



Mammal Survey Group of Victoria NEWSLETTER

April 2008

Next Meeting June 17th

See you at Arthur and Jess Howard's house, at 8 pm,..

Last Camp

March 21st -24th Providence Ponds

This was our eighth camp at this site, which we have monitored for New Holland mouse since '93. As with the last two camps here we caught only one juvenile female (in 269 trap nights), so numbers remain very low, but at least they are still present. We also caught 12 Agile Antechinus, 2 Eastern Pigmy Possums and as a special surprise, one White-footed Dunnart, *Sminthopsis leucopus*. We captured this species once before in 1995, about 300m away.



New Holland Mouse



White footed Dunnart

Spotting found Brushtail possums and Swamp Wallaby, with several Sugar Gliders heard. Batting was sparse with 4 captures involving 3 species: Lesser Long-eared, Goulds Wattle and Large Forest Bats .Daylight sightings included fox, rabbit, Eastern Grey Roo and Echidna diggings.



White footed Dunnart

Overall the bush seemed much healthier than the last 2 visits following good autumn rains so we hope the New Holland Mouse population will increase again, especially as burns to promote this species are planned this year

Next Camp – April 25th -27th Kings Flat Flora and Fauna reserve

This reserve is north of Cape Liptrap near Bald Hills and we will be staying on a nearby private property (see attached map).

Future camps

- May 17-18th Mittons Bridge, near St Andrews, on private property
- June 7th -9th Wychitella
- July 12th-13th Working Bee
- Aug 16th-17th Aireys Inlet



Eastern Pigmy Possum

All photos taken at camp
by Andrew Mc Cutchen and Jenny Barnett

In putting together the kangaroo article for the last newsletter. I wondered if the people that were involved in the killing of kangaroos, ever gave a thought to how unique these animals are, and do they appreciate the unusual biology of these Australian icons.

I think the kangaroo is one of our least understood marsupials, there are still a lot of people both in suburbia and the country who claim they are like the rabbits, "just bloody vermin". They usually fail to realise there is not one kangaroo, but 48 different species of kangaroo, wallaby and closely related animals; that range greatly in size and shape from rat kangaroo no bigger than a large rat, to the big red kangaroo. All are classified in the family Macropodidae. On evolutionary lines, their closest relatives are possum, koala, wombat and short and long nosed bandicoots. These animals share a similar hind foot plan, the first toe is absent or reduced, the second and third toes are fused together, the fourth is the largest and each toe bears a claw. Similarly kangaroos, possums, koalas and wombats share similar tooth structures; they have a single pair of long incisor teeth on the lower jaw, and three pairs on the upper jaw. As far as I know, no kangaroo fossils have been discovered outside Australia.

The kangaroos occupy the ecological niches that antelopes, deer and other large herbivorous mammals occupy in Asia, Africa and the Americas. Our five big macropod species are predominantly grass eaters. The **red kangaroo**-*Megaleia rufa*- stands nearly 2metres in height, it's the worlds largest living marsupial. The female has a long parent-young relationship with her joey spending 195days in the pouch and remaining with the mother for another 16months. It occurs in all inland regions, they are essentially an arid country species. **Eastern grey kangaroo**-*Macropus giganteus*- Although it is found in a wide range of environments, it seems to prefer woodland and savannah, interspersed with timber belts, where it camps during the day. Its parent-young relationship of 250 days is the longest period of time that the joey uses the pouch; it then stays with the mother for over 16months. The **western grey kangaroo**- *Macrops fuliginosus*. Generally it lives in areas of lower rainfall than the eastern grey, although throughout most of its range it overlaps with the red kangaroo. The **common wallaroo**-*Macropus robustus*, is smaller, stockier and shaggier than the others, it is wide spread through the rocky outcrops and stony grasslands along the Great Dividing Range. The **antilopine wallaroo**-*Macropus antilopinus*, is found in the open forests and savannah woodlands, around the rocky escarpments at the top end of Australia.

The way macropods propel themselves through the environment really defies all accepted laws of locomotion, and their movement is almost as efficient as that of animals that fly. The only mammal more athletic than a kangaroo is a horse. Humans are regarded as not particularly efficient in terms of energy cost at speed; in fact, on energy versus speed they are midway between rats and dogs. Science defines hopping as two legs moving together and the macropod family is the only group of large mammals that is known to have ever hopped. When kangaroos bound they are able to recover up to 50 per cent of the energy used for one stride and use it for the next. This method is so efficient that a large kangaroo can travel with five-metre bounds for kilometres on end at 45kmh, faster than the world's best sprinters can muster over 100metres. When other mammals increase their speed, they immediately begin to use up extra energy. But kangaroos continue to accelerate and their energy consumption levels out, giving them stamina that is matched only by horses. When chased they can reach 64 kpm hopping 120 times a minute.

All the macropods have an amazing ability to change the fat protein and carbohydrate levels in their milk; kangaroo females perform this miracle on the hop so to speak, always keeping pace with the changing metabolic requirements of the pouch young, as they develop from tiny naked newborns into furry, well-insulated juveniles ready to make their first forays into the outside world and become vegetarians. An even more remarkable feat is that the female macropods in general, can simultaneously produce two different types of milk from adjacent nipples, one type for a newborn, and another for an almost independent juvenile. The macropod mother's secret is the hormone prolaction activates as a single genetic switch that turns on milk synthesis. Thereafter the intensity of sucking that varies with the young joey's stage of development fine-tunes the special milk cocktail.

ARTHUR HOWARD



MEETINGS: 2ND or 3RD Tuesday of Feb, April, June, August, October
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