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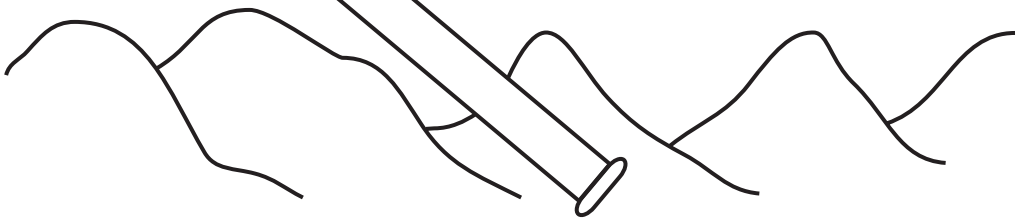

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WALLYS STORY

This is a story of Wally Mounser, one of the lucky people of our age

It is now ten years since I "retired", that was a change from working 8 hours a day, five days a week to working 24 hours a day 7 days a week. I still consider myself fortunate because my new job was engineer on the "Endeavour" replica, this is the replica of Captain Cook's ship which was built in Fremantle and launched in 1993, not to be confused with the "Young Endeavour". The ship took me all around the world, to some big cities and to very remote places. Her role as a floating museum meant that we frequently spent ten or more days in each port. That gave the crew plenty of time to go sightseeing and in my case bushwalking. She returned to Australia in June 2000 by which time I had had enough of being away from home so I resigned and settled back in Hobart. The events in the story below are a sequel to the world voyage.

Since June 2001 I have been back at sea on the "Endeavour". It seems that after I left the ship last year the Captain had a very difficult time trying to find a replacement engineer. I can't understand why but there was just a run of no-hopers! So, back in June Robyn and I agreed to join the ship at Mooloolaba, just near Brisbane, for six weeks. The idea was that I was to be on board to mentor a fellow who had a knowledge of diesel engines but no marine ticket. Well we had a nice sail in the warm and pleasant waters of the Barrier Reef but the bloke was not able to get any qualification.

Following that trip the Endeavour was chartered by the BBC to make a series of "reality TV" programs in which the crew were expected to endure the rigors of shipboard life as experienced by Captain Cook and his crew. As part of the preparation of the ship for this I was contracted to modify the dummy galley stove so that it could be used to cook 18th century style food using wood as fuel. The charter was to start from Cairns and last for six weeks while the ship sailed (no engines allowed) to Jakarta following the route taken by Cook in 1770. We were told that there would be rigid discipline, every one would have to play a role as a member of Cook's crew. There would only be salt beef and ship's biscuit to eat, no fresh water for washing, use the "heads" on the bow of the ship as a toilet and so on.

Rob and I traveled back to Cairns in August, after a brief trip home. Robyn enjoyed a holiday for two weeks while I supervised the modification to the stove. After satisfying the maritime safety authorities that the ship would not be set on fire or blown up the job was relatively easy. My experience with steam boat boilers was a big help. Meanwhile no engineer had been

found for the ship so, being soft hearted, I agreed to do the trip.

By the end of August every thing was ready, the ship was stored with salt beef, salt pork, ships biscuit (harder than the proverbial rocks) dried fish (it smelled so bad it was thrown away) oatmeal, dried peas and lots of sauerkraut. Also on board were a nanny goat, six hens and an assortment of ancient navigational instruments. Two cabins were filled with the film crew s equipment including a full pallet of boxes of video tape.

The ship had its regular permanent crew, 15 of us. There were six BBC staff including the three man film crew. In addition to this the BBC had recruited two botanists, from Kew Gardens in London. There were three "navigators" who were to plot the ship's course using the charts and technology available to Cook (the real navigation was done using modern equipment). There were also six historians whose role was unclear to me but they seemed to be away with the fairies for most of the time. The remainder of the 56 persons on board were selected by the BBC from all over the English speaking world, we had a Police prosecutor from Oklahoma, two Maori people, four Royal Navy personnel, a Negro TV producer from New York and an assortment of others, both men and women.

We sailed from Cairns on 24 August and when we got to Cooktown, two days later, we had our first desertion. By the time the ship had left Australian waters seven people had left, two of these were medical evacuation, I believe only one of them was genuinely sick. There were about ten of the remaining people who really entered into the spirit of the project, they enjoyed themselves and made themselves useful as crew members. The rest spent the voyage whingeing about the food, the lack of fresh water and the work they tried to dodge whenever possible. I was a bit disappointed in that the management kept giving in to their demands to relax the restrictions on fresh water use, the use of toilets below and the access to areas of the ship which would have been out of bounds to Cook s crew. The film crew worked tirelessly day and night recording every aspect of the trip (except the engineering, media people always ignore the engineer until they need something fixed). They told me that it will be edited into six one hour programs to be released in September next year.

We followed Cook s route up through the Barrier Reef, into Torres Strait and then across to the island of Savu, an Indonesian island just west of Timor. It is an out of the way place and our visit there was the event of the decade for them. Schools were closed so that the kids could practice their English on our crew when we went ashore. People were amazingly friendly and the visit was one of the highlights of the trip for me. Cook went there for fresh food, we did not find much in the market but some of the crew managed to find and smuggle aboard some very potent spirit made from palm juice. The Endeavour is normally a dry ship but she was very wet on one late night!

We had planned to finish the journey at Jakarta (once called Batavia) where Cook had gone to repair his ship after the grounding on the Barrier Reef. However, following the events of Sept 11 in the USA news came to us of anti US demonstrations in Jakarta. It was decided to divert to Bali, which is part of Indonesia but has a predominantly Hindu population. That was a very popular decision. Not only was it a nicer place to spend five days but it was a lot closer. We had sailed very slowly since the wind was very gentle (a good strong blow would have woken some of the grumblers up to how easy they were having it) and we were becalmed for days at a time. We certainly would have needed the engines to get to Jakarta on time.

I had a couple of days leave in Bali, the highlight was a mountain bike ride of 25 km visiting traditional gardens, temples and homes. The journey back to Darwin was motoring all the way, what wind there was was in the wrong direction for sailing and we had only a few crew on board. We had all lost weight while eating the 18th Century food, we put it back while travelling back to Darwin.

Once back in Darwin the problem of a relief engineer still had not been resolved and I was asked to stay on for a further three weeks while the ship did a tour of aboriginal settlements in Arnhem land. This had been organised and partly paid for by the Northern Territory government as part of the reconciliation process (a bit of a political football in Australia these days). Our itinerary took us to three settlements and two mining towns as well as the site of Victoria settlement, established in 1838 as a token occupation of the country to deter French or Dutch settlement. It lasted for 11 years and must have been a real misery village, hot dry and terribly isolated. At the aboriginal settlements the kids all came aboard to inspect the ship but the adults did not show a great deal of interest. At this time of the year the climate is building up for the start of the monsoon, it is hot, 35 degrees and humid. It was the first time I had experienced sweating copiously while asleep in my bunk. The engine room temperature was about 50 degrees and working in there was like a sauna.

I signed off on Darwin and drove with Robyn to visit friends and family in Adelaide.

The Mt Brown re-enactment walk - a surreal start
by Mark Darter

Silently drifting away from a pirate ship silhouetted against the Milky Way isn't the usual start to a Flinders Ranges bushwalk. The experience was surreal, but very true.

At some time that I didn't record (but after our 3.30am wake up call), I was in the second of three landing parties. Spencer Gulf was flat, the temperature mild, and our surroundings silent. Going ashore in a dinghy was historically authentic only to a point - ours was rubber, inflatable, and powered by an outboard motor that cut out - hence us drifting away. Our dinghy operator used the authentic oars out of necessity, but we were rowing away from Mt Brown, and back to the "Enterprize"! The rigging stood out against the dark sky and white stars, and a few on-board lights gave the ship an eerie aura. It was impossible to convince myself that I was in these unfamiliar surroundings.

The fuel line coupling was fixed, and we motored towards the shore. Graeme Oats's advance party guided us in with torchlight flashes - very clandestine. Our Encounter 2002 re-enactment now became more of a D-Day 1944 re-enactment. The shallow water meant us leaving the dinghy and wading in a few hundred metres, carrying rucksacks, to rendezvous with Graeme's party.

Mt Brown stood out in silhouette to the north-east. It was obvious where we were to head, but not so obvious where we were now. While the third party was brought ashore, we fixed our location in the vicinity of Red Cliff Point.

After more clandestine strobe signals and acknowledging headlight flashes, Alun Thomas drove the mini-bus towards us. A short drive around a marshy area, and at 6.33am the "real" walk was starting. Mt Brown was 25km away, (as the crow flies), and its broad pyramid profile became more obvious as first light dawned behind it. A meteorite, or perhaps falling space junk, provided a colourful show in the pre-dawn sky.

With enough light to see, and a fast pace developing in our group, my perceptions changed. I was now in the familiar role of being in a bushwalking group (or at least a marsh and paddock walking group), and the pre-dawn activities seemed like a dream.

The day was a long one. Ten hours later (4.35pm), my fragment of the group summited the 970m peak. Fragmented further, we reached the bus on the plain at 6.40pm. It would be another couple of hours before we were in Port Augusta, let alone showered and fed.

An exhausting day, and really quite a strange one. Knowing that we were doing this 200 years to the day that a group from the "Investigator" had done this, and having been guests of honour at the summit made it quite incomprehensible for me.

I'm checking my bushwalking journal as I write this. It was an experience that can never be recreated, and my journal shall remind me in years to come that the weirdest of starts to a bushwalk really did happen.

MINNAWARRA PROJECT

The next Minnawarra Bio-diversity Survey will take place in late October. The actual date will be set soon. Please contact Richard Willing.

Eight sites have been set up and the mammal traps will be open for 4 days and nights. The trap lines are visited twice daily to record and release mammals and reptiles. During the days surveys of birds and vegetation will be undertaken. Last spring 125 mammals were trapped. Volunteers to help set up the traps and to close the traplines would be appreciated.

Please make contact as soon as possible and indicate:

1. Your interest in these few days
2. Your availability – which days can you come? Can you help set up or close the traplines?
3. Transport – will you bring a car? Can you transport anybody else? More details including map will be provided later. It may be possible to meet a bus in Myponga, depending on the day and time.

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Gammon Ranges Data Recovery Trip
10th 14th Jul 2002 (Wednesday - Sunday)

Leader Graham Blair
Expeditioners Stuart Austin and Sam Dalton

Wednesday 10th
We departed Adelaide at 5:30 a.m. Following a fuel stop at Leigh Creek it was noticed the alternator light was remaining on. The vehicle was checked out in Copley where it was confirmed the alternator had failed. As the earliest a new unit could arrive from Adelaide would be the next morning, so the night was spent at the Copley Caravan Park.

Thursday 11th
The alternator was fixed by 10:30 am. Before heading to Arcoona Creek car park, a side trip was made to Balcanoona (Gammon Ranges NP headquarters) to present Cathy Zwick, who is about to transfer to Ceduna, with a gift in recognition for her positive support of the Gammon Ranges Scientific Program. Arcoona Creek car park was reached at 2pm. After setting up camp, the level and rainfall recorders were visited. No flow had occurred over the preceding three months and the pool was dry. Problems were encountered with the exchange HS logger, so it was not installed. A masonry anchor was placed into the rock above the transducer and a bolt inserted, so that the pool level can be measured to a fixed point on future visits. The Exclusion Zone pluvio was visited.

Friday 12th
Fox bait was laid along Arcoona Creek between the car park and Vandenberg Camp including the detour to the Arcoona South Pluvio. No surface water was observed anywhere along the length of Arcoona Creek. The Arcoona South pluvio visit was hampered by a faulty communication lead preventing the usual visit procedure to be carried out on the SDS logger consequently the data module was not replaced. The cable problem was partly solved during the visit to the Sambot pluvio where it was determined that the fault was due to a poor electrical connection within the cable. The night was spent at Vandenberg Camp.

Saturday 13th
An early start was made, proceeding up the western flank of North Tusk Hill to the summit and then on to the plateau pluvio. An improvised solution was found for the lead problem that plagued logger visits on the previous day. Following successful logger maintenance, the return trip was made to Vandenberg Camp in light rain. After hastily packing wet tents, an energetic walk took place back to the car park where the campsite was re-established. The rain ceased shortly after dark.

Sunday 14th
The group departed the Gammon Ranges NP at 08:30am. After a bakery stop at Copley, and a fuel stop at Leigh Creek an uneventful return trip was made to Adelaide.

A WEBSITE FOR SEG
ALUN THOMAS

SEG has been given an opportunity to have a website constructed for it by students of the University of South Australia as part of a project which is an initiative of the Government of South Australia to promote the web presence of community groups.

I have been appointed as Webmaster and in conjunction with our allocated student over the next few months we will design and build the site.

Members will have access to the site to get details of upcoming projects, to read past editions of SEGments and to get other information on SEG. The site will of course be open to the public so it will give us a valuable tool to advertise projects and to inform potential participants of the requirements for attendance on expeditions.

The important thing is to get our content as useful, attractive and informative as possible. This is where I am relying on as much assistance as possible. I would be grateful if members would supply me with documents, photographs, items of interest and notice of upcoming events to be included in the site. Where possible I am happy to acknowledge sources of material. Please send information to my email address athomas6@bigpond.net.au if in electronic form or by mail to my address given on the back page of this issue.

As soon as the site is approved the site will be hosted by the Community Webs project and I will advertise the address in SEGments. Feedback will be welcome at all times.

Things my mother never told me...

Never take life seriously. Nobody gets out alive anyway.
No guts, no glory, no brain, same story.
There are three kinds of people -- those who can count and those who can't.

A Reconstruction of Mulga Regeneration

Robert Henzell

Introduction

Australia's rangeland vegetation has shown itself to be poorly adapted to the grazing pressures exerted by large numbers of exotic herbivores, which include wild rabbits and a variety of domestic species, such as sheep, cattle, goats, donkeys, camels and brumbies. Some of the domestic species have established feral populations. Grazing by exotic herbivores at historically high grazing pressures has often reduced overall plant biomass, and has selected for plants that are unpalatable or ephemeral. The perennial vegetation in particular has suffered. Exotic herbivores have suppressed the regeneration of many palatable trees and shrubs, threatening their long term survival. Unless regeneration can be restored, some of these species will disappear from the landscape as the existing mature specimens die. However, compared with short-lived plants, trees and shrubs contribute disproportionately to landscape and ecosystem stability in the semi-arid and arid zones because of their perennial nature and drought resistance: they are still there during a drought to stabilise the soil and provide forage for domestic and native fauna. Their loss will therefore have a major effect on ecosystem stability and resilience.

The changes that have accompanied European settlement have accelerated soil erosion in some areas, both as a result of a reduced vegetation cover and the disruptive effect of the new herbivores' hard feet on the soil surface. Increased soil erosion often reduces plant production by increasing runoff and reducing soil fertility, and this, combined with a shift to less palatable or more ephemeral vegetation, has greatly effected the native fauna. Aquatic biota have not escaped, as natural waterholes became polluted and hydrological regimes changed. In the Gammon Ranges the main herbivores responsible for this state of affairs include rabbits, sheep, and feral goats. Native herbivores such as euros probably play little part in this process as they have co-existed with regenerating trees and shrubs for millions of years prior to the arrival of exotic herbivores.

The changes in the rangelands that began with European settlement will eventually result in radically different landscapes unless we manage these areas better. However, we need to understand the processes involved in these changes before we can influence them.

The original 1977 exclusion zones

In 1977, the Animal and Plant Control Commission and other government land management agencies set up several sets of fenced exclusion zones in the northern Flinders Ranges, close to Arcoona Bluff in the Gammon Ranges National Park, to evaluate the effects of rabbits and feral goats on the growth and regeneration of arid zone perennial vegetation. The aim was to see which was the more influential of these two pests, and to establish the threshold densities to which goat and rabbit densities must be reduced before regeneration could occur. Several species of palatable perennial trees and shrubs occur in the area, but the following account focuses on mulga (Acacia aneura).

We included an experimental treatment to allow us to separate the effects of rabbits from those of goats. Each treatment plot is 25 metres square.

When we arrived at the site in 1977:

* The ground was almost bare (1977 was a very dry year), and most of the ground layer of vegetation had either been eaten or had died and been blown away;
* Several stands of mature mulga were present, and were included in two sets of exclusion zones;
* There were scattered groups of young mulga, mostly less than 50 cm high; and
* Many of the young mulga had extensive overlapping layers of ringbarking and bark regrowth in addition to stem severing. These were characteristic of damage by rabbits (not goats), suggesting they had been attacked during each of a series of severe rabbit plagues.

We surmised that the young mulga had probably germinated in the two exceptionally wet years of 1973-1974. At the time, this supposition was not unreasonable: (1) mulga seedlings could have grown this fast (based on evidence from other areas); and (2) these two years were the wettest in the last 100 and could have produced such an apparently exceptional germination event, followed by rapid growth, together with one or more rabbit plagues.

From the lack of any mulgas of intermediate size between the juveniles (mostly less than 0.5 metres high) and the adults (mostly over 3 metres tall), it appeared that there had been a period when no regeneration had occurred, but that this barrier might have been overcome in 1973-74.

With the wisdom of hindsight, what is the story as we now understand it? Since 1977 we have mapped seedlings when they germinated, and followed their subsequent growth. It is now clear that we grossly underestimated the age of the young mulga that were present in 1977. One seedling which germinated in 1984 is now only about 1 metre high, and it has not been exposed to the episodes of severe rabbit damage and growth checks that its predecessors suffered. Others that have come up tell the same story: growth of mulga in this environment is very slow. Using a much lower estimate of growth rate, and allowing for growth before 1981 being slower than afterwards (for reasons explained below), the most likely germination date for the young mulga present in 1977 is the mid-1950s, corresponding to the arrival at Arcoona Bluff of myxomatosis. Myxomatosis would have devastated rabbit populations in the area at that time (as it did elsewhere). Rainfall records from nearby stations reveal that there were several wet summers at that time which would also have germinated mulga seed. Wet summers were rarer in the decades immediately preceding or following the mid to late 1950s.

This conclusion allows us to put together the first pieces of the jigsaw puzzle. We have one group of mulgas that probably germinated in the 1950s, but the next oldest group of mulgas present in 1977 were mature trees. These probably germinated before rabbits arrived in the area in the 1880s. So there was probably no successful mulga regeneration between the 1880s and the 1950s. Rabbits can be blamed for this as sheep were probably not grazed regularly in this area even prior to its dedication as a National Park, and feral goats probably did not become numerous until the 1970s.

In the years following the 1950s, rabbit populations at Arcoona Bluff would have partially recovered from myxomatosis, as they did elsewhere. This would have prevented any further successful regeneration of mulga, and completely wiped out the seedlings that must have germinated in 1973 and 1974.

A prolific germination event followed 120 mm of rain falling over five consecutive days in February 1979. Many mulga seedlings survived in areas protected from rabbits by our exclusion zones, but in accessible areas virtually all of them were wiped out by the 1980/81 rabbit plague (the sole survivor outside the fenced areas was protected from rabbits by a tangle of fallen mulga branches). Rabbits reached a density of about 450 per square kilometre during this plague.

The results from the exclusion zones show that survival of the 1979 cohort of seedlings in fenced areas protected from goats but accessible to rabbits was very slightly better than in areas accessible to both goats and rabbits. In the former areas other low growing vegetation protected a few of the seedlings from rabbits, and the slight improvement in seedling survival possibly results from this protection rather than the absence of any direct effect of goat grazing on seedlings. Outside the fenced areas most of this protective vegetation is removed by goats and euros, thereby exposing the seedlings to rabbit grazing.

In one fenced area protected from both goats and rabbits, 50 of the seedlings which germinated in 1979 are still alive, and these are more than enough to replace the mature mulgas that have died. About half the mature mulgas present in 1977 have since died.

The next significant event at Arcoona Bluff was the introduction of the European rabbit flea, a vector for myxomatosis. This was first released in Australia in 1969, but we know from samples of shot rabbits that it was absent from this area in late 1981 but was present about four kilometres away. It probably reached the exclusion zones a year or two afterwards. The flea rejuvenated myxomatosis, and the rabbit plague of 1980/81 was the last we have seen at Arcoona Bluff. (These conclusions are supported by dung counts - see Fig. 1 - and by the absence of any further severe ringbarking events since 1981.)

Germinations of mulga also occurred in this area in January 1984 and March 1989. A few seedlings exposed to rabbits survived, but not enough to replace the mature mulgas that have died since 1977.

This led to the question: how low do we need to get rabbit numbers before mulga can regenerate successfully? It is generally thought that rabbit numbers have to be reduced to below 1 to every one or two hectares (50 - 100 per square kilometre) for perennial trees and shrubs to regenerate. At Arcoona Bluff we were already at the lower end of that supposed threshold (one rabbit to two hectares), without significant regeneration.

SEG's 1996 exclusion zones

The project was expanded in 1996 in order to establish additional exclusion zones in areas of very low rabbit density. In July, with the help of volunteers from the Scientific Expedition Group and the loan of a helicopter from SANTOS to ferry fencing materials, we erected four more small exclusion zones in patches of mulga close to Arcoona Creek but further upstream from Arcoona Bluff. Preliminary surveys indicated that rabbit numbers were lower at these sites than at Arcoona Bluff, and we hoped that they would provide an opportunity to measure the threshold density of rabbits for mulga regeneration.

The next significant event was the introduction of rabbit haemorrhagic disease (RHD). RHD escaped from quarantine on Wardang Island in 1995, and probably reached Arcoona Creek in 1996. It resulted in a major reduction in rabbit numbers to about one rabbit to ten hectares (ten per square kilometre) at the original (downstream) exclusion zone site at Arcoona Bluff, and numbers still have not recovered to pre-RHD levels.

More mulga regeneration occurred in February 1997, in response to the rainfall event that flooded the area around Yunta. Once again, at the original Arcoona Bluff site the seedlings were nearly all removed by rabbits, albeit at a slightly slower rate than previously. And at the four new, upstream sites, where rabbits were now at densities below one per square kilometre, they still removed half the mulga seedlings. It is too early to tell if those that remain will be enough to replace the mature mulga that are dying.

Over the last 25 years we have observed the survival of mulga seedlings exposed to rabbit densities ranging from about 1 per square kilometre to 450 per square kilometre. The conclusions drawn from these observations highlight the mortality levels expected at the lowest three of the rabbit densities for which we have data. At 450 rabbits per square kilometre the 1980/81 plague the proportion of seedlings eaten was very close to 1.0. Only at the extreme lower end of this density range has the effect of rabbit grazing on seedling survival fallen to a level sufficiently low for there to be some prospect of successful regeneration. At moderate to high rabbit densities, even major reductions in rabbit numbers will produce only minor benefits for regeneration.

Rabbits and feral goats have both grazed the juvenile mulga. This has been apparent visually and can also be inferred statistically from correlations between year-to-year variations in quantitative measurements of damage to the juvenile mulga and from variations in annual rates of dung deposition by rabbits, feral goats and euros. The rabbit plague of 1980/81

probably caused the high level of damage that occurred then, and similarly the high numbers of goats present in 1990/91 probably caused the damage that occurred at that time. Euros cannot be shown to have any effect on juvenile mulga. Grazing by rabbits and feral goats does not appear to have killed many (if any) of the juveniles.

What are the main lessons in this story?

(1) Long-term experiments can have great value. In effect, because the project has been allowed to run for 25 years, we have been able to develop an understanding of the vegetation dynamics in this area, and how this relates to the main vertebrate pests, that extends for over 120 years.

(2) The foregoing description of the relationship between rabbits and the population dynamics of mulga applies also to a wide range of other arid zone trees and shrubs. The different elements of the story vary according to the palatability of the plant species, its growth rate, mature size, and the longevity of the plant and of its seed, but the general principles remain the same. Other examples at Arcoona Creek are bullock bush (Alectryon oleifolium), quandong (Santalum acuminatum), sandalwood (Santalum spicatum), native honeysuckle (Eremophila alternifolia), and native apricot (Pittosporum phylliraeoides).

(3) Mulga seedlings are very sensitive to grazing but once they have established themselves they appear to be quite resistant (unless grazing is heavier than we have so far seen at Arcoona Bluff).

(4) Each additional layer of biological control has brought benefits in terms of lower rabbit numbers. This has resulted in major benefits for pasture production, but the benefits for rangeland stability and palatable trees and shrubs have been less pronounced.

(5) Mulga regeneration has benefited only modestly from the biological control of rabbits, and we still have some way to go with rabbit control in arid areas. We are probably getting close to where we need to be if we can reduce rabbit numbers to one per square kilometre.

(6) There is no way that pastoralists will be able to use conventional means (poisoning, and warren ripping and fumigation) to control rabbits at densities of one or less per square kilometre. The rabbits are never seen, and we cannot find their warrens. We only know they are there because of the occasional dung pellet they leave behind, and because of their characteristic effects on vegetation.

(7) The only solution to the consequences of seedling predation by rabbits is more layers of biological control. If we can achieve this, there is a chance we will eventually be able to win the war against the rabbit.

The next time you visit Arcoona Creek and look at the mulgas there, you will know that the mature trees probably all germinated before the 1880s, that the young adults now 2 to 3 metres tall probably germinated in the 1950s under the influence of myxomatosis, and that juveniles under 1 metre tall probably germinated after 1980 under the renewed influence of myxomatosis and (after 1995) of RHD.

WHAT, NO POSTS ?

John Love

Wire was expensive because it had to be brought all the way from Adelaide. Native pine was cheap and abundant - the obvious material for a sheep yard, however, the yard at Witolcra, on Warraweena station, was not the usual post and rail construction. There were no posts.

A rectangular enclosure can be made by laying two logs parallel on the ground, a suitable distance apart, then resting two more logs on these, at right angles to the first pair, and continuing this process until the desired height has been achieved. The size of the enclosure is limited by the length of the logs. There is a series of six such enclosures at Witolcra, averaging 0.7 by 2.0 metres. Some, perhaps all, of the logs were mortised to make them fit together without rolling away. The logs appear to be held together by their own weight, without nails, pegs or wire.

The structure of the pens is straightforward enough but to make a large yard without posts required some ingenuity. The long logs forming the fence were supported by short logs, about 40cm long, at right angles to them. The fence would have run north for about 3m, then west for about 20cm, north for another 3m, then east for 20cm, then north again and so on. The Macquarie Dictionary calls this kind of structure a 'chock-and-log fence' and even gives an illustration of it.

Native pine is straight and very durable - ideal for this kind of fencing. The small pens are still more or less intact. However, a line of fencing of this kind is less stable, and most of it has fallen down and rotted away, leaving enough to trace its outline. The whole structure is probably more than a century old.

Keith Nicholls, former lease holder of Warraweena, said lambs were put in the pens, which were covered with boughs during the day to keep out predators, while the shepherd took his flock out to feed. At night all the sheep were yarded to protect them from dingos, and the lambs would then be released to join their dams. The shepherd's hut was built beside the yard, on level ground near the pens, so no doubt the shepherd's wife, if he had one, would have kept an eye on the lambs during the day.

To a person with not much experience of sheep, there are puzzles. The total area of the pens is about 8.4 square metres. How many lambs per square metre? If the answer is ten, there would be 80 - 90 lambs. One ewe per lamb, plus a few with unsuccessful pregnancies, makes a small flock. The whole yard was about 118 by 61 metres: 7198 square metres, or nearly two acres. The ewes would need to spread out so that they and their lambs could find each other but, even so, the yard seems to be bigger than necessary. Were the wethers herded with the ewes?

As boys, my friends and I used to make little pens with matches. We called them pig sties. I have always thought this was a figment of our imagination but perhaps it was an echo of a forgotten method of making pig pens.I would be interested to hear from anyone who knows more about sheep and sheep yards - and pig sties.

Mount Brown Re-enactment
Lisette Flinders-Petrie

The Mount Brown trek remains one the greatest highlights in my memory of our trip to SA, equalled I think only by one of the last events, the voyage to Memory Cove using Flinders' replica chart to navigate.

I am so grateful that we were privileged to take part, and only regret that my tendency to vertigo (and fear that you would all be enormously fit and leave me standing) meant that I didn't have the nerve complete the whole of the reenactment walk. (Though I don't think Rachel would agree - she was only too glad of the 4WD option!). I would like to thank SEG for the idea of reenacting the walk and for the excellent organisation and collaboration with Encounter 2002 and the Royal Geographical Society of SA, and I would specially like to thank Graeme Oats who, apart from his great role in organising the walk, looked after us so tirelessly during that part of the trip when we were desperately disorientated and jet lagged.

The jet lag probably meant that the 4.30 am start was more painless for us! Climbing off the Enterprize into the dinghy and watching the lights and (comparative) comfort of the ship shrink away into the distant darkness was an extraordinary moment, giving I think some slight feel for voyaging into the unknown. And for me the country was all very alien, not looking like England at all; although the Investigator had not made very many landfalls by that point in the voyage, I was probably even less familiar with the local landscape and wildlife than the walkers on the original Mount Brown expedition 200 years ago. For a 21st century European walker, it also felt very purposeful and liberating to have the opportunity to walk in a straight line, thanks to permissions to stray from public rights of way and follow Robert Brown's route, despite the seemingly large number of barbed wire fences, pipelines, roads etc that have appeared in two centuries. As we emerged into the dawn light, the spectacular double shooting star seemed (unscientifically!) to be a good omen for the walk. At the time I assumed it was just a piece of space junk, magnificent nevertheless, but only a couple of weeks ago I observed a very similar one here in England as part of the Perseid meteor shower, so I like to think it could have been natural. It was a great experience to be walking across the coastal plain (though how Brown and Flinders judged it to be only 5 miles I don't know) with such knowledgeable companions, and I felt that by the time I left the walking party - all too soon - I had begun to get some slight feeling for what that part of the world is like. I was sorely tempted to stay with the walk and head up Mount Brown from the south, but the day was beginning to heat up by then and there was still the question of the steep shaly part of the ascent, so regretfully I decided to stick with the sensible option and climbed into Erik's Encounter 2002 air conditioned car to be whisked off to the celebrations at Woolshed Flat, where I arrived, covered in mud from wading ashore, to be seated among the VIPs!

Well, I did enjoy the gentle gradient, shaded trail walk up the north side of the mountain, and was so glad to see you all when you arrived at the summit as well. I wish I could take part in more SEG events, but sadly it's a very long way to come. Since getting home I have greatly enjoyed reading Josephine Flood's Archaeology of the Dreamtime, which Keryn recommended to me, and Rachel is now talking of starting a degree in Earth Sciences, so maybe she will be back. Thanks to everyone both on the walk and behind the scenes for doing so much to make the start of our trip so interesting and enjoyable.

Things my mother never told me.. . continued..

If quitters never win, and winners never quit, then who is the fool who said "Quit while you're ahead"?
If you don't die from it -- it is healthy?

KID'S CORNER

This edition's puzzle has Australian animals and birds hidden in all directio ns.

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

WORD LIST

BILBY
BOWERBIRD
CASSOWARY
CUSCUS
DINGO
DUGONG
DUNNART
ECHIDNA
EMU
GOANNA
KANGAROO
KOALA
LYREBIRD
MAGPIE
NUMBAT
PLATYPUS
QUOLL
ROSELLA

EDITORIAL

I am pleased to announce that at last the Scientific Expedition Group is joining the electronic age. We are currently developing a website under the auspices of the Community Webs Project as described in the article on page 4 of this issue.

As editor I will have editorial access to the website so that I will be able to post information for that access of members and others on a much more regular basis than has been possible using the quarterly publication of SEGments. This does not mean that SEGments has become obsolete. It will still have an important role for the publication of article on SEG activities and other matters of interest to members of the Group. SEGments will also continue to provide access to members who have had the sense not to enter the electronic age.

I hope to be able to provide the web address in the December issue of SEGments.

Thank you to those of you who have commented favourably on the email publication of SEGments and provided addresses. I now have more than 40 email addresses and would be glad to receive more. We will have a saving in printing and postage costs. It would be useful if we could email to members interstate as postage to them is more expensive than for local members.

As this edition goes to print the final preparations are being made for Expedition Munyaroo. One again a great planning effort has been put in. I look forward to being able to report on the Expedition in later editions.

The next Minnawarra Biodiversity survey will be in late October. This is a good opportunity for members who cannot take the time to go on a major expedition to assist with a SEG project and they are lots of fun.

Alun Thomas

SCIENTIFIC EXPEDITION GROUP

The Scientific Expedition Group came into being at a public meeting on 21st August 1984. Membership is open to any persons, family or organisation interested in the following aims:

The promotion and running of expeditions of a scientific, cultural and adventurous nature.

The furthering of knowledge, understanding and appreciation of the natural environment.

Promotion of the values and philosophy of wilderness.

Enabling people to learn the skills required for planning and running expeditions, and to develop sound field techniques.

Members will receive regular information on S. E. G. activities and expeditions

SUBSCRIPTIONS (Including GST)

Working adult member - - - - - - - - - - - - - - - - $16.50
Pensioner student or unemployed - - - - - - - - - $11.00
Family membership - - - - - - - - - - - - - - - - - - $22.00
Organisation membership - - - - - - - - - - - - - - $22.00

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Address . . . . . .

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Email . . . . . .

Details of scientific, cultural, adventuring or other relevant skill or interests you may be prepared to share with the group:

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. . . . . .
. . . . . .

Applications should be addressed to : The Hon. Secretary
Scientific Expedition Group Inc.
P.O. Box 501
Unley S.A. 5061

Patron: Her Excellency, the Honourable Marjorie Jackson-Nelson, AC, CVO, MBE, Governor of South Australia

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