koala.

There have been few reports of greater glider sightings in the

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Campbelltown area.

The yellow-bellied glider is endangered.

It has quite a different diet from the greater glider and eats nectar and flowers.

Yellow-bellied gliders also share a trait with sugar gliders, a much smaller marsupial.

Both cut grooves in the bark of suitable trees and will lick up the sap that oozes out.

Yellow-bellied gliders will make V-shaped incisions which concentrate the sap towards the bottom point of the V.

We have seen Vs in

local trees which look like the incisions of yellow-bellied gliders, but have not yet spotted the gliders themselves.

It would be fantastic news if the recent sighting was indeed a yellow-bellied glider.

The only other animal it could be is a greater glider, which would still be reassuring.

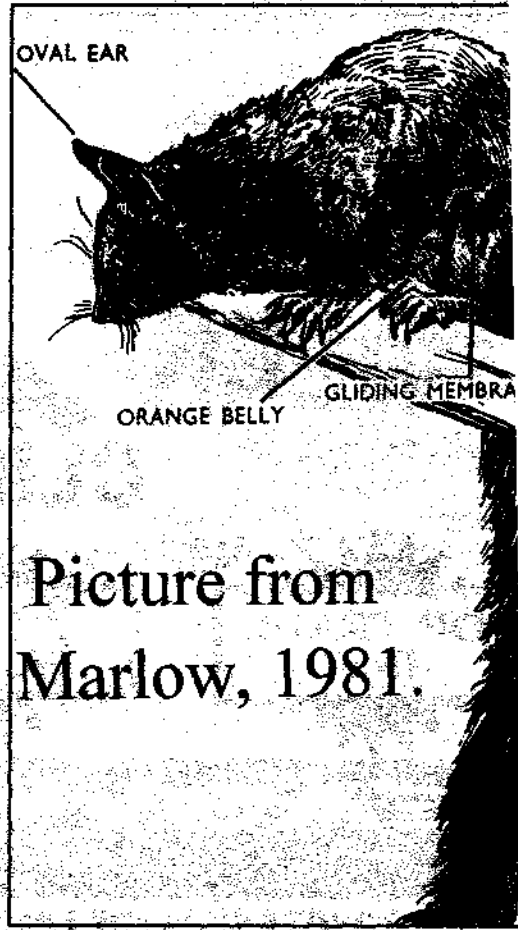
Those residents living near the bush can listen for the yellow-bellied glider's call - "a high-pitched shriek subsiding into a throaty rattle" (Mammals of Australia, 1998).

This call carries for up to 400m and can sound quite disturbing at night.

To report a koala sighting, call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing, call 4620 3200.

■ By Steven Ward and Robert Close.



Picture from Marlow, 1981.

Go east, young Dan: it's home

PREVIOUSLY we have reported that Dan, a young male koala has been exploring the Smiths Creek Reserve in the suburbs of Ruse and Campbelltown.

We believe Dan originally came from Peter Meadows Creek and travelled west through bush and backyards to Smith Creeks, where he has been around for two months.

A recent sighting close to the Shell Service Station on Junction Road has indicated that Dan has headed back east towards Peter Meadows Creek or the Georges River.

We recognised Dan from his coloured-ear tags and would like all Ruse residents to watch out for him.

It also appears that the koala breeding season is already underway.

Normally the season starts in September and runs through February.

With all the recent rain, the bush is looking great and we expect that this will be a great year for the koalas.

The male koalas are in good condition and should be bellowing to foes and female friends.

These can sound quite frightening. Listen to our recorded bellows on (02) 4620 3200 to appreciate the unusual sounds.

The early start to the breeding season was noted

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by a keen-eyed bushwalker at Yerrinbool, in the first week of September.

On hearing grunting noises coming from a tree, he investigated and found two adult koalas on the same branch, one behind the other.

An hour and a half later the bushwalker returned and found that one koala had moved to a lower fork, while the other remained on the same branch.

We suspect the encounter was a male koala trying to mate with a female.

Had it been two males it is unlikely both would have remained in the same tree, the victor in the struggle would have forced the other to move on.

So, we expect a busy breeding season for koalas: keep your eyes peeled and ears flapping.

To report a sighting, call the University of Western Sydney, Macarthur hotline on (02) 9962 9996.

■ By Steven Ward and Robert Close.

Koala remains make the life of a biologist

SPARE a thought for the families who have to live with a biologist.

Car journeys are frequently interrupted by roadside stops to examine the squashed remains of various animals.

Sometimes, the skulls or bits of tissue are collected from these unfortunate animals and brought back in the car for later study.

Then at home there are usually containers full of faecal pellets awaiting analysis and sometimes mysterious and heavily sealed containers in the freezer.

Once collected, the skulls must be prepared. Often there are skulls at various stages of preparation.

Robert's home is currently host to three koala skulls in final stages of being cleaned, dried and labeled.

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These skulls will eventually be placed in the Australian Museum where they will remain forever as a record of koala distribution and will be available to other biologists for further study.

Note, however, that collectors of skulls and roadside specimens must have a license to do so from the National Parks and Wildlife Service.

Before the skulls go to the museum, Steven will study them for his PhD thesis.

The three skulls are all the results of car collisions, one from Heathcote Road, one from Peter Meadows Road, and the other from Wedderburn Road.

Like all koalas, the skulls have a pair of large, sharp incisors on the point of the lower jaw and an opposite large pair of incisors, two smaller pairs of incisors and a pair of small canine teeth on the upper jaw.

Further along the upper and lower jaws are opposite pairs of blade-like teeth for cutting leaf stems and rows of four sharp cusped molar teeth for cutting the eucalypt leaves into small, squarish fragments and for crushing the leaves to release their nutrients.

By measuring the skulls and by noting the minimal wear on their incisors and first molars, Steven can determine that they were

young males setting off on their grand journeys to find a suitable home range and mates.

This compulsion to travel made them vulnerable to cars, and it is sad that they failed in their goal.

Let's hope that the information they are providing now will help ensure that those future biologists will have living specimens to study and will not have to rely on ancient museum skulls.

You can help the long-term survival of koalas by driving carefully and notifying us promptly of any koalas - dead or alive.

To report a koala sighting, call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

ROBERT CLOSE and STEVEN WARD.

Students examine bushland

ENVIRONMENTAL science students at the University of Western Sydney, Macarthur, last week attended a field camp to investigate bushland at Macquarie Fields.

The camp was arranged with the assistance of the Housing Communities Assistance Programs, Macquarie Fields, Environmental Committee which is interested in rehabilitating the area.

As a first stage of the plan, the students worked to find and identify the flora (plants) and fauna (animals) present in the area.

The subject bushland has been greatly influenced by human activity with two old tips included in the study as well as continuing impact.

These influences appear to have affected local fauna. The students' trapping survey found a few native species.

Three types of traps were used to capture small mammals.

However, the only mammals captured were introduced black rats.

Normally, one would expect to find the native bush rats and brown antechinus in similar habitat along the Georges River.

Spotlighting at night, another technique used to detect mammals, revealed quite a few ringtail possums and a sugar glider but no other mammals apart from bats.

However, tracks and faecal pellets of a small wallaby, probably a swamp wallaby, were found.

For frogs and reptiles, the situation was much better with three species of native frogs, water

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were excited by the diverse range of plant species.

The reason for the variety is that three different soil types meet in the area and allow a great range of condition for plants.

It was previously mentioned that a scientific committee was examining listing transition shale and sandstone plant communities as an endangered ecological community.

This listing has been approved, and much of the Macquarie Fields bushland is this transition type. So, in short, the Macquarie Fields bushland has a poor range of animal species, probably due to the high impact humans have had upon the area.

There is, however, a good range of plant species present, and if the community continues the effort to reduce the current impact on the bushland, native animal species may return.

Although they worked hard, the students had a great time on the camp and particularly enjoyed swimming in the beautiful Georges River.

Perhaps, in 10 or 20 years time, a future class will be able to report on the success of the rehabilitation. To report a koala sighting, call the University of Western

Georges River bushland home to native animals

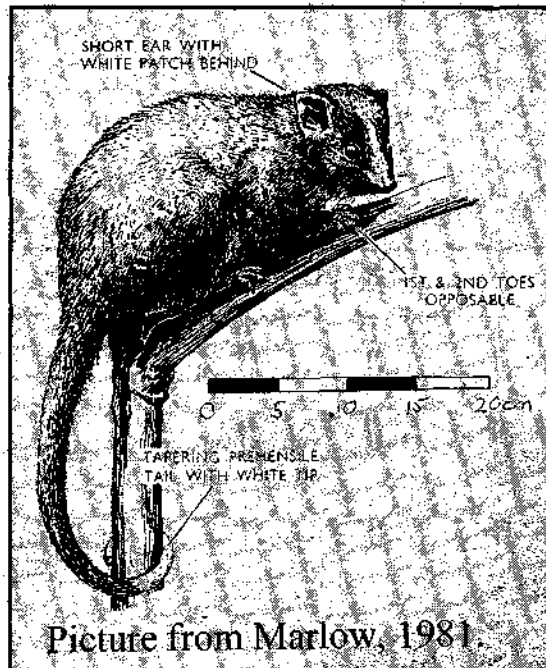
mac's koala club

LAST week we described our work with the Macquarie Fields Neighbourhood Advisory Board to conduct a flora and fauna survey of bushland besides the Georges River.

We reported seeing several ringtail possums. This beautiful and relatively common species (*Pseudocheirus peregrinus*), is found in Tasmania and along the east coast of Australia.

The possums live in a variety of habitats where dense understorey is found.

Sometimes these habitats include back



gardens or other urban areas.

Ringtail possums are easy to recognise because the last third of their tail has a white tip.

The tail is also prehensile – this means that it can act as a limb and will curl around branches and other objects helping the

possum to hold on or balance itself.

Ringtails build themselves a nest among the foliage of a tree.

This nest is called a “drey” and is lined with shredded bark or grass to make a nice comfy home.

Our students observed a drey on the recent Macquarie Fields survey.

A ringtail was disturbed during spotlighting and then clambered through the canopies of two low trees and into a tree which also had a climbing vine amongst the canopy.

Among the thick vegetation we could just make out the possum as it sat in its drey, which was about half a metre long, 25cms wide and high.

The vine formed the walls and sides of the drey, although there were large enough gaps through which to see the ringtail.

Ringtail possums eat leaves, flowers and fruits, and face the same problem as koalas in that leaves are a very poor food source.

To get the most nutrition out of the leaves, ringtail possums retain fine food particles in the caecum, which is part of the digestive tract.

In the caecum, bacteria work to break down these fine food particles.

During the day, while resting in their drey, the ringtails practice coprophagy.

This means that the food particles in the caecum are excreted as

faeces and then eaten by the possum.

This may sound unpleasant but it means that the possum can then absorb all the nutrients released by the bacteria while they worked on the food particles in the caecum.

After the second passage through the digestive tract, the food is excreted at night and is not eaten.

We looked in vain for koalas in the area.

Nor did we see scratch marks in the koala feed trees that grow in the area, or the distinctive faecal pellets on the ground beneath.

However, we expect that an occasional koala will move through the area in search of mates.

So people in the Macquarie Fields area should keep an eye out, and an ear open for the koala bellows.

To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

■ By Steven Ward and Robert Close

Evidence of koala breeding

WE recently received two calls within a week from people sighting koalas near the Wedderburn causeway across the Georges River.

The first call was a day after sighting and by then it was too late to locate the koala.

The second call, however, was from an enterprising resident who had wrapped the koala in a coat to move it from the busy roadway.

When we came to collect the koala, it was sprawled in a carry bag, quietly being patted and apparently enjoying the attention!

We took it to be checked over by a vet at Elizabeth Macarthur Agricultural Institute.

The koala is young, six kilogram female and we named her Martine.

Martine's pouch was shallow, and empty too, but the teats on the lower edge of the pouch were visible.

We believe that these signs indicate that Martine is ready to have her first baby.

She would certainly make some koala a healthy mate; she had a beautiful grey coat and was in fine condition.

Martine's location at the Wedderburn causeway is quite significant.

There have been quite a few sightings at the causeway, but all animals that we have managed to capture or found killed by cars have been male.

As Martine is a virgin we cannot say for sure that breeding is happening at the causeway.

However, female koalas do not generally disperse very far compared to males, so it is likely that Martine's

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mother wouldn't be far away.

We know that koalas are breeding at Wedderburn and Kentlyn and we have suspected that koalas might well be breeding along the Georges River, between these two suburbs.

If koalas are indeed breeding between Wedderburn and Kentlyn the amount of bushland being used as breeding habitat could be significantly larger than we previously thought.

This could also mean that we have underestimated the size of the Campbelltown koala population - good news indeed!

However, we must remember that although female koalas don't tend to disperse long distances, Martine could be an exception.

We have not radio-collared her, but she does have distinctive ear-tags.

So we depend on you (our community "eyes") to report her movements.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

■ By Steven Ward and Rob Close

Dan makes great pilgrim's progress

THE road rumbled and we could feel the wind from the trucks as they whistled by.

This was the scene late one weeknight recently when we responded to a call about a koala on Appin Road, about 400 metres south of St Helens Park.

Despite the difficulties of cars and the narrow verge, we located the koala in a huge redgum not two metres from the road.

Fortunately, it was a relatively low branch and we were able to catch it without trouble.

Drivers of passing vehicles must have been perplexed by lights shining in the trees and shadowy figures.

Unfortunately, Appin Road is particularly hazardous to koalas, as well as other wildlife.

The danger of course stems from vehicles, which often travel at great speed down this road.

Information from koala-carer groups on the Central Coast clearly

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shows that as vehicle speeds increase, so do the number of koalas that are hit and the proportion of koalas killed.

The other reason this road is dangerous is that there is a considerable amount of traffic and a narrow verge, which means that an animal could easily run out right in front of a car without the driver being aware until the last moment.

In such circumstances, drivers must remember not to swerve or jam on the brakes if it is dangerous to do so.

To our great delight, we found that the koala

had ear tags. Our records showed that it was Dan, who was first caught in Ruse in February this year.

Dan is also the koala that we believe may have been moving through the Smiths Creek Reserve.

It now seems likely that Dan has moved through a good number of backyards on his trek to Appin Road, but with no further reports since he was seen in Campbelltown - a remarkable feat!

We would love to know what adventures he's had.

As usual, Dan was checked out at Elizabeth Macarthur Agricultural Institute and was in good health.

When last caught in February Dan weighed 3.85kg.

■ UNFORTUNATELY, while Steven was loading up the car at university for another koala catch the following week someone took Steven's backpack and our expensive 50m climbing rope.

This is the second time Steve's work has been set back by thieves!

Contained in the backpack was the data sheet with Dan's weight and other important details, so this means that it is impossible to be sure how much weight Dan has gained.

From memory, Dan was 7.5kg, which would mean a large weight increase.

However, we really need the data sheet for a proper comparison and if found, we would appreciate the return of the backpack and rope.

Since Dan's recapture we have had a further two koala catches.

Stay tuned to future columns for details!

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

- By Steven Ward and Robert Close

Angela's release caught on TV

YOU may have seen a fleeting glimpse of your local koala researchers Rob and Steven on television's 7.30 Report last week.

The footage was taken when we released a female koala caught beside the Georges River at Kentlyn.

A year-10 Leumeah High School class led by teacher Melanie Bettie and Sharon Cullis from the Georges River Education Centre were on a field trip

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to Freres Crossing.

While the students sat on the riverbank, Sharon

Cullis explained that the area was used by koalas.

One of the students piped up with: "There's one, Miss!"

Soon we were contacted. We captured the koala, which we nicknamed Angela.

Angela then received a vet check-over at Elizabeth Macarthur Agricultural Institute (EMAI) and had coloured ear-tags fitted for later identification.

Angela weighed 7.5kg and had moderately worn teeth, indicating that she was a mature koala.

Her pouch opening was wide, with one of the two teats large and extended.

This means that Angela had weaned a cub earlier this year.

This is further evidence that our koalas are doing well.

Angela was later released, with the

cameramen filming the finish of her whirlwind tour of the Macarthur area - her return to the beautiful Georges River.

To report a koala sighting, please please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

- By STEVEN WARD and ROB CLOSE

Bold visitor an easy catch

A WEDDERBURN resident was woken recently at 2am by the furious barking of his dogs.

After going outside to investigate, he heard a frightening growling, grunting noise.

Unable to identify the source of the noise the resident quickly retreated back indoors.

The source of the noises turned out to be a koala which then boldly walked up to the back door of the house and banged on the door.

One dog also wisely decided to retreat, taking cover underneath the house, the other disappeared inside the house.

Unable to get in, the koala climbed the nearby verandah post.

When Steven was called and arrived at about 8am, it was still sitting there.

It was Steven's easiest catch ever and the koala was soon in the catching bag and on its way to Elizabeth Macarthur Agricultural Institute for a checkover.

The koala was male,

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weighed 9.7kgs, and in poor condition, with numerous old scratches on his nose and body, very tattered ears and worn teeth.

All this indicates that the koala, nicknamed Martin, was fairly old.

The scratches would be from fights with other male koalas.

The pads on his feet were also tough and worn indicating that he'd spent a lot of time on the ground recently.

We think that Martin has been pushed out of his territory by another male and will find it hard to survive.

We would like residents in the Aberfoyle/Pheasants Road area in Wedderburn

to keep on the lookout for him and to investigate if they should hear their dogs barking.

Since his release he has been reported three times.

However, despite his age and poor condition, he'll still manage to move about.

The distances between sightings have totalled more than two kilometres!

Finally it is fantastic to note that new koalas are turning up.

The fact that the last two koalas were both mature, means that they would have been alive when our research commenced, but have not been seen before.

This means that there must be quite a few more koalas out there than we currently know about!

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call 4620 3200 (and hear what the resident heard!)

- By Steven Ward and Robert Close.

Hopping for joy at frog find

UNIVERSITY of Western Sydney Macarthur environmental science students have found three species of frog in the Macquarie Fields bushland.

The three species found during a flora and fauna survey were Lesueur's tree frog (*Litoria lesueurii*), eastern froglet (*Crinia signifera*), and the Pobblebonk, or striped marsh frog (*Limnodynastes peronii*).

These species are all common, however as the students weren't specifically looking for frogs it is quite possible that other species may be present.

This abundance of frogs in the bushland is a good sign, as frogs can be very susceptible to pollution.

The best time to look for frogs is after dark and after rain, when water is abundant.

The wet allows frogs to move around much more, and to look for mates and lay eggs in the temporary pools formed by the rain.

Permanent waterways, such as streams and rivers, generally host a lot of aquatic life such as fish, eels and crayfish, many of which consider frogs a delicacy.

By laying their eggs in a temporary pool, frogs can avoid these predators, although they take a gamble on the pond lasting long enough for the tadpoles to mature.

Most frogs feed on a variety of invertebrates

mac's koala club

such as insects, spiders, snails and slugs, which helps farmers by keeping some pests away.

A pond full of frogs consumes a lot of insects every night!

However, because frogs absorb water through their skin, they will also absorb insecticides and other chemicals directly into their bloodstream.

Ironically, this means that by using pesticides, farmers may accidentally kill off frogs which would have helped to control the insects free of charge!

Clearly frogs serve an important role.

The Macarthur area has two frog species which are classed as vulnerable: the giant burrowing frog and red-crowned toadlet.

We will discuss the lives of these frogs in more detail in future columns.

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996. To hear a male koala bellowing, call (02) 4620 3200.

■ By Steven Ward and Robert Close

Underground life of burrowing frog

WHEN we think of frogs, we usually also think of water. However, some frogs have adaptations that allow them to survive for long periods, sometimes years, without obvious water. This means that frogs can be found in unexpected locations, such as deserts or dry riverbeds.

One such adaptation is the ability to burrow into the ground. Burrowing frogs will use their powerful back legs to push aside the dirt and spiral downward into the gap created, with the hole filling up behind them. Underground conditions will be cooler and more humid than on the surface, and the frog will obtain sufficient oxygen from the surrounding soil to survive until it emerges, normally after heavy rain.

Near streams in Campbelltown lives the Giant Burrowing Frog, *Heleioporus australiacus*. This giant is about 10cm in length and is chocolate-brown on top and white below. Unfortunately, the Giant Burrowing Frog is listed under the Threatened Species Act as vulnerable. Its range extends along the coast from eastern Victoria to central NSW.

The Giant Burrowing Frog also has very large tadpoles, up to 7cm long before they metamorphose (change) into juvenile



Giant Burrowing Frog.
Drawing by Robert Close.

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frogllets. The tadpoles can sometimes be found in deep clear pools in sandstone areas.

The adult frogs are active during the warmer months of the year and can be distinguished by the owl-like call, which is a soft rapid "hoo hoo hoo" -

pause - "hoo hoo hoo", which is repeated.

The Giant Burrowing Frog burrows in the banks of small creeks so it is threatened by human activities close to the Georges River and its tributaries. So if you see the enormous tadpoles or hear the strange call, please let us know. This will allow us to plot their distribution.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 962 9996. To hear a male koala bellowing call 4620 3200.

■ By Steven Ward and Robert Close

Kerry's capers

RECENTLY we set out to recapture Franchesca, one of our radio-collared female koalas.

We were also aiming to catch her cub but unfortunately the youngster had other ideas.

While Franchesca quickly responded to the flag, descended the tree and was soon in the catching bag, the youngster climbed part-way down the tree, then jumped to a nearby branch and scampered out of reach of the flagpole.

Franchesca weighed 7.6kg and was in poor condition, with brown fur.

After she was checked and had her collar changed, we released Franchesca back into the same tree so that she could join her cub.

Two weeks later we located Franchesca again, to make another attempt at catching her cub.

Rob was soon up in the tree and the youngster responded to the flag on the end of the pole and moved

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back along the branch towards Rob.

However, a metre or two from Rob the youngster turned and leapt in one motion towards another branch.

Normally a koala will assess a jump first to make sure that the leap is within their capabilities.

Unfortunately for the youngster the branch it was aiming for was much too far away and missed it by half a metre.

To our horror, we watched it fall spread-eagled on to the leaf litter below.

However, it was not even winded and was up and away, headed for a new tree and freedom.

Steven, however, was even quicker and swept it up and into a catching bag as it began to climb.

We thoroughly checked the youngster over and found it had suffered no injuries from its misjudged leap.

The female youngster, nicknamed Kerry, weighed 3.3kg and was in reasonable condition.

Kerry soon had ear tags fitted and was released back into Franchesca's tree.

To report a koala sighting, please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200.

- Steven Ward
and Robert Close

Frog a colourful character

IN a previous column we discussed one of Sydney's largest frogs, the giant burrowing frog.

This week we look at one of Australia's smallest frogs, the red-crowned toadlet.

The red-crowned toadlet is distinctive in appearance, with a large, brightly coloured red or orange patch on the back of the head, red patch on the forearms and stripe on the lower back and a white patch on the upper arms.

The adult frogs are up to 3cm long and newly emerged frogs are a tiny 8mm.

Despite its common name, the red-crowned toadlet is actually a frog,

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not a toad. In fact, there are no native Australian toads and the introduced cane toad is the only real toad found in Australia.

The red-crowned toadlet is classed as a vulnerable species and is only found within a 160km radius of Sydney.

These frogs tend to live just below sandstone ridgetops near temporary creeks or waterways.

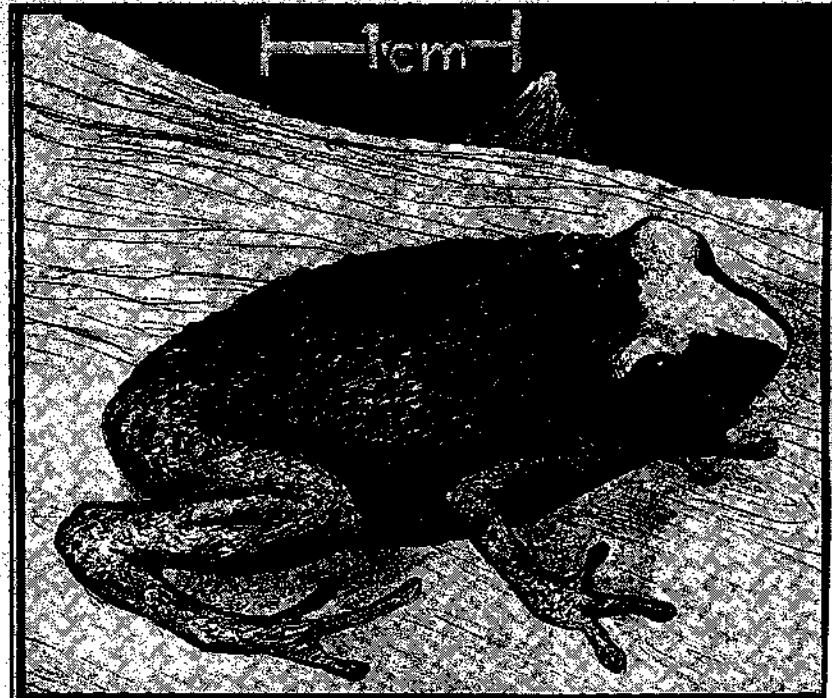
Because these streams are so unpredictable few of the eggs laid by the red-crowned toadlet will survive to become adults.

Conditions must be just right for young to survive.

Too much rain and the eggs and tadpoles can be swept out of the ponds in which they were deposited and down into the creek or river downstream, where the eggs or tadpoles will be eaten by fish and other aquatic life.

Too little rain and the pool could dry up before the tadpoles mature and metamorphose into adult frogs.

Compounding these



Red-Crowned Toadlet. Diagram by Benjamin Hopkinson

problems is the fact that many human Sydney residents live on the sandstone ridgetops themselves and this means the red-crowned toadlet is subject to a lot of human impact.

These impacts include housing development (either direct habitat destruction or urban run-off), stormwater pollution, weed invasion and a high fire frequency.

Most frog species survive because of the

large numbers of young produced.

However, because so few of the toadlets' young survive, any loss of adults can endanger the population.

So how can you help?

By taking care of our waterways.

Remember that all Campbelltown gullies and storm drains lead into local creeks.

Don't allow grass clippings, dirt pesticides, and other pollutants to

flow down storm drains.

Don't dump garden clippings and other waste in bushland or plant noxious weeds in your garden, and don't light unnecessary fires in bushland.

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4621 3200.



■ CAUGHT! Steven Ward is pictured holding Grant, a male koala found in Kentlyn, that fought hard to escape. Photo: DANNY LETT

Caught after fierce struggle

OUR Campbelltown koala ear-tag club is open to koalas of all ages!

The only requirement is that members be out of the pouch.

Our most recent member, however, has been out of the pouch for six to eight years!

This koala was spotted by our volunteer radiotrackers (who incidentally are doing a great job).

They initially thought that the koala was the female (Shirley) that they were tracking near Georges River Road in Kentlyn.

However, they soon realised that this koala had neither ear-tags or a radiocollar.

It also had a large domed head which suggested that it was a

mac's koala club

male. The koala was in a large Blackbutt eucalypt and we soon had our 20 metre wire ladder strung up.

Rob was soon high up in the tree and Steven followed a short while after.

Rob then used the flag on the end of the pole to bring the koala back to the fork where Steven was positioned.

However, when the

koala was just out of his reach it turned and jumped to a lower branch, eluding Steven.

Rob soon clambered down to a new position and this time Steven used the pole and flag to bring the koala towards Rob.

However, this animal was like no other Rob had encountered.

It slashed with its teeth, flashed with its claws and wriggled and lunged all the while.

In fact, Rob was amazed when he finished up with the koala in the bag and only two minor gashes to his own leg and jeans.

Once on the ground it became apparent that Rob had done well in managing to get the koala into the catching bag, as it weighed a whopping 10.95kg.

The koala, nicknamed

Grant (or should that be Grunt?) was taken for a veterinary inspection by Teri Bellamy at Canley Heights Veterinary Clinic.

Grant was in good condition, despite some wear to his teeth.

He was fitted with ear-tags and then released.

We were intrigued to discover that Grant was a mature male that has presumably been living close to Kentlyn for many years, yet we have not caught him before.

How long before he is spotted again?

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200.

Long way to come

YOU may have heard on the radio or read about a koala that turned up at Lapstone in the lower Blue Mountains.

The animal was a four-year-old male and the first koala recorded in the Blue Mountains since 1967 – an exciting find.

He was in poor condition and the pads on his feet showed signs of wear indicating that he'd been on the ground for quite a while.

He may have travelled a considerable distance – but from where?

Our own studies have shown that some young animals have travelled for 20km from Campbelltown.

Thus, a journey to Lapstone is possible from any of the nearest known koala colonies: Colo River 40km to the north,

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Cowan 50km to the north-east, Oakdale 35km to south or Campbelltown, 35km to the south east.

Alternatively, he may have come from an as yet undiscovered colony.

Yet another possibility is that he is an escapee from a wildlife park.

Because of this possibility, NPWS officers do not want to release him until his DNA has been tested.

This testing is now underway and should tell us whether he is a local animal.

Once the DNA results are known, he will be radio-collared and released in a suitable area.

Recently a volunteer team of Clancy's future radio-trackers came to Campbelltown to learn from Steven, the tricks of the radio-tracking trade.

They also saw us release Grant, a newly captured animal that we described in last week's column.

We suspect that the volunteers will have a tough job tracking Clancy. He will probably continue his journey till he finds a new colony of koalas.

This journey could take several months and involve travelling many kilometres.

Wildlife officers are debating whether they should release him near a known colony and so reduce his journey.

However, this plan might alter the natural process of movement which is so important for the survival of natural populations of koalas.

We believe that he should be released in bushland as close as possible to the point of capture, even if it does make the radio-trackers' job a nightmare.

To report a koala sighting please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

■ By Steven Ward and Robert Close

Another cub for Lyn!

THIS week, an update on a well-known koala in the Kentlyn area: Lyn.

Lyn was first captured in February 1996 in Kentlyn Primary School, to the great delight of both students and staff.

At that time we fitted Lyn with a radio-collar, but only two weeks later she threw the collar, and disappeared from sight for the next two years.

Lyn reappeared in February 1998, and we recaptured her and were pleased to note that she had a youngster in the pouch.

We again fitted a radio-collar, but this time the collar stayed on so we were able to follow her movements.

When Lyn's cub emerged from the pouch we were surprised at how large it was compared to the cubs of other female koalas.

Unfortunately however, we were also taken by surprise when Lyn's cub moved away from Lyn very early about September.

Back in February, the cub's ears were too small to carry ear-tags, so now it's gone and we cannot follow it.

Perhaps it is sitting in a Kentlyn backyard now!

In early December we again caught Lyn to change her radio-collar.

Lyn weighed an impressive 8.5 kg at this time, was in good condition, and to our

mac's koala club

delight had a youngster about six weeks old, about eight centimetres long.

Calculating backwards from the age of the youngster and a 35 day pregnancy would mean that Lyn became pregnant in early September, right about the time when her back young moved off!

Perhaps the attentions of the male courting Lyn forced her young cub to move off; male koalas aren't very romantic when they have an interest in a female koala and youngsters tend to get in the way!

We look forward to seeing Lyn's new cub maturing through 1999, and this time we'll allow for the fact that the youngster is likely to move off early!

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996. To hear a male koala bellowing, call (02) 4620 3200.

■ By Steven Ward and Robert Close.

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Wary Eric proves to be a big nipper

ALTHOUGH the main interest is in Campbell's koala, war still broke out in a series of fights all through the southern Sydney region.

So when a koala was reported at Woronora, just south of River Road and only 200 metres east of the Woronora River, we were keen to capture it.

The koala was 1 year old, co-operative and friendly. It proceeded to climb a tree and grab a gum tree branch from a nearby resident, reaching the ground, we swung up both our 10m wire ladders and Rob climbed the higher one.

When koala fights they can be very vicious, and can even lead to fatal wounds.

So if a koala surrenders to the dominant individual, it may avoid a fight and possible injury.

A similar behaviour would be when a dog rolls onto its back, exposing its underbelly to indicate submission to another dog.

Rob tagged the koala to come towards him and when close enough was able to grab it and wrestle it into a catching bag.

However, the koala retaliated by

blowing down hard and long into Rob's bag.

Fortunately, the koala tried to take a bite out of me, so was unable to breathe the air.

One of the koalas was lowered to the ground by a tree, and the other's closer look at their visitors.

Unsatisfied with the poor result on Rob's leg, the koala bit through the bag and Steven's jeans, leaving a bruise on Steven's leg.

The feisty young koala, nicknamed Eric, was a 7.6kg male in good condition. After having ear-tags fitted and a veterinary inspection at

Macarthur, we were able to return the koalas to their natural habitat. The koalas were released into the forest and we were able to observe the koalas in their natural habitat.

We hope to hear of further sightings of Eric.

These will probably be providing insights into how koalas behave in the area.

It will be particularly interesting to know if he will use the bush along Woronora River as a corridor.

- STEVEN WILSON and ROB

mac's koala club

When he is not out there close to the koala, mac's koala club is a committee of people who

Because they are designed to give a response to those

mac's koala club can sometimes

mac's koala club can sometimes

mac's koala club can sometimes

mac's koala club can sometimes

We cover the plover

A STAFF member of UWS Macarthur contacted us recently and asked whether we could report on the spur-winged plover (also known as the masked or spur-winged lapwing).

These remarkable birds (diagram at right, by Benjamin Hopkinson) are common around Campbelltown and have a yellow mask (wattles) on either side of the beak and a small spur on each shoulder.

The staff member was concerned that students on campus were disturbing the birds by walking too close to the eggs which the birds lay in open areas (such as lawns or even car parks).

In response, the plovers stretch and swoop at the students. Sometimes they may actually hit them with their spurs.

Some students then escalate the conflict by swinging their bags for protection and attack.

The result can be raised tempers, damaged birds and smashed eggs.

The staff member hopes that this article will help the students to understand the birds' habits and so avoid these problems.

The plover's nest is a

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shallow scrape or small cup of twigs, grasses or pebbles and the four eggs are yellow to dark olive, blotched with brown.

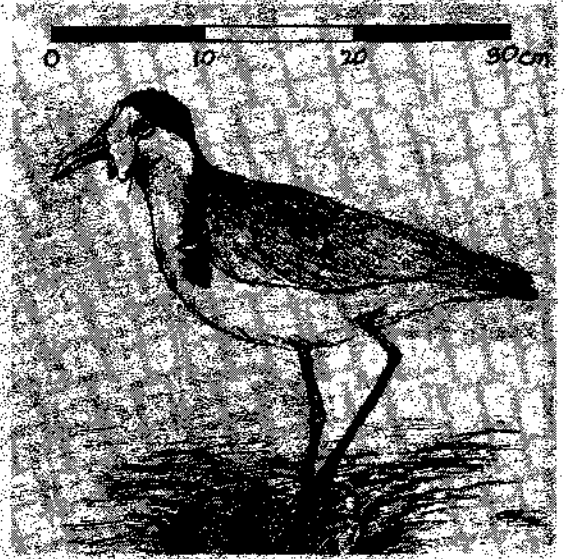
Plovers eat worms and insects and love the edges of the dams on the Campbelltown University campus.

Because they like wet grasslands, they thrive on improved and irrigated pastures and well-watered lawns.

When not breeding, the birds form groups of 100 or so and at this time they roam widely across Australia.

In fact, the distribution of the plovers has increased since white settlement, with the invasion of Tasmania and New Zealand.

This spread is due to irrigation increasing the



habitat suitable for plovers.

A similar race, the masked plover (with which the spur-winged plover interbreeds), has spread from northern Australia into New Guinea.

So how to avoid injury to both humans and plovers?

Well the easiest tactic is to note the area that the plovers defend, which will contain their nest, and to then detour around the area

if passing by.

Then stand back and watch the hatching and development of four cute chicks!

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996. To hear a male koala bellowing, call (02) 4620 3260.

By STEVEN WARD and ROBERT CLOSE

Sarah has cub, both well

A KOALA whose movements we have been following is Sarah, the daughter of another koala we are tracking, Franchesca.

Sarah's collar battery was running low, so Steven set out on a hot day this month to capture her so that the collar could be changed.

Assisting Steven was a volunteer climber, a radio tracker, and three people from the team who are following Clancy, the Lapstone koala.

The first challenge was to find Sarah, as she had moved away from her usual territory and down into the steep, rugged O'Hares Creek gorge.

After four hours of hard going along steep slopes Sarah was eventually

mac's koala club

located in a nice shady tree, only six metres off the ground.

The trek through the bush to find Sarah was good practice for the volunteers tracking Clancy, as they will have to work hard to keep up with him following his movements out in the Blue Mountains.

Once the equipment was lugged to Sarah's tree, Steven and the climber were soon up the tree and

Sarah was soon safely in a catching bag.

Sarah was then inspected by vet Teri Bellamy at Austral Veterinary Clinic and was in good condition, weighing 6.5kg.

We were also delighted to discover that she had a youngster in the pouch that was less than three days old!

Because we caught Sarah when she was still a youngster riding around on Franchesca's back, we know Sarah was just under one year old when we first caught her.

Sarah having a cub is excellent news because we now know that female Campbelltown koalas can start breeding at three years old.

We will also be able to

monitor the cub's progress to see if it survives its first year.

To further help us to determine how well Campbelltown koalas are breeding we need to work out what the average lifespan is for a female Campbelltown koala.

This way we can work out how many young a female can expect to raise during her lifetime.

As a koala might live for 10 to 15 years in the wild this will take a little longer though!

To report a koala sighting please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

- STEVEN WARD

Cute and cuddly puzzle

IT MAY take some years, but we expect that one of the young koalas moving out of the Campbelltown population will eventually find its way to Mount Annan Botanical Gardens.

Its journey will probably be across Appin Road from the Georges River and along one of the creek-lines that run from Appin Road to the Nepean River.

Once on the banks of the Nepean, the koala will move past the Menangle Paceway and up a side creek by the coal washery or up the new Camden bush corridor to the gardens.

Students from University of Western Sydney Macarthur have long been interested in the arrival of native mammals at the gardens.

Ten years ago when both the gardens and Macarthur were young, students searched the gardens for mammals.

They found only

mac's koala club

introduced species.

However, they did find a footprint of a large kangaroo, but could not sight the animal itself.

Since that time, dead kangaroos have occasionally been reported on Narellan Road or nearby on the freeway.

More recently, kangaroos have been spotted in the gardens by staff.

Two Macarthur students, Greg Mackney and Michael Harris, recently conducted a follow-up survey of mammals in the gardens.

They identified the kangaroos as common wallaroos.

Although the name suggests that a wallaroo is something between a kangaroo and a wallaby, it is actually a large kangaroo.

Wallabies and kangaroos all come from the same family and the distinction between the two groups is based solely on size.

An adult kangaroo has a foot length of 25cm or more.

The wallaroo is sometimes called a hill kangaroo because it likes hilly, rocky country.

The southern end of Mt Annan seems to suit them well and the students counted six animals of different sexes and ages (males are charcoal grey, while females are a whitish-grey).

Where did these animals come from?

It's possible that the wallaroos were always there

and have taken 10 years to become relaxed enough to venture out of the vegetation while people are around.

It's more likely, however, that occasionally animals have arrived at the gardens from the Nepean valley or perhaps from the ridge to the north of the gardens.

It may well have taken 10 years before a male and a female arrived at the same time in order to start the population that we see now.

Similarly, we expect that although koalas may eventually reach the gardens, it will be a very long time before a male and female are there at the same time to start a family.

To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.

— STEVEN WARD

Best laid plans often go astray

WHEN UWS Macarthur students worked upon their project of designing a safe and effective koala trap, Vince Keogh included in his design report a fascinating account, taken from the Saturday Magazine, December 31, 1836, of an Aborigine catching a koala.

"The native espied the animal perched upon the tree, quite at home. 'Me catch the rascal directly,' said the black and proceeded first to cut a thin pole about 10 feet in length.

"He then tore a long strip of ropy bark, which he fastened to one end of the pole in the form of a rope or noose, after which he commenced climbing the tree in good spirits, and confident of success.

"The animal, on observing the approach of his enemy, ascended higher and higher till he reached the very extremity of the leafy bough on the top of the tree, while the native, mounting as high as he could safely go, could but safely reach him with his pole.

"For a long time he tried to get the noose over the head of the monkey [koala], and several times when the native imagined he had succeeded, the monkey, at work with his forehead, would repeatedly tear it off and disengage himself.

mac's koala club

"The poor animal, as he looked down upon his perplexing adversary, looked truly piteous and ridiculous, and we began to think that the black would fail in his attempt.

"The native, however, growing impatient and angry, ascended a step higher, till the very tree bended with his weight.

"He tried again, and having succeeded in slipping the noose over the monkey's head, immediately twisted the pole, as to tighten the cord.

" 'Me got him rascal,' he exclaimed . . .

" 'Come along, you rascal, come, come, come,' he cried, tugging away at the monkey, who seemed unwilling to quit his post.

"Down they came, by degrees, the black cautiously managing his prisoner, every now and then making faces at him, and teasing him, with great apparent delight and satisfaction with himself.

"We could not but observe the cautious manner in which he appeared at times to treat the monkey, but this caution, we soon perceived, was very necessary, for when they had descended to where the tree divided into two branches, the black endeavoured to make the animal pass him, so that he might have a better control over him.

"In so doing the monkey made a spiteful catch or spring at the native, but which he cleverly avoided by shifting himself to the other branch with great dexterity.

"At length, however, both the man and the monkey arrived nearly to the bottom of the tree, when the latter, being lowermost, jumped upon the ground, got loose, and having crawled to the nearest tree, commenced ascending again.

"We seized him by the rump, thoughtless of danger, but soon quit our hold when the native, now enraged, sprung to his tomahawk and threw it with such force at the unlucky animal as to knock him off the tree!"

To report a koala sighting, phone UWS Macarthur hotline on (02) 9962 9996.

- By Steven Ward and Robert Close

Bound to be a few surprises

A FEW weeks ago we reported that a koala, Clancy, had turned up at Lapstone in the Blue Mountains, the first koala there since 1967.

This find showed that there are always surprises awaiting us in the bush.

Now rangers have made another reassuring discovery: a colony of brush-tailed rock wallabies at Faulconbridge, also in the lower Blue Mountains.

These beautiful, acrobatic animals have largely disappeared from more than half their range in NSW and the well-known colony at Jenolan Caves is now fenced to protect the animals from foxes.

It is amazing that a colony should have survived in Faulconbridge, where bushwalkers would be frequent, without someone sighting and reporting them.

Once, rock wallabies were recorded from O'Hares Creek near Campbelltown but there have been no verified sightings for 50 years.

It would be momentous, therefore, if some animals still remained, perhaps sheltered in gorges in the Holsworthy range.

These wallabies weigh 6kg-8kg, have a long, black, bushy tail, and a

mac's koala club

chocolate brown coat. Superficially, they look like a swamp wallaby, which are common in Campbelltown.

Inexperienced people

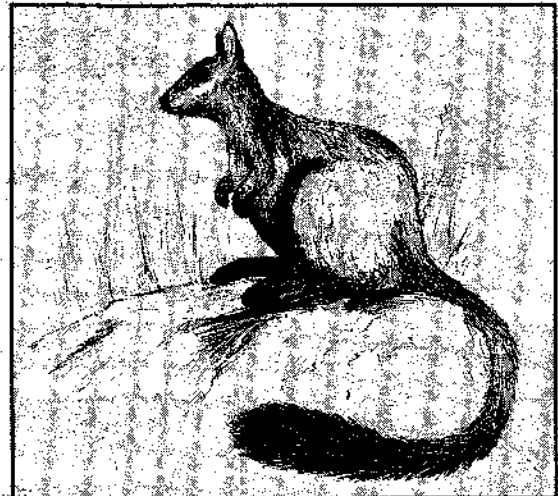
would normally find it difficult to distinguish a large rock wallaby from a small swamp wallaby.

However, if they saw an animal leaping from rock to rock and rebounding its way up a cliff face, they could not be mistaken!

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200.

- By Steven Ward and Robert Close



■ A COLONY of brush-tailed rock wallabies has been discovered in the Blue Mountains.

Bellows tell a story

A MAJOR part of Steven's work has been locating koalas.

This is very difficult because around Campbelltown, the koalas are thinly scattered in suitable habitat (perhaps one every 20ha to 30ha).

In other places, such as Victoria, for example, there is more than one koala a hectare.

In the Bega/Merimbula area of southern NSW, the koalas are even more difficult to find than round here. Volunteer searchers have spent hundreds of hours combing the bush and have found only fecal pellets (scats) to prove that koalas exist.

State Forests personnel, however, have located two animals for radio-tracking by the technique of playing a taped call of a koala out across the still bushland and listening for koala males to respond.

Male koalas often don't

mac's koala club

seem to be very discerning and will call back in response to passing aircraft, the slamming of truck doors and human imitations of their calls.

In fact, both Aboriginal and European hunters have used the koalas' response to human bellows to locate their prey.

Researchers from State Forests reasoned that this method may also be useful for surveying koalas across large, unsearched areas.

The method uses two

listeners, stationed 50m apart who play the tapes at moderate volume without special amplification.

When both listeners independently hear a response, which could be a bellow or merely a grunt, they record a presence of a koala.

They say that if a koala is on a high point across a valley for example, that they can hear him from a distance of 2km.

In other areas, however, the call may only be heard for a 100m or so.

Top study the area from the Victorian border to north of Bermagui, an area of 8000 sq m, the researchers played the tapes at 140 randomly selected sites and recorded only four koala replies.

From this and other evidence, they calculate that the entire area may hold only 1000 to 1400 koalas.

Independent

researchers, however, who base their surveys on searching for scats, estimate that the same area holds only 50 to 100 koalas.

Whichever estimate is more correct, the total number is still extremely low.

State Forests have now extended their play-back survey as far north as Nowra, and conclude that a scattered, low-density population continues throughout the area.

These low population estimates are consistent with our estimates for koala populations from Sydney to Mittagong.

To report a koala sighting call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

- ROBERT CLOSE
and STEPHEN WARD

Direction finder works

WE AT present fit radiocollars on some of the koalas that we catch and this allows us to find the koala later.

Basically, this works by the radiocollar sending out a constant signal on a radiofrequency.

Different radiocollars have different radiofrequencies.

We then go out into the field with an antenna which picks up and magnifies the signals.

And there is also a receiver, which turns the signals into an audible "beep-beep-beep".

By swinging the antenna around, we can work out the koala's direction, and we keep on walking until we get to it.

Wouldn't it be better though if we could fit a collar and come back some time later and get the collar to tell us where the koala has been?

Well, with a recent innovation we hope to test such a system.

This innovation, called GPS (Global Positioning) technology, is used by pilots and surveyors, as well as bushwalkers, to find their location on the globe.

GPS units communicate with satellites and if they can "see" enough satellites, they can work out their position on the surface of the earth.

Hand-held units have been readily accessible for a number of years, but recently the price has dropped considerably and

mac's koala club

their accuracy has improved.

One of the major problems with the GPS units has been the lack of accuracy.

The US military, which developed the system, was concerned about civilians (including terrorists and others) accurately knowing their position and using that information for their destructive deeds.

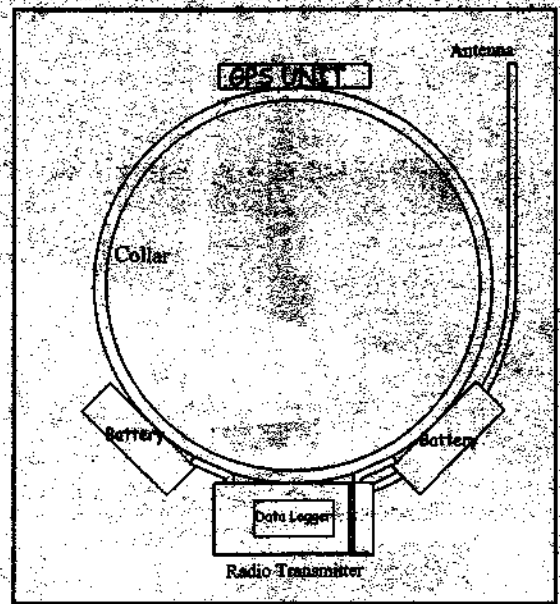
They introduced an error or "blur" into the reading that their satellites sent to non-military GPS units!

Recent research has also greatly reduced the size of GPS units such as Brett Tyler, a UWS Macarthur student, skilled tree climber and electronics buff, thinks that one could be adapted to fit a koala with the help of Darren Reynolds, from Darcom.

They will make a prototype combining a radiocollar and GPS unit.

Brett then hopes to test the prototype on a koala for a short time.

So how will this help? Well, if one of the small



■ PROTOTYPE koala radiocollar combined with GPS unit. The collar fits around the koala's neck and batteries and radio transmitter hang underneath the koala's chin. Diagram by Brett Tyler.

GPS units can be fitted to a modified radiocollar (making sure that the collar is as light as possible), then the unit can be set to record the location of the koala, perhaps every two hours.

About three weeks later we would then use the radiocollar to locate the koala, and download all the locations that the GPS unit has recorded.

Because we only locate our animals once a week, this new information will tell us much more about how far koalas move during an average day, and what habitat they prefer.

This wouldn't tell us

what tree species they have been using.

Nevertheless, we already have this information from the radiotracking we've already done.

If successful, the new collars will be a big step forward in wildlife research.

To report a koala sighting, call the hotline at University of Western Sydney Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200.

■ Steven Ward and Robert Close.

Large untagged male spotted

RECENTLY we received a call from a local resident who calls him Ted.

Ted has spent his life in the Campbelltown bush, has a real feeling for it, and can read signs in the bush that other people (including us) miss.

On this particular day Ted reported finding a koala at Kentlyn, inside the territory of Gary, a previously collared male.

Ted was alerted to look for the koala after finding some broken twigs with fresh leaves on the ground beneath the koala tree.

We were unable to attempt a capture at that time, but the next day, Steven and two volunteers tried to locate the koala.

After an hour or so of searching, Steven admitted defeat and the volunteers went off to locate Shirley, a radio-collared koala who lives nearby.

A few hours later, Ted located the volunteers in the field and persuaded them to renew the search, and within minutes he had spotted the koala.

We were immediately notified via the koala hotline and soon arrived.

The koala, a large untagged male, had moved into a grey gum tree growing precariously on the edge of the Georges River gully, and was sitting in a fork low to the ground. Because the koala

mac's koala club

was quite low we hoped to flag him down without us having to climb the tree.

However, the sides of the gully were so steep that we had to tie ourselves to trees to prevent falling into the gully.

While we were

attaching ourselves, the koala realised that something was up and headed higher up the tree, out of the reach of the pole and flag.

Rob soon climbed the tree but he couldn't quite reach high enough to get the flag well above the koala's head and the koala again ascended a couple of metres higher.

Rob couldn't climb further as we were concerned that the slim tree wouldn't be able to hold his weight.

So, unfortunately, we had to call off the capture attempt.

However, it is interesting to know that a new, untagged, male in

Kentlyn may have taken over from Gary, the previous dominant male in that area.

Obviously there are still many koalas out there that we still haven't been able to capture and tag in Campbelltown.

About every second koala we hear about is untagged, so we assume the koalas are doing well.

Report a koala sighting on the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4631 3200.

■ STEVEN WARD and ROBERT CLOSE

Joe blake goes full monty when dining

SOME weeks ago we reported finding Ray, a young male koala in Wedderburn, several kilometres from where we'd tagged him at Kinca.

Ray had slipped up at the property of Ted Laker who notified us via the phone.

After Ray's six-month recovery, while we were yarning about the local fauna, Ted told us about a visit he'd had from a huge python.

He'd watched, fascinated, as the huge snake had stretched out one and a half metres horizontally from one tree to the next across to another tree (see photograph).

From Ted's

photograph, we identified the snake as a diamond python.

This quite rare and beautiful snake is a sub-species of moretha snakes.

The other sub-species, the carpet python, has freckles and is found in northern NSW.

The diamond python is usually glossy olive-black above with cream or yellow spots on some scales forming a diamond pattern.

The carpet python occur in different shades of brown, sometimes with blotches or even banding across, or lengthwise along its body.

coiling around it and constricting it until it suffocates.

The prey would consist mainly of birds and mammals which it detects with the help of special

heat sensors found in its lower jaw.

Although they can give a painful bite when aroused, diamond pythons are usually very docile.

bush, enjoy watching it from a distance.

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur campus.

089 670 6200. To hear a more detailed recording, call (02) 4570 1270.

Koala watch campaign by Steven Wardland, Macarthur Campus, Western Sydney University.

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The stomach of both types is cream or yellow with grey patches.

Both types of python are often two metres in length, but can grow up to four metres.

Pythons are not poisonous.

They kill prey by



Scratch, me happy

BEFORE Steven joined the koala study, Rob Close and assistants used to survey for koalas by walking through selected koala habitat and recording the number of grey gums (a type of eucalypt used by koalas) with scratch marks on the bark.

Obviously, for this to be effective, you need to be able to identify koala scratch marks.

Of the several animals that leave scratches, the most common are brush-tailed possums or goannas.

Two local species of goanna are the lace monitor and heath monitor.

Goannas often climb trees in search of prey.

When they do so, their long sharp claws can leave scratch marks, which look like long S-shaped furrows.

The goanna uses an intriguing method of avoiding detection by people. As humans

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approach its tree, it will move to the opposite side of the trunk.

If you walk around the tree to observe it, the goanna will also move, keeping the tree trunk between you both.

So to get a good look you generally need at least two people!

Of the two species found in the local area the lace monitor, *Varanus varius*, is more common and widespread than the heath monitor, *Varanus rosenbergi*, which is classed as vulnerable.

They are similar in

appearance and can easily be mistaken. Both have the long sinuous body, long neck and tail which are typical of goannas.

The lace monitor has dark grey skin with yellowish banding across its body, forelegs, and head.

The heath monitor is also dark grey with yellowish bands on the tail and back, but with many fine yellow and cream speckles on the rest of the body.

The heath monitor is also smaller in size, up to 1.4m long, while the lace monitor can be up to 2m long.

Both species feed mainly on live prey including insects, rodents, reptiles, birds and frogs, but they may also eat carrion (animals that have been dead for some time).

We have also observed a goanna in the Campbelltown bushland raiding a sulphur-crested

cockatoo's nest for eggs - with the cockatoos quite upset about the invasion!

Unfortunately heath monitors are vulnerable to habitat loss and fragmentation, being killed on roads and from poisoned baits aimed at foxes.

They are also affected by loss of medium to large hollow logs that may be used as shelter, as unfortunately these logs are often used as fuel for wood fires.

So when you next walk through the bush, remember to look out for goannas.

One may be hiding behind a tree trunk!

To report a koala sighting please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing call (02) 4620 3200.

- By Steven Ward and Robert Close

A leafy legacy

AS part of his commitment to Mac's Koala Club, Steven Ward has often given talks to local schools about Campbelltown's koalas and his work with them.

However, since he has started writing up his thesis, Steven has had to concentrate on that work.

So when Thomas Reddall High School asked for a visit from Steven, Robert Close decided to give the talk instead.

He has special interests in Thomas Reddall, as one of his daughters has just graduated from there and his other daughter is in Year 10.

He is also president of the School Council.

In addition, one of the Science teachers asking for the visit, Jarrod Evans, is a former university student of Robert's.

Jarrod remembers with pleasure an undergraduate field trip on which we captured Molly in 1992 to change her radio collar.

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So with Roger, the stuffed koala, under his arm, a collection of koala skulls, a jar of fecal pellets, a radio collar, collection of photographs and a video sequence of a koala capture (Molly again), Robert set off to talk to a group of 50 Year 9 students and a smaller group from Year 11.

He found them attentive and well-behaved but was struck by their responses to a number of questions.

Firstly, the students seemed to be unaware that the Georges River and all its attractions runs so close to where they live. Secondly, apart from kangaroos, they could not

suggest any of the several other marsupials, such as ring-tail, pigmy and brush-tail possums, antechinus and the several species of gliders that share their area.

The bushland of Campbelltown can enrich our lives in so many ways and is a fantastic resource.

Our young people should be growing up using and valuing its many pleasures.

I hope that parents reading this article will consider introducing their children to our bushland.

Joining the local Macarthur branch of the National Parks Association, which has many bushwalks along the Georges River, is a good way to start.

To report a koala sighting, phone the UWS Macarthur hotline on (02) 9962 9996, to hear a male koala bellowing call (02) 4620 3200.

- Rob Close
and Steven Ward

Campbelltown Macarthur Advertiser, Wednesday, April 7, 1999

Note:

No column published on this date

Death adders a hazard

WHEN we and our volunteers are tracking koalas with radio collars or searching for new koalas we are, of course, often looking up into the trees.

But we also have to be aware that there are some hazards on the ground. One of these is the Death Adder (*Acanthophis antarcticus*), pictured at right.

Most snakes will feel the vibration from your steps as you walk through the bush and will then move away.

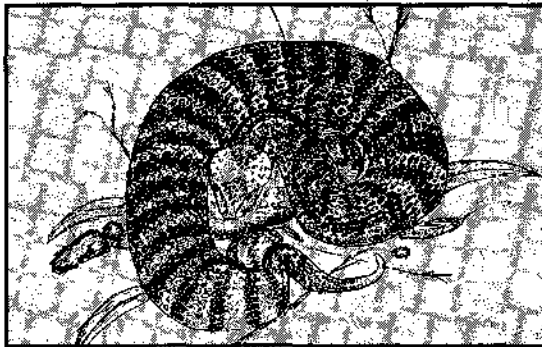
To a snake, a human is not prey and is a possible threat so they generally try to avoid contact with us.

The Death Adder relies on its camouflage to avoid encountering people.

So you may walk right over a Death Adder without even realising it. Death Adders are usually around 40cm long but can grow up to 80cm.

They have a distinctive wedge-shaped head and a thick grey body with red or yellowish cross bands.

The tail quickly tapers



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off and has a cream or yellow worm-like segment.

It wriggles its tail near its head as a worm-like bait when it senses prey nearby.

The adder will often be covered with soil or leaves,

making it almost invisible.

When the bird or lizard grabs for the worm-like tail tip, the adder strikes.

The chance of being bitten by a Death Adder is small, you'd probably have to step on one before it would bite.

The Death Adder is also uncommon, although one was encountered by Rob's Environmental Science class during an exercise in Campbelltown's bushland.

As the Death Adder is extremely poisonous it makes good sense to look where you put your feet

whilst walking in the bush.

Steven has also encountered a Death Adder as a school student on a camp in the north of Western Australia.

A friend of Steven's found what she thought was a lizard. She bent down to pick it up, but then thought better of it.

Instead, she borrowed another student's floppy hat and scooped up the creatures.

When she showed it to one of the biologists he was quite concerned and asked twice if she had been bitten.

When satisfied she had not been bitten, he explained that it was a Death Adder.

She was very glad indeed that she changed her mind about picking up the snake with only her bare hands.

To report a koala sighting please call the University of Western Sydney, Macarthur hotline on (02) 9962 9996. Call (02) 4620 3200 to hear a male koala bellowing.

Book prints our study

WE are proud to announce that an article written by us has recently appeared in a book published by Surrey Beatty & Sons.

The book is called *Ecology for Everyone: Communicating ecology to scientists, the public and the politicians.*

Our article (chapter 18) discusses how the Campbelltown community has helped our koala research by reporting sightings to us.

The book developed from a conference run by the Ecological Society of Australia, at which Steven was a contributor.

Our article, and those published in reputable scientific journals, such as *Australian Journal of Ecology*, *Australian Zoologist* and *Journal of Mammalogy* are first sent to referees who check that

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the writing is clear and understandable and that the science is of high quality.

The referees are other expert scientists.

The reviewing process is essential for ensuring reliable results and is a major step in the process of communicating scientific results.

Most papers are sent back by the referees to the authors for revision, which can often be extensive, and around 30 per cent of all

scientific papers that are submitted never get printed.

Unfortunately the process of reviewing and correcting articles and arranging for printing often takes several months or longer.

For example, we submitted our article in mid-1996 and the book has only recently come out.

Journals are not cheap to produce and it costs a library \$200 or more to subscribe to a journal for a year.

This is why you will find many scientific journals only in university libraries.

Because journals aren't widely available, scientists communicate with the public in other ways, such as newspapers, television and radio.

We have used all these media and also have sent a

lot of information to Campbelltown library.

The information there, which can be used by the public, includes past copies of our koala columns, a map of koala sightings in the Campbelltown region, and articles by other scientists.

We think it is a great resource for school projects and interested community members.

The great part is that much of the information originally comes from people such as yourselves, who read our column and take an interest in their local area.

To report a koala sighting, phone the University of Western Sydney Macarthur hotline on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200.

How a land owner is helping wildlife

STUDENTS enrolled in environmental science at UWS Macarthur have had some memorable field camps over the years.

These camps have often involved koala surveys and radio-tracking our Campbelltown koalas.

This year however we were invited to conduct a survey of mammals on a private property not far from Sydney.

The owner was keen to use the property to help conserve native mammals.

He had already installed an electric fence around a large portion of the property to protect native mammals from predators and wanted to know how to use the property to best effect.

Our first task was to identify existing mammals.

We found high densities of the tiny carnivorous

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Antechinus, a marsupial in the same family as quolls and Tasmanian devils.

In adjacent traps and in similar numbers we found the Australian bush-rat, an attractive native rodent.

We also caught a brush-tailed possum and to the owner's dismay, a black feral cat.

Nearby, students captured a tiny pygmy possum and saw the rare Parma wallaby.

Freshly dug conical-shaped holes indicated that bandicoots

were on the site.

Unfortunately the peanut butter and bread bait did not entice the bandicoots into the wire box traps.

We decided that one way to help the bandicoots would be to give them access to the watered, fertilised lawn inside the electric fence.

Here they would find beetles, grubs, and worms during winter or in droughts when food outside the fence was scarce.

Safety within the fence would allow young bandicoots to reach maturity without facing the dangers of feral cats.

The problem with electric fences however is that although they keep the cats and foxes out, they prevent free movement of native animals.

On a large scale, electric

fences can disrupt natural ecosystems and cause genetic problems.

We suggest to the land owner that plastic tubes large enough for bandicoots to enter but too narrow and too long for cats could be inserted through the fence at ground level and baited to persuade the bandicoots to enter.

He intends to give it a try and has offered his property as a site for a research student to investigate the problem of restricting predators but not native animals.

A challenging problem for a future student!

Report koala sightings to UWS Macarthur's Justice (02) 9962 9996.

To hear a male koala bellowing call (02) 4520 3200.

— By Robert Cross and Steven Ward.

Vet talk on native pets

IN 1995 Paul Hopwood, a veterinarian, gave a talk to zoologists at a symposium on science and ethics.

Many different ethical questions and dilemmas were considered, but Paul's contribution was "is it ethical to have native animals as pets".

Using some of Paul's ideas in this week's column we tackle the same issue.

It is illegal to keep most native Australian animals as pets, but legal for many introduced animals, such as cats, dogs, mice and guinea pigs.

So would it be better to keep Australian animals?

Well, ethically, if keeping animals as pets is accepted, there is no reason not to keep an Australian animal.

However, taking animals from the wild to be pets is not ethical; these animals would not be accustomed to humans and generally would not cope well with the dramatic change.

From a practical point of view, a large number of Australian mammals are under 100g in weight and so would not require large amounts of space.

The other good thing is that most are nocturnal, so sleep during the day when their owners are at work or school.

If the species were endangered then it could be an advantage to have animals being bred and kept in captivity.

However, releasing animals back into the wild is difficult and has a very low success rate.

Another issue is that, far too often people underestimate the care that a domestic pet requires.

If they cannot cope, responsible owners will find a new owner for their cat or dog, take it to the RSPCA or local pound.

Sadly though, many are dumped in the bush.

Many experience terrible deaths, if they are unable to fend for themselves.

If they do survive, the

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dumped pets can breed and threaten native animals.

If native Australian animals were kept as pets eventually some would be dumped by irresponsible owners.

Even though they are native, they could easily become a pest.

Imagine, for example, Tasmanian Devils dumped on the mainland, where at present there are none.

Kookaburras, in fact, have been released in WA and are causing ecological problems.

These animals could easily eat native mainland animals, threatening their survival.

Moreover, animals bred for their ability to survive in captivity may not do well when released, and could introduce these genes to the wild population.

Thus there are both positive and negative points and the issue needs to be considered carefully.

However, remember that when you get a pet, wherever it might be, that you take on the responsibility of caring for that animal.

If you can no longer cope, please don't dump it, but take it to a vet, the RSPCA or pound.

Also be sure that your pet is neutered (so that it can't have offspring) if you don't want additional responsibilities.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 99629996.

To hear a male koala bellowing call 46 203200.
— Steven Ward and Robert Close.

Macarthur Advertiser, Wednesday, May 5, 1999

One angry koala

IN a previous column we described how we released a male koala, he flipped onto his back and brandished his teeth and claws, ready to attack if we approached.

We concluded that this behaviour would help a koala defend itself against predators and may explain how our radio-tracked adults have survived despite the large number of dogs in their home ranges.

However, Steve Phillips, whilst working for the Australian Koala Foundation, observed two male koalas fighting and noted that the losing koala did the same thing. The

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behaviour appeared to have two roles: to indicate submission to the winning male, and to defend itself if the other male should continue to attack.

Animals will also change their behaviour if predators are a significant risk. Researchers found

that when possums detect the presence of foxes, (which happily eat possums), they then stay closer than usual to tree trunks, for an escape route to the treetops.

We recently heard on ABC radio a more bizarre record of predator and prey behaviour.

Wildlife officers in Queensland found a dead 3.5m crocodile, and examined the corpse to discover the cause of death.

It turned out the croc had choked on a possum!

Apparently the croc had tried to swallow the possum and in desperation the possum dug its claws

into the croc's throat.

The croc died because it was unable to either swallow the possum or dislodge it.

Perhaps this is why crocs usually drown their prey before eating them.

Although there was no information about the possum, we assume that it also perished.

This an example of the old cliché "it didn't go down without a struggle." To report sighting a koala call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing call (02) 4620 3200.

Rosier look for koalas

THIS week we look at the change in our knowledge of koala populations around Sydney.

In 1994 an article was published in the Sydney Morning Herald containing the Australian Koala Foundation's estimates of the number of koalas in different populations.

The updated map show, partially due to our research and your support, that things are now looking a bit rosier.

We now know that the population at Kentlyn is a significant one.

In addition we know that koalas are breeding in the Cordeaux, Nepean and Avon Dam catchments.

However we have less information from this area so our estimate of koala numbers in this area could be inaccurate.

To the west, the recent re-discovery of koalas in the Blue Mountains is particularly significant, as in 1994 it was thought that this population was extinct.

This population may also help to link our southern Sydney koala populations with those to the north.

North of Sydney, the picture appears much the same as in 1994, although the density of koalas in the Ku-Ring-Gai Chase National Park is probably

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similar to that in southern Sydney.

So what does all this mean for the koalas?

Unfortunately, the threats to koalas remain the same: clearing of habitat, dogs, cars and large high-intensity fires.

However, the clearer picture we now have of where koala populations are, and how many animals are present, means that we are now more optimistic about their long-term survival.

Nevertheless, koalas remain difficult to spot, so your sightings in the southern Sydney region will help us to better reveal what our koalas are doing.

Who knows, there may yet be other populations awaiting discovery.

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996. To hear a male koala bellowing, call (02) 4620 3200. Steven Ward and Robert Close.

Terrific owl power

THANKS to the generous support from the Macarthur Advertiser we have now written more than 170 weekly columns, primarily about koalas, but also about other Macarthur species and issues.

We now need an index of topics so that we can

keep track of our stories.

So to help us, Rob's daughter has been compiling the index.

When it's finished, we'll send a copy to Campbelltown Library to use with the copies of our columns we have given them.

We'd also be interested to hear from people who have a topic they would like us to tackle. Write to Robert Close, UWS Macarthur, PO Box 555 Campbelltown.

From perusing the list of topics covered so far, we realised that we have written little about our local birds.

So to remedy this we will start with the Powerful Owl (*Ninox strenua*).

The Powerful Owl is the largest Australian owl; the male has a wingspan of up to 1.3m.

It has a deep "woo-hoo" call which may be used for communicating with other owls over a number of kilometres.

This is important as each owl uses a large area for hunting.

Food includes mammals, mainly possums and gliders, and occasionally young koalas and other birds.

The Powerful Owl uses hollows or cavities in large, old trees for nest sites, usually on hillsides in heavy forest.

The breeding season is between May and September and two eggs may be laid.

As Powerful Owls each

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club**

need large areas, densities are normally very low.

Its presence close to towns depends on suitable habitat, especially the large, old trees.

Two of these large and beautiful birds were recently discovered in Pheasants Creek, Wedderburn, by John Callaghan and Hane Thompson from the Australian Koala Foundation, while they were putting final touches to their Campbelltown Koala Plan of Management.

Perhaps you too will see one of these fantastic birds.

To report a koala sighting, please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200. Steven Ward and Robert Close.

Few left: Black is beautiful

AN endangered bird species seen in the Macarthur area is the glossy black cockatoo.

Calyptorhynchus lathami.

These birds feed extensively on seeds from casuarinas, (also called she-oaks), although they will also eat eucalypt and acacia seeds and the larvae of wood-borers.

The cockatoos eat by biting off the casuarina cone, holding it in one foot and picking the seeds out with their beaks.

Where there are many casuarinas, the glossy blacks may live permanently, but where the casuarinas are scarce the birds are often nomadic.

Glossy blacks are found in pairs, or in small groups of up to 25 consisting of several families.

The glossy black cockatoos is 460mm to 500mm in length, with the tail making up about half of this.

The plumage is dark brown to brown-black, and the tail has a broad band of bright red feathers near the end.

The female also has yellow patches on the side of the neck and head.

The call is a soft drawn out "tarr-red".

This call distinguishes it from the slightly larger red-tailed cockatoo which has a harsher, louder call.

It can also be distinguished by orange-yellow bars on the plumage underparts of the female red-tailed cockatoo and the absence of a crest

mac's koala club

in the male glossy black. Like powerful owls in last week's column, the glossy black nests in tree hollows, and a single white egg will be laid in the breeding season which is from March to August.

The male assists the female in rearing the young.

The main limitation on the distribution and numbers of the glossy black cockatoo is the amount of casuarinas present and of course the prevalence of tree hollows.

As we have reported in earlier columns, eucalypts do not develop tree hollows till aged about 70 years.

So clearing, such as we have recently seen at St Helens Park, has the potential to affect the distribution of this beautiful bird.

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200.

■ By Steven Ward and Robert Close.

Too smart for humans

SHIRLEY, one of our two Kentlyn females fitted with radio collars, had two sets of visitors recently.

The first was a group of Year 11 biology students from Thomas Reddall High School, who came to see our radio-tracking methods and to appreciate the ecology of our local koala population.

The second was a class of science degree students from UWS Macarthur who, we hoped, would help us catch Shirley to replace the battery in her collar and check her health and the contents of her pouch.

The Thomas Reddall group found Shirley in a small, densely foliated Turpentine tree in the creek line that runs through her territory.

We expected her to have a large cub aboard,

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but she carefully avoided giving us a clear look at the pouch.

Leaving Shirley to her musings, we walked two hundred metres to the cliff line overlooking the Georges River, so that the students could appreciate the extent of Shirley's territory and the beauty of the Kentlyn bushland.

Unfortunately, the lookout site was despoiled by an array of rubbish, clearly left recently by people who

had cooked a meal there.

Plastic bottles, chip packets, tin cans, food wrappings, ropes, utensils and clothing were spread over the area and detracted from our enjoyment of the bush and river.

We carried the mess out and left the site as it should have been, but the thoughtlessness of the campers made us wonder about the future of our superb bushland.

If koalas are to survive in the area and if succeeding human generations are to enjoy them and the bush, then we must all be responsible.

The following day, the university group found Shirley not 50 metres from her previous tree, again in a Turpentine.

This tree was tall and slender and only a metre

from a slim and even taller Blackbutt.

Shirley was almost out of reach of our flagging pole and being now experienced in dealing with humans, she speedily hopped across to the Blackbutt and climbed casually up to a safe vantage point.

Further pursuit would have been unsafe for humans and koala so we gave up the attempt.

Fortunately, her battery is still sending out a strong signal so we have some time yet to find her in a more suitable tree.

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200. Steven Ward and Robert Close.

MAC'S KOALA CLUB



Happy Birthday this month to:

Renee Benkovich - Lisa Close - Lauren Hoban - Mathew Cupitt - Ethan Upton - Lucy Chapman - Petra Majurdic - Claire Gunton - Raquel De Vries - Jared De Vries - Ann Maria Lewis - Timothy Rutledge - James Cassar - Sarah Coffey - James Burke - Zoe Lucas - Schoenfeld Millie - Bridget Potts - Brianna Bowden - Sophie Green

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Owl no hoot for budgie

WE recently received a fascinating letter from a reader, Mrs Joanne Douglas, in response to our recent column on the Powerful Owl.

We enjoyed her story so much that we asked her permission to print it . . .

"I have just put down the local paper down after reading the article Terrific Owl Power.

"I'm very excited as this has confirmed a sighting I had approximately two months ago in Rosemeadow,

"My family was having breakfast at our table at 8 one morning looking out our glass sliding doors onto a pergola with a covered roof and a railing at waist height.

"I have a budgie in a cage which was on a hook under the pergola.

"When I first looked when opening the blinds she looked a little distressed, however, because I was running late with breakfast I thought I would check her a little later.

"Within minutes my children and husband were urging me to come and look at the big bird on our pergola.

"To my total amazement there was a huge owl sitting on the railing of our pergola.

"Its claws were nearly the size of my hand, it was so big.

"However, the first thing I thought of was my budgie.

"I ran for the back door and after noticing my movement inside the owl flew up into a large gumtree in our back yard.

"My children got to see this, which I hope they remember forevermore.

"There is nothing more inspiring than seeing nature at its finest.

"When I reached my budgie it was obvious the owl had been on the tiny little cage shaking it

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around. There was water and food everywhere and my poor little bird's heart was nearly jumping out of her chest (she survived though).

"We were so shocked at seeing such a huge majestic bird, and under our pergola into the bargain. I just didn't think this kind of bird would be in Campbelltown.

"This was so exciting for my children and myself; I'm sure it's something we won't forget for a long time.

"I guess my budgie won't either. I took her inside for the next few nights just in case the owl decided to try again.

"I am certainly glad to hear the owls are okay and do have a home relatively close by.

"Maybe some other lucky person will have the opportunity to see them."

. . . We hope so too! (It's no wonder that Joanne's budgie's heart was jumping.

As a comparison, a budgie perched beside a powerful owl would be like a human standing beside a six-metre high Tyrannosaurus rex!) Thank you for that great story Joanne!

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200.

■ By Steven Ward and Robert Close.

The shy koala

RECENTLY we reported that Shirley, one of our radio-collared koalas at Kentlyn eluded us when we attempted to capture her for a collar change.

A couple of weeks later our volunteer koala trackers informed us that she looked to be in a viable tree for a catch.

When we arrived with the catching equipment Shirley was only about three metres from the ground.

However, again sensing that something was up, Shirley climbed higher and out of our reach of our flag.

Not deterred we set up our wire ladder and Rob quickly ascended to a branch opposite Shirley's.

However, the day was windy and Rob soon found himself swaying back and forth like a sailor aloft in a storm.

Nevertheless, Rob manoeuvred the flag above Shirley's head, but was especially careful to back

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off if Shirley moved far out to the small branchlets, as we were worried that the strong wind could dislodge her.

The wind also brought neighbouring branches close enough to Shirley to her to grab, and after a couple of tries, she managed to climb across to Rob's branch.

Rob then used the flag to persuade Shirley close enough for him to grab and then wrestle into the catching sack.

Rob didn't go unscathed however, as Shirley bit him firmly on the fingers.

This later became quite

swollen, but would have been much worse if not for his catching gloves.

A veterinary inspection showed Shirley to be excellent in health, weighing in at 8 kg.

She also had a young male cub, nicknamed Frank, about six months old and soon to emerge from the pouch.

The cub was fully furred, about 20 cm long and with small needle—sharp claws with which he dug into Rob's beard while being inspected.

Rob now appreciates why Shirley winced noticeably as Frank clambered back into her pouch!

Shirley and Frank were soon back out enjoying the Kentlyn bushland—despite the windy conditions.

To report a Koala sighting please call the University of Western Sydney Macarthur hotline on (02) 9962 9996.

Rare squirrel glider

The squirrel glider is a small marsupial mammal with dark brown to black back, rufous to black sides, and a white belly. It is found in the coastal rainforests of south-eastern Queensland.

The animal is the sugar glider, which glides from tree to tree by stretching its skin and wings.

Recently, we heard that the squirrel glider was found to be a new species. It is called the 'Mac's koala club'.

Scientists have now named this species as 'Mac's koala club'.

Mac's koala club

weight. They are very similar in appearance to sugar gliders, but are slightly larger and have more prominent ears, larger narrow ears, and a bushier tail.

In fact, although they are different species, the two species have mated in captivity and produced

hybrids. It is possible that a mating between animals of two species would be sterile.

Like the sugar glider, the squirrel glider feeds on insects, sap produced by some eucalyptus, nectar and pollen. Family groups of up to 10 animals use leaf lined tree hollows for nests. The squirrel glider in contrast builds leafy nests in small trees.

The squirrel glider can also glide. It glides between trees in which it lives. It does this by pushing off with its hind legs and spreading the thin band of skin which links its wrists

and ankles. This allows it to reach the trunk of a tree some distance away without having to descend to the ground, an amazing feat to watch!

The squirrel glider is classed as vulnerable which means that its range is limited and it is threatened by habitat loss. It lives in the rainforests of south-eastern Queensland. It is a very beautiful animal and it is worth seeing it in the wild.

For more information on the squirrel glider, contact the Queensland Department of Environment and Heritage on (07) 5522 9900.

Our history is defaced

LAST week we recounted how on a trip to locate koala Shirley with a class from Thomas Reddall High School we discovered and cleaned up a disgusting pile of campers' rubbish.

Later that day we encountered another example of vandalism when we visited the famous Bull Cave.

The Bull Cave occurs on the perimeter of koala Lyn's and contains a huge Aboriginal cave painting of a bull.

Unfortunately, the marvellous painting has been defaced by orange spray paint.

Moreover, a massive metal grille protects the cave.

The combined effect of the orange defilement and the grim prison was inexpressibly sadness and a dreadful commentary on our society.

We struggled to look through the paint and bars to feel the wonder of the original artist who tried to depict the beast that had suddenly appeared in their world.

The artist in fact had recorded a dramatic moment in history in the young European colony.

The First Fleeters had brought with them a small herd of cattle and had hoped to rely on the herd for food

mac's koala club

in the tough first years before farms were established.

Sadly, the herd broke free and vanished.

Years later, the herd or offspring were discovered in the Camden area, doing well on the fertile river flats.

The name Cowpastures reflects that history.

We are fortunate to have the cave painting as a reminder of that time but unfortunate that some people in our community lack the thoughtfulness to appreciate it.

Once again, we sing the praises of Campbelltown heritage and ask that people enjoy and respect it.

To report a koala sighting please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a mate koala bellowing, call (02) 4620 3200.

- Steven Ward
and Robert Close

Cottoning on to life

AUSTRALIA is home to many animals, including 15 species of freshwater turtles.

The most common turtle in the Sydney region is the eastern snake-necked turtle.

This species gets its name because it has a long neck, at least half as long as its shell.

This species can be seen on wet days crossing roads as it moves to a new waterhole and, unfortunately, they are often hit by cars as they do so.

Some researchers have tracked turtles' movements by using a technique called spooling.

This involves catching turtles and for those large enough, gluing a spool of cotton thread to their shell.

When the turtles are released, one end of the thread is tied to nearby vegetation and the turtle leaves behind a trail of

mac's koala club

cotton thread, which can be followed up by the researchers.

Care is taken that only those animals which are large enough so that the cotton spool is not a burden, are selected.

In a few days, any remnant of the cotton thread will fall off the shell, thus not causing any permanent discomfort or burden.

One group of researchers, using this technique, were out one morning collecting data by following and collecting a thread trail left by a turtle.

In the process they came across a well-intentioned person who was also following the trail of cotton and who had already collected about 100m of thread!

Unfortunately, this rather ruined the data collection for that turtle's movement!

Australia has freshwater as well as salt-water turtles.

All freshwater turtles have clawed feet with webbing between the toes and mainly feed on water insects, frogs, tadpoles, fish and sometimes plant material.

They are fully aquatic (that is they live in water), coming ashore only to bask and migrate.

From research using the spooling technique, it has been found that the eastern snake-necked turtle is remarkably adept at navigating between ponds as they normally take a very direct route, except

where necessary to detour around obstacles and moving up to 550m in one night.

Sadly, we have introduced a foreign turtle, the slider, which is originally from the southern US.

The slider is found in the Sydney region and may take over habitats used by the native eastern snake-necked turtle.

They were probably introduced from Asia, where they are legally sold.

Note that it is illegal to import reptiles (which includes turtles) into Australia.

To report a koala sighting, please call the hotline at University of Western Sydney, Macarthur on (02) 9962 9996.

To hear a male koala bellowing, call (02) 4620 3200.

- Steven Ward
and Robert Close

The shy lyre bird

THIS week we look at a bird quite common in the Campbelltown bush, which is well known despite its shy nature - the lyrebird.

There are, in fact, two species of lyrebird in Australia: the superb lyrebird (*menurus superba*) and the Prince Albert lyrebird (*menurus alberti*).

Although similar in a number of respects, the Prince Albert lyrebird is found in rainforests from north-eastern NSW to south-eastern Queensland.

The superb lyrebird occurs from Queensland south to near Melbourne and has also been recorded in Tasmania.

It is the species with which most people are familiar.

Lyrebirds have an incredible three-foot tail that is used as a musical instrument in pairings.

mac's koala club

will call more often than the female, and may be able to mimic up to fifteen other bird species.

Lyrebirds will also mimic sounds made by humans, including chainsaws!

Both male and female lyrebirds have tails as long as their body, although males are significantly larger than the females.

The male's tail, however, is very ornate and is used for display to

try and attract a mate.

In fact, the male is often a show-off that he begins dancing or display movements which are about one metre and a half metres long, and are small low hops, in which the male bows back by raking up soft soil.

Generally a male will make a number of mounds and move between them, stopping to display his finery by spreading his tail over his back and head and giving his repertoire of calls.

The female does all the work of nest building, incubating the egg, and rearing the nestlings, both of which take about six weeks.

The breeding season is from May to September and the bird is moulting in June or July.

To find food, lyrebirds will dig through leaf litter and debris and break apart rotten logs to find insects, worms and small snails.

Sometimes they roost in a nest usually built on a ledge of rock, in a cavity in a tree or stump, or high in a large tree fork.

Lyrebird nests are often found in the Campbelltown area, but as the birds themselves are very shy they are generally hard to spot.

Their songs, however, can often be heard!

To report a koala sighting please call the University of Western Sydney Mammal Centre on 9963 9996.

To hear a male lyrebird sing call 4620 3293.

By Steven Ward and Robert Cross

Noxious weed wildlife threat

SECOND-year biology students at the University of Western Sydney, Macarthur, currently can do an environmental science unit with their degree.

As part of their activities students identify as many species as possible on the Campbelltown campus and produce a vegetation map.

Recently the students discovered what appeared to be a nasty noxious weed called alligator weed.

A sample will be sent for verification.

Alligator weed can rapidly spread from a single piece of stem and take over an area.

It can grow on both land and water and can be spread downstream by floods, tyres, machinery, boats, trailers, in stock hooves and through irrigation and stormwater pipes.

Alligator weed can choke waterways so that they are unsuitable for both fishing and boating and impact on the native Australian plants and animals.

It is a bane to agriculturalists too: if it is found in sand, gravel, agricultural produce or turf then the product cannot be moved or sold (so that the problem isn't passed onto others).

So what can you do about this nasty weed?

Well, obviously it will be

*Happy
Mahn*

mac's koala club

far easier to remove if its presence is detected early.

So you can help by making sure you can recognise the weed if you see it, and then report it immediately to your council or NSW Agriculture.

They can also help with the best methods to remove alligator weed.

Care must be taken when removing alligator weed as even a small piece can start a new infestation.

Alligator weed has two leaves on opposite sides of its stalk, a white papery flower smaller than a five-cent piece in spring to summer.

It can have an extensive root system and the stalks can be up to a metre high.

It also has spear-shaped (lanceolate) leaves.

The size of the leaves may vary from 2-3cm long, up to 10cm long, depending on where it is growing.

Alligator weed may also be confused with some native plants.

Distinguishing features to look out for are hollow stems (although the hollow may be pin-sized if it is growing on land) and the flower grows on a stalk from the leaf axis (where the leaf is attached to the plant stem).

Farmers should look out for the weed by checking water bodies (eg dams) and banks for the weed.

If irrigating or pumping water for stock, they should check their pipes don't suck alligator weed out onto their property.

Canoeists can help by making sure that their canoes are clean, and waterskiers and people using boats should check that the weed isn't spread on the propeller or trailer.

People fishing are also ideally-suited to looking out for alligator weed.

After all, you wouldn't want it to ruin your favourite fishing spot!

Remember what the weed looks like and report any sightings to your council or to NSW Agriculture on 4577 0600.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on 9962 9996.

To hear a male koala bellowing call 4620 3200.

■ By Steven Ward and Robert Close.

For safe crossing

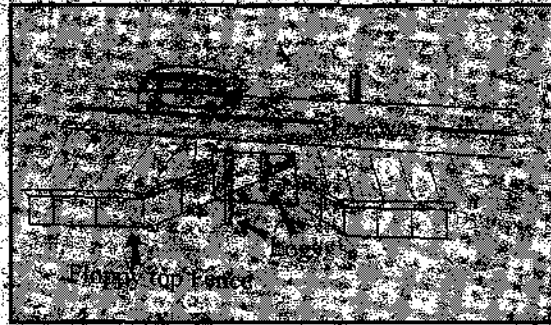
SPARE a thought for koalas crossing major freeways. Six lanes of traffic become a major obstacle and many koalas die before they reach the other side. Recently Robert was up north looking at new ways of helping koalas make the crossing safely.

Safety devices now in use are concrete culverts (large square tunnels) which pass under the freeways. Wire netting outside the entrances and logs placed inside the culvert can give koalas a refuge if dogs attack.

Fences line the road and direct the koalas towards the culvert. These fences have a bend at the top sloping away from the road with a floppy top lip.

These fences and culverts seem to work quite well, but the culverts need to be large and not too dark. Researchers hope to work with light funnels to direct light down the tubes from the roof. It's hoped these lights provide enough light at night for the koalas to see any predators lurking in the culvert.

Other plans are to build



■ THE culvert (under-road tunnel) which could be used to help koalas cross highways safely.

mac's koala club

overpasses across the freeways. These overpasses will come with some trees enough to grow vegetation, perhaps even small trees to make the crossing even easier (so that it's like a bridge for wildlife).

However, these

crossings are very expensive and we don't know whether the koalas will use them.

One of Robert's tasks is to design a way of testing how effective these overpasses and underpasses are.

We'll give more details of this later.

To report a koala sighting, call the University of Western Sydney Macarthur hotline on 9902 9996. To hear a male koala bellowing, call 4620 3200.

■ By Robert Close and Steven Ward

Radio collars might help

WE mentioned in last week's column that Robert was recently in the north of the state testing the effectiveness of overpasses and culverts in allowing koalas to cross freeways safely.

One effective technique is to compare the movement patterns and activities of koalas living next to the freeway with those some distance away.

Fitting the koalas with radio collars can help provide this important information.

While in the north, however, Robert found that there was a high level of concern among the local community about the use of radio tracking.

The issues which concerned the community included possible risks to koalas while they are

check that the collar is not chafing support our belief that the collar is not a problem.

Catching the koala, we believe, is a more serious risk and we shall discuss this problem in a later column.

For those people who would like to see more details of our work, we are in the final stages of preparing for a 20-minute video entitled Koala Tales: The Lives of Koalas in Southern Sydney.

In the video you will see some of the four female koalas mentioned above, a koala catch in action, and find out other details about Campbelltown's koalas.

The aim of the video is to help the Campbelltown community appreciate what a fabulous treasure we have: breeding female koalas in our own backyards.

We have this treasure, of course, because of the relatively unspoilt bushland beside the Georges River.

We believe that the following generations will only be able to enjoy Koalas if Campbelltown's residents appreciate this bushland and the koalas.

We wish to do an official launch of this video in the first week of October. We will give you more precise details in a later column.

To report a koala sighting please call the University of Western Sydney-Macarthur hotline on 9962 9996.

To hear a male koala bellowing, 4620 3290

By Steven Ward and Robert Choo

mac's koala club

being caught and the belief that a radio collar is a hindrance to a koala. Are their concerns justified.

Well, we are following movements in the Campbelltown area of four female koalas fitted with radio collars. All four are in good health and all have healthy young cubs with them. Obviously they are coping well.

Regular vet inspections and examinations to

An echidna's sad demise

LAST week a reader called to tell us that a small animal had been killed on Appin Road.

On investigation, Robert found a short-beaked echidna (or spiny anteater - see previous column (April 9) lying dead on the double dines.

All its spines had been knocked off (perhaps now embedded in tyres) leaving only the short, brown underfur.

The animal was a mature male, identified by the spur on its ankle and its unusual penis, which has four extensions on the tip.

July to August is the mating season for echidnas, so this fellow no doubt was on the lookout for a mate.

Robert was not surprised to see an animal killed on

mac's koala club

that part of Appin Road because there the road passes between two patches of woodland.

The easterly patch is known as Brown's Bush while the westerly patch is called Beulah Forest or previously Humewood.

Motorists would notice this woodland because it contains many large, beautiful spotted gums (the trunk is grey with many spots), the only significant

stand in Cumberland. Brown's Bush connects to the Georges River while out of Beulah Forest flows Woodhouse Creek (intermittently) down to the Nepean River.

This area, then, is a bushland corridor that links the Georges River to the Nepean River.

We believe that the corridor is important to allow animals, such as echidna, to move between the two river systems.

Such movement is necessary to replenish populations and maintain genetic health of isolated groups.

Further down the road towards Campbelltown the same morning was the remains of a fox.

It may have also been

using the corridor.

Two of our tagged koalas have been seen in that patch of woodland, perhaps also using the corridor.

Both koalas were tagged in Kentlyn or Ruse and had made a considerable journey to Appin Road.

Neither were reported again; let's hope they moved down the corridor to safety.

August to September is the start of the mating season for koalas.

We'd appreciate, as always, hearing of any koala sightings or bellows. To report a koala sighting, phone the University of Western Sydney Macarthur hotline on 9962 9996.

- Robert Close and Steven Ward.

To be Frank, he's great

REGULAR readers of our column will be familiar with Shirley, who was first caught in Kaitlyn in 1992, and has regularly been radio-tracked since 1995.

We last caught Shirley two months ago to change her collar. At the time she had a male cubs nicknamed Frank.

Frank was still in the pouch and was too small to ear tag.

However, we wanted to identify Frank later after he leaves Shirley so we had to

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capture Shirley and Frank again before he sets off. We located Shirley in a small tree and with the assistance of volunteers and our flagged teaching pole, persuaded Shirley

with Frank on her back to descend safely into our catching bag.

Both Shirley and Frank were in good condition. Shirley weighed in at 8.35kg and Frank at 1.45kg.

As they had been checked over when last caught we didn't take them for a vet inspection, but took ahead length and other measurements. We also fitted Frank with ear tags and took a small piece of ear tissue for later genetic analysis. The two were then

released together at the capture site.

It is interesting to note that despite Shirley's home range including part of George Rover Road, and being next to houses, that she has successfully raised four healthy cubs since 1995 - Bill in 1996, Orin in 1997, Leslie in 1998 and Frank this year.

Shirley may also be the mother of Molly, a female koala at Wedderburn and perhaps others. We haven't seen Shirley's other offspring this year, but at the end of

1997, Bill started up in Afford Pass, 19km to the northeast of Kaitlyn.

So Shirley is helping to spread Campbelltown koalas far and wide. Whilst locating Shirley we also spotted a huge male koala without a radio collar who we also caught - details next week.

To report a koala sighting please call the university of Western Sydney, Macarthur hotline on (02) 9662 9996. —Steven Ward and Rob Chase

Grant sets a new record

In his week's collection we identified that white female Shirley, a female Blackbutt, and the son Frank. We spotted large numbers of koalas in the area and decided to check his tags for our coloured ear-tags. Every koala that we tag has a unique colour combination so that they can be individually identified. We couldn't see any tags and so decided to capture him.

The male was about

eight metres up a small Yungahine, with two large Blackbutts only metres away.

As the Blackbutts were

around 20 metres high we suspected that the male koala would jump onto one of the trunks and scramble up it to safety. To prevent this, a volunteer climbed assisting with the catch got into position on the trunk of one of the Blackbutts to discontinue the male's route from climbing it.

Rob was climbed into the tree below the koala to try and catch him before he could escape to another branch.

At volunteer in the Blackbutt then positioned the flag on the end of the catching pole above the koala's head, persuading the male to descend into Rob's open arms.

However, as Rob was easing him into the catching bag, one of the safety lines slipped from the koala in his arms, and it went down the tree trunk before his second safety line snapped his descent. Regaining his composure, Rob

manoeuvred the koala safely into the catching bag and lowered him to the ground.

Rob didn't escape so far though. He scurried some claw scratches on his upper arm from his embrace with the koala.

When we examined the koala's ears, however, we discovered that the male was already tagged. This shows that you really must look hard to pick out the tags in a koala's fluffy ear.

The koala was Grant (Grant), caught for the first time last December. He was in excellent condition and weighed in at just under 12 kg - a new record for Campbelltown!

We took the measurements and then on Grant's progress and routine blood sample which was sent to Elizabeth Macarthur Agricultural Institute for testing.

It seems likely that Grant's Franco father

Being so big he would possibly be the largest male in the area. Grant should be making season swing into action.

We would like to hear from you about koalas.

To check out the story ring 4620 3244, to hear more below. But the koala hotline - 999 699 699 - leave a message for us.

By Steven West
Flot Glass

Koalas cross line of no return

15/9/99
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club**

IN a recent column we discussed a trip Robert made to northern NSW to investigate koala crossings.

The problem is that where a group of koalas is separated by a barrier such as a six-lane freeway there may no longer be movement between the divided groups.

Fire or disease may destroy one or other of the colonies, and there will be no replacement of animals.

such as those seen on Kangaroo Island, in South Australia, where many male koalas have testicular abnormalities.

Robert was seeking koalas on either side of the existing highway (to be superseded by a freeway) to see if they crossed the highway frequently.

He hopes to track their movements by fitting them with radio-collars. In searching for koalas, however, he frequently

encountered residents who invariably told him koalas were more common five years ago.

One reason for this apparent decline was not hard to find.

We would seek out the koalas on ridge-lines where the feed-trees were common and would often find a koala.

However, all too often we also would find the small, white marker stakes which proclaimed the area would be cleared (for housing

Tweed region is a favourite destination for people who build their bushland dream home on these beautiful ridges with sweeping views of the coast. At one site we found the bulldozers had moved in already.

Despite this, we spotted two koalas crammed into a small remaining patch of eucalypts. The animals may survive a year or two, but it won't long before the agents will

years ago". Most of the new residents will be sad to see the koalas slowly disappear, and they don't understand that if they build on the best koala sites that the animals are doomed.

The same reasoning applies to the Campbelltown region. If we continue to build bushland houses in the best remaining koala habitat, then we will not have koalas on

On a brighter note, our new video Koala Tales: Koalas in Southern Sydney will be launched at 8.10pm on October 6 in Lecture Theatre 5, Campbelltown Campus, University of Western Sydney Macarthur. All are welcome.

To report a koala sighting call the University of Western Sydney Macarthur hotline on 9962 9996; to hear a male koala bellowing call 4620 3200.

Battle in the tree tops

WE recently received a call about a koala in a resident's backyard off Hansens Road, Minto Heights – not a good place to be.

With the help of volunteers, Steven went to see if the koala could be captured.

We found the koala 5m up a peppercorn tree but within reach of the flag on the end of our koala pole. However, a fence close to the tree prevented the koala climbing down.

So Steven climbed 3m to a fork and attached his safety lines. With several residents holding the spotlight, the volunteers used the flag to move the koala back to

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Steven, but before it was within reach, it leapt to another branch.

The volunteers repositioned the flag and persuaded the koala to move close to Steven, who was now able to grasp it. However, many small branches made it difficult to manoeuvre and in the

process the koala turned around and chomped on the end of Steven's index finger.

Steven tried to pull his finger from its mouth but the animal had a vicious grip. As he was holding on the koala's back leg with his other hand, there was nothing he could do except bellow, like a koala.

Once the koala let go and with the help of a volunteer we eased the koala safely into the bag.

The koala was fine but Steven's finger looked a bit worse as the tip was soon swollen.

The koala was inspected at Elizabeth Macarthur Agricultural Institute. It was a male,

6.5kg and in fair, but not in good condition.

We fitted him with ear tags and called him Matthew.

We then took him out to be released (see front cover picture).

Steven will remember Matthew and his fondness for fingers for quite a while.

Matthew is of a size and age where he is roaming the countryside trying to establish himself in his own special area, so watch out for him.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 99629996 **Steven Ward and Robert Close.**

Dan weighs in after traveling

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AS we predicted recently, young male koalas are being exported all over the district.

Our pager has been ringing for a couple of days now. It was a call from Douglas Park on the Nepean River about a koala that was found on the riverbank.

A koala had apparently been found on the riverbank. It was a male koala, and it was quite young. It was found on the riverbank, and it was quite young.

To our great surprise, it had extra tags and turned out to be a koala that had been exported from the district.

Ruse had a motorist reported from Ayrton last October.

We captured him in a tree not three metres from the road. By that time he had increased his weight to 7.5kg.

We released him near the Georges River adjacent to the Ayrton Road capture site and watched him well for his travels.

Traveling certainly agrees with him because he now weighs 9.7kg and is in a relatively good

condition. To reach Douglas Park he must have crossed the Nepean River and moved across country to the riverbank.

Ruse probably he would have travelled along the bush corridors remaining unoccupied.

It is a great line that we have a number of koalas in the bush corridors. All up he's moved over 1.5km. This matches the record of a koala travelled by Shirley's son Bill, who moved from Kzinlyn in the opposite

direction to Alford's Point. Now that Dan is in the Nepean Basin where will he end up?

He's now big and strong enough to look after himself and a couple of females as well. He would certainly be a good advertisement for the park.

Don't forget that we have a number of koalas in the bush corridors. All up he's moved over 1.5km. This matches the record of a koala travelled by Shirley's son Bill, who moved from Kzinlyn in the opposite

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By Steven Ward and Robert Cross

Koalas film is a big hit

CLOSE to 100 people of all ages came last week to see the first public screening of the video *Koala Tales: Koalas in Southern Sydney*, and our koala display, and all had a great time.

We also sold 26 copies of the video - a great indication that it went down well!

The audience included several people who have been involved with the koala research at one time or another, so they were knowledgeable and had high expectations.

We were relieved after the screening to hear that they thoroughly enjoyed it.

The many children in the audience were also enthusiastic about it.

One of them was Kaityn Plum, aged 6, from Kentlyn, who was excited to see her school and the school's koala, Lyn, in the film.

Kaityn persuaded her Mum to buy a copy of the video and has watched it eight times already!

Our special thanks to the Sydney couple who donated \$7,000 to cover filming and editing costs to make the video possible, and the University of Western Sydney.

Macarthur Environmental Media Services, who did a fantastic job of making the video, and the staff at our more than 100 schools, were actually paid to do.

Their special effects made the video lively, wondrous and put the kids on the edge.

We'd also like to remind people that the video is available for purchase.

The easiest way to get a copy is to go into your local Family Community

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Newspaper office (Macarthur Advertiser in Campbelltown, Camden, Wollondilly Advertiser, Liverpool Champion or Fairfield Champion) with

an order form, or a cheque or money order to the Assoc Robert Close, University of Western Sydney Macarthur, PO Box 555, Campbelltown 2560.

The videos are \$20 each, and just \$4 to cover postage and handling no matter how many videos you order.

Make sure you put in your name and the address that we should send it to, and allow at least two to three weeks for delivery.

We hope that all schools in the south-west will purchase a copy.

The video is an interesting mixture of science, education and beautiful bushland scenes.

We expect that the video will be suitable for many types of local studies and school projects.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on 062 9900.

To find a local koala belt, call 4620 1000.

For more information contact Robert Close.

Devotees leaving no leaf unturned

MANY people fascinated by mammals join the Australian Mammal Society. Most society members are researchers or wildlife managers, but there are interested amateurs.

Each year a conference is held where members give short talks on many topics.

There is a social side, which culminates in a dinner featuring a limerick competition (about some talk or event that occurred during the conference), and the bestowing of the Scruffy Award on someone whose antics, or talk, was considered amusing or embarrassing.

This year the conference was held at the Hawkesbury Campus

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of the University of Western Sydney.

Seven of the many talks were devoted to koalas.

All were interesting but one in particular caught our attention—the question that has always intrigued koala researchers: why do koalas regularly visit a certain tree and avoid an adjacent tree of the same species? The researcher presented foliage of 12

trees of the same species to six male koalas.

The koalas had to eat or go hungry. The 12 trees were chosen according to their degree of attack by insects, so some were eaten heavily by insects and some were not.

The researcher found that koalas ate five times as much from the trees least attacked as from the ones that the insects most enjoyed.

He examined the trees to see if they differed in chemical make-up, and found that water content, fibre and nitrogen content were similar for all.

However, they differed significantly in a toxic chemical (phenol-based) that the trees produce to deter insects!

The researcher recently visited Cairns to test whether the trees that one collar-collared animal select have less phenol chemical. We are awaiting his findings with interest.

So, bit by bit, we'll piece together what's important in the diets of koalas and how to conserve them.

Co-operation between researchers and the community is a big help and scientific conferences aid in this co-operation.

To report a koala sighting, call the University of Western Sydney Mammal hotline on 9967 9966.

For a male koala bellowing, call 4620 3200.

By Stacey Ward and Robert Close.

Sighted in the suburbs

RECENTLY we've had three reports of koalas along Peter Meadows Road, which runs from Leumeah to Kentlyn; both suburbs of Campbelltown.

This road dips down into the gully formed by Peter Meadows Creek and the creek later joins the Georges River.

The creek appears to be a corridor for koala movements, and we also know that koalas are successfully breeding in bushland in the Peter Meadows Creek, and these koalas often live in, or visit, residents' backyards!

One of the recent reports was in the evening, of a koala running along the road, so we went out to investigate.

When we arrived we searched the area with bright spotlights.

However, whilst

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searching we found large piles of disposable nappies, broken bottles, car parts and other dumped rubbish, which made searching difficult and dangerous.

Unfortunately, Peter Meadows Road has a high incidence of people dumping rubbish of all kinds.

Much of this rubbish will wash down the creek, eventually ending up in the Georges River.

Pathogens (germs that cause diseases) from the nappies will end up

contaminating swimming areas.

The plastic will take decades to break down, and the dumped rubbish also includes old household plants, or cuttings, giving these weeds a head start at invading our bushland.

Already many weeds can be seen in the bushland along Peter Meadows Creek.

Thankfully, the koalas that were reported apparently managed to get safely off Peter Meadows Road.

However, there have previously been at least two koalas hit and killed along this stretch of road.

Koalas have no road sense and sometimes have been reported as walking straight up the middle of the road!

Thus, it is important to remember to drive

carefully along Peter Meadows Road, particularly within 200m of Peter Meadows Creek.

Other koala hotspots in which to drive carefully, are Wedderburn Road causeway over the Georges River, and where Heathcote Road crosses Deadmans Creek.

Another caller reported a dead koala at Narellan but it turned out to be a large grey cat.

It is remarkable how easy it is to be mistaken about the identity of a roadkill while driving past!

To report a koala sighting please call the University of Western Sydney Macarthur hotline on 9962 9996.

To hear a male koala bellowing call 4620 3200.

■ By Steven Ward and Robert Close.

Cat parasite danger

BRUSH-tailed rock wallabies used to live along the river cliffs near Campbelltown but have not been seen for many years.

Humans had a hand in their decline, with several hundred rock wallabies shot for the fur-trade.

Records of the Picton markets show that several hundred were killed between 1905-1911.

However, with a little luck some may still survive along the Nepean River.

Over the past four years, Robert has been interested in a family group of these wallabies that has survived at Kangaroo Valley and visits a home on the cliffs above the river.

The local residents have been recording the number of joeys that were born to the two adult females in the group and how many survive.

So far, only three of 12 have survived the hazardous period, shortly after leaving the pouch, when the mother leaves

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them in caves, returning occasionally to suckle.

The youngsters at that time are very vulnerable to foxes, cats and pythons.

Of the three survivors, only one remained to breed!

Recently, the adult male appeared unwell for a few days, then disappeared.

Robert scoured the cliff-line and eventually found the carcass.

Anxious to find the cause of death, he took the carcass to the Elizabeth Macarthur Agricultural Institute in Camden, where Dr Tony Ross conducted a post-mortem examination.

Tony found that death was caused by heart failure.

Close inspection of the damaged heart revealed the cysts of a tiny protozoal parasite which Tony suspects is *Toxoplasma gondii*.

This parasite causes the disease toxoplasmosis which can also affect humans.

Normally, the symptoms are like a heavy flu.

Sever infections, however, can cause brain and eye damage.

The parasite has a life-cycle in which the egg-laying stage occurs in young cats.

Cats spread the eggs with their faeces (often in sand-pits and gardens) and humans consume the eggs on vegetables, from their own hands or even from dust.

We can also be infected by eating uncooked meat.

Pregnant mothers should be especially careful as the foetus is particularly vulnerable.

Here's yet another reason to keep cats from

hunting! People, particularly the immuno-compromised, should be careful to wash fruit and vegetables carefully; also wash hands after gardening and cleaning kitty litter trays.

Avoid handling kittens and strays as these are the most infective.

We now want to find out how serious an impact toxoplasmosis has had on the declining rock wallaby population.

Is it found only close to towns where the cat population is greatest?

Are all rock wallabies infected?

How serious a problem is it?

This will be another research project for Robert!

To report a koala sighting please call the University of Western Sydney Macarthur hotline on 4962 9996. To hear a male koala bellowing call 4620 3200.

Robert Close and Steven Ward.

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Martin still going!

MARTIN is still going!

One recent Sunday evening, we received a report of a koala fighting at the rear of a property in Pheasants Road, Wedderburn.

No eartags could be seen on the koala so we came out to investigate.

Because of other commitments it was quite late when we finally arrived with the catching gear.

We'd like to thank the landowner for being so tolerant of our late night visitation!

The koala's tree was perfect for a catch and Rob was soon in position.

He flagged the koala down from its perch and past him towards Steven and other catchers waiting

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on the ground. However, the koala didn't seem to be cooperating and changed direction, climbing past Rob again.

Unfortunately it was that Rob's long reach for part of the tree trunk, leaving some characteristic koala scratches!

At close range, we could see that the koala was a male and already had eartags so we decided

that catching him was unnecessary.

Checking our records, we were surprised to discover that the koala was Martin, a 5-year-old male koala caught a year earlier in another property not far away.

We estimated his age as between 8 to 10 years and noted that he had scars on his nose, ears and eyelids, his ears were tapered and he had abrasions on his heels and elbows, as if he had been doing a considerable amount of walking.

We surmised that he'd been displaced by a younger male and was now being forced into less suitable habitat.

At the time, we predicted that he would not

last long because it seemed unlikely that he would be able to compete for a good suitable territory to survive.

Obviously we were wrong, and in fact Martin looked to be in quite good condition during the recent capture attempt.

It will be fascinating to see if Martin turns up yet again in the future.

Next week we will look at koala food ageing, and discuss what happens to elderly koalas.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on 9962 9996.

To hear a male koala howling call 4020 3200.

By Steven Ward and Robert Chase

Old koalas waste away

We are all familiar with the ageing process in humans, but what happens to old koalas?

Back in the 1980s a malaise - wasting disease - in old koalas was identified by researchers.

As we have mentioned in previous columns, koalas rely on the cusps, or ridges, on their teeth to slice and grind up the eucalyptus leaves that they eat.

This is because the most nutritious part of the leaf is inside a plant's cells, but each cell is protected by a thick wall.

If you compare a eucalypt leaf to those of a broad-leaved indoor plant, or even a lettuce leaf, you will find that eucalypt leaves are hard and tough, whereas the lettuce or

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indoor plant leaves will be much more spongy and fleshy.

The hardness of the eucalypt leaves is due to their thick wall cells, which effectively make them as nutritious as cardboard, but for the contents of the cells themselves.

Breaking open these cells to get to the nutritious contents is what allows a koala to survive.

However as koalas get older, all that chewing on the tough leaves slowly wears down their teeth.

Once the koalas are 10-15 years old, the ridges on their molar teeth are often worn smooth and they have to work much harder to crush the leaves.

These ageing koalas will face a continuing battle to get enough nutrients to survive. The result is wasting disease.

With less energy available to them, these elderly koalas often will not be able to fight off infections, or they may simply waste away.

Ironically these animals may perish due to starvation, despite having a full stomach of uncrushed leaves.

The old male Martin, that visited a Wedderburn family recently, is on the path to wasting disease.

His teeth are worn, but not critically - yet.

Nevertheless, his weight would be less than a young female and he would be unlikely to win a fight.

We suspect that he's been pushed out of the breeding area into a retirement area where he will have to use vital energy to survive.

Call the University of Western Sydney Macarthur hotline on 9962 9996 if you spot a koala.

Call 4620 8200 to hear a male koala bellowing.

By Steven Ward and Robert Close

Gary returns

It must be the time for old friends to reappear!

Steve recently celebrated a half century's koala sighting in Keweenaw and easily found the koala thanks to the accurate directions from those reporting the sighting.

It was dark by the time Steve arrived but he found the colour of the tail in the left ear showed up clearly in the spotlight beam, but the right ear was much more difficult.

Whenever Steven would look from behind the koala it would turn its head to the left and when he went to the left hand side the koala would look straight ahead.

No matter how much Steven tried, the koala outwitted him.

To get around the koala's reluctance to reveal its identity Steven put up one of the climbing ladders in a nearby tree, ascended with a spotlight and was finally able to clearly see both the koala's ears.

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When we checked our records we were excited to find out that the koala was Gary, whom we were radio tracking one and a half years ago.

However a fire passed through the area Gary was using at the time and we lost contact.

Over the next few weeks we occasionally picked up weak signals in the Georges River Gully but were prevented from following them up because of small snowdrifts in the area.

Although small fires could have quickly swept up into the track area,

bushfires, so to trek through the bush wouldn't have been wise.

Gary had an collar when Steve found him again so, presumably he lost his whilst walking through thick underbrush in the Georges River gully after the fire.

This could explain why we couldn't pick up any signal for Gary later as radio signal wasn't strong to get out of the deep gully and be picked up by our receiver.

It's great to see Gary again, and perhaps he'll excite some more bushwalkers with his presence in the forest.

And if anyone finds a discarded radio collar, please return it to us - they cost \$260 each.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on 9962 9990.

By Steve Ward and Robert O'Keefe

Why dead animals do tell tales.

Wrong things are now

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RECENTLY Robert received a message from a former student that he had seen a dead koala near the Wilton bypass on the Picton Wollongong Road.

Unfortunately, the corpse disappeared during the same day. Robert contacted Wollondilly Shire Council to see if they might have collected the corpse, but although council officers had been notified of the accident,

uncommon for dead animals to disappear quickly. This is because roaming dogs, and possibly foxes, will drag a corpse away to a quiet spot so that they can dine in peace.

Of course, this usually means that we lose much valuable information that can be gained from a koala corpse. If we do manage to retrieve a corpse in time

we can record the sex, age, weight, condition and breeding status of the koala, which is then added to our records to help build up a profile of the koala population.

We also freeze some tissue samples that are later used for DNA analysis. The skull is also kept and these provide vital proof that koalas are in fact present in an area. So, although unfortunate,

koala corpse can still provide a large amount of information, which over time helps us to better understand the dynamics of the local koala population.

So what should you do if you see a dead koala? Well, if you can, please stop to check that it is actually a koala. It is extremely difficult to correctly identify a corpse while driving past, and we have often been

initially mistaken ourselves. This also means that even should the koala corpse disappear that you can be confident that it was a koala.

Then, please call us as soon as possible on the pager hotline. We will return your call as soon as we can to get the details. Dedicated people might want to bring the body to us. However, unless you

have a special licence, it is technically illegal to take away bodies, or even skulls, of native animals. An immediate call to us is the best thing!

To report a koala sighting, please call the University of Western Sydney Macarthur hotline on (02) 9962 9996. To hear a male koala bellowing, call 4620 3200.

- By Steven Ward and Robert Close

Burning matter must be solved

IN A recent column we mentioned that a major factor in the decline of the pygmy possum was inappropriate fire programs.

Burn-offs conducted to reduce the risk of wildfire have removed vegetation required by the pygmy possum.

For example, where we found the pygmy possum recently, we also found many heath-leaved banksias. These beautiful banksias disappear if burnt more than once every seven years.

Reducing the wildfire risk of damage to people and property while simultaneously conserving all our native species is a balancing act that is difficult to perform.

What is an appropriate burning program? This question is perhaps the most significant that can be asked by environmental managers.

To help answer this question, we will summarise the studies of Lynette McLoughlin reported in the Australian Journal of Ecology volume 23, 399-404.

She looked at historical records and reports of fires in the Sydney region and found that most Aboriginal and natural burning between 1788 and 1845 occurred from August to January. By contrast, 97 per cent of burns conducted by the NSW National Parks and Wildlife Service and Hornsby Council for bushland in northern Sydney were in April to September.

Within this period, the NPWS conducted their burns later than did the council. However, the 1996 policy for the North Metropolitan Region of NPWS is now for prescribed burning in late summer to winter.

So it appears that the current fire program, for northern Sydney at least, is burning vegetation outside the original fire season.

This change will affect the numbers and distributions of native plants and the animals

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which feed and shelter in those plants.

However, prescribed burns conducted during the August to January period would be impossible to control. What is the answer?

One answer is to limit autumn/winter burns to bushland immediately surrounding habitation and to accept that the bush will be different from what it was prior to white settlement.

That is, there will be a different group of plants and animals (both native and introduced) living there.

However, there are other ways to reduce fire risk such as removal of ground fuel and rubbish, thinning of the shrub layer, and planting of non-flammable screening vegetation.

In addition, all buildings could be separated from the bush by an expanse of cleared land. This means that people wanting to "live in the bush" have to appreciate that by doing so they will have a large effect on that bushland and the animals in it.

The other thing to remember is that once every 25 years or so, a wildfire will sweep through our bushland no matter what its burning history has been.

People living in and near the bush, have to be prepared for this.

To report a koala sighting please call the University of Western Sydney Macarthur hotline on (02) 996 29956. To hear a male koala bellowing, call 4620 3209. The Koala video is on sale for \$20 at the Macarthur Advertiser office or at Quondong.

— Robert Close and Steven Ward

Sarah's in top hands

ONE of the few koalas still being radio-tracked is Sarah, who is the daughter of Franchesca, both of whom live at Wedderburn. Sarah, who is almost four years old, had her first cub this year.

Sarah needed to be caught to fit a radio collar with a new battery and to ear tag her youngster before it left her.

We found Sarah in a beautiful angophora, also known as a smooth-barked apple. Rob climbed into position and flagged Sarah, with the cub on her back, towards Steven and a volunteer waiting at the base of the tree.

Unfortunately, Sarah encountered a large dead branch hanging in the tree as she descended. Sarah managed to slip under it, but the branch got in the cub's way and he had to climb up her back, and then over her head on to the tree.

We could not prevent the separation of Sarah and her cub. However, we soon had Sarah down from the tree and safely in the catching bag. Rob managed to flag the cub down and into a catching bag too.

We fitted Sarah with her new collar and ear tagged her youngster, who is a male. We took them for a veterinary inspection at Elizabeth Macarthur Agricultural Institute. Sarah weighed 7kg and her cub, nicknamed Elliot,

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1.8kg. Both were taken to their tree at Wedderburn.

It is interesting to note that Elliot emerged from the pouch later than the cubs of the other three female koalas being radio-tracked.

Perhaps Sarah mated later in the season last year than the other koalas or perhaps Elliot has developed more slowly because Sarah is a first-time mother.

Still, it is fantastic to know that we have seen three successive generations of koalas developing at Wedderburn!

To report a koala sighting call the University of Western Sydney Macarthur hotline on (02) 9962 9996; to hear a male koala bellowing call 4620 3200.

Merry Christmas and a happy new year to all our readers.

■ Steven Ward and Robert Close

Note:

No column published on this date

Campbelltown Macarthur Advertiser, Wednesday, December 29, 1999

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