CSIRO RABBIT RESEARCH HUT, SNOWY PLAIN,
KOSCIUSZKO NATIONAL PARK

Report by Graham Scully, Kosciuszko Huts Association
Based on a site visit 6-8 December 2005 and interviews with some of the men who worked there between 1965 and 1980.

GPS coordinates use WGS 84 map datum

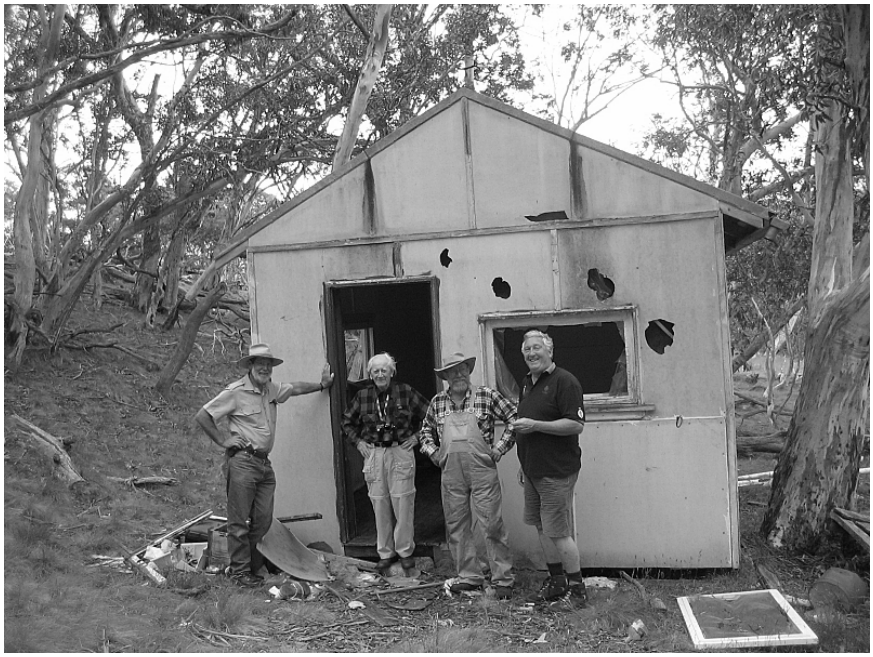
Context.
The visit to the hut and associated study area was organised to gather information on the social history of the hut to incorporate in a possible future conservation study.

Very few huts in Kosciuszko National Park were built specifically for scientific purposes .I am aware that Dr Phillips used a Snowy Mountains Authority (SMA) hut on Happy Jacks Plain for research into pine plantation growth, Commissioners hut on the Geehi was used by the Water Conservation and Conservation Commission for river gauging prior to the SMA, and that other huts were used occasionally, such as the Soil Conservation hut on Mt Carruthers by researchers such as Alec Costin and Colin Totterdell.

CSIRO personnel who had worked for various periods at the site from the mid 1960's to around 1980 were contacted and four were able to attend; Dr Peter Fullagar, researcher, Ederic Slater, photographer, Bill Price, technical assistant and Peter Haycock, technical assistant. Several others were interested but unable to attend. One of these, John Libke was interviewed in August, and extracts from this interview are included in this report.
The appendix gives a list of workers involved with a brief description of their roles.

Location.
The hut and study area are in the valley of the Gungarlin river, Kosciuszko National Park, GPS coordinates 0640149 - 5989306 for the hut and 0639546 - 5989562 for the study site and hide. The map used is Eucumbene 1:50000. There is a vestigial 4WD track from the hut to the study area of approximately 1 kilometre long and in a roughly NW direction

Chris Davey with CSIRO Landrover at hut,1960's, Chris Davey photo



L-R, Peter haycock, Ederic Slater, Bill Price and Peter Fullagar, Dec 2005, photo-G Scully

Construction.
"The hut was prefabricated by CSIRO carpenter Don Brown in 1964 with timber frame, fibro cladding and tin roof.
Clive Hale and I started work there in 1966 and I helped him mark out the grid. Bill Price started there in 1967, tagging rabbits and so on. We worked together for a few years." (*John Libke).*

Background and context.
Myxomatosis was released in Australia around 1950, and in the 1960's there was serious concern about whether it would continue to be effective in controlling rabbit populations. Laboratory work showed that the rabbit and the virus would eventually come to some sort of compromise or balance.

The Snowy Plains subalpine site was one of four study areas set up in the mid 1960's. Another smaller and less used site was on Botheram Plain not far from Botheram Plain hut in a little amphitheatre overlooking the Gungarlin river. A portable canvas hide was used here.
The sites chosen to study rabbits in different environments were:
Urana, NSW, mediterranean climate,(where rabbits originated)
Tero, west NSW, semi arid
Mitchell, Queensland, subtropical
Snowy Plain, subalpine
Mogo, NSW, temperate coastal.

Study site, hide and Bill Price at a warren, photo, Jon Dunsmore

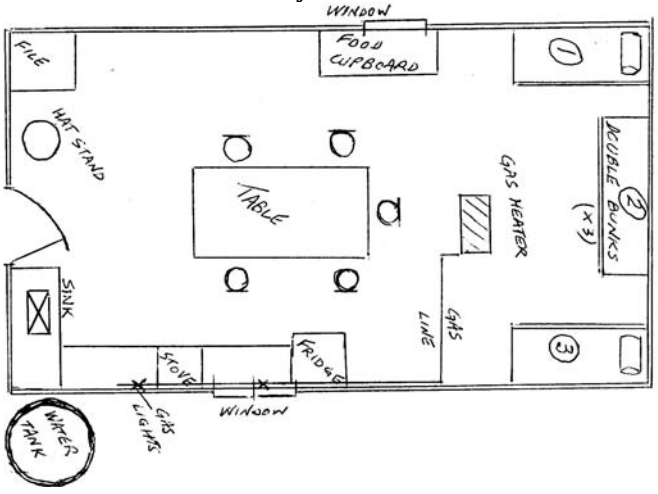
Up to this point rabbits were studied in pens, but techniques had not been developed to study them in the wild. Dr Peter Fullagar had done some work studying animals in the wild in the UK and modified those techniques to apply to wild rabbit populations in Australia. More efficient traps had to be developed and marking systems devised so that individual rabbits could be identified at the study site.

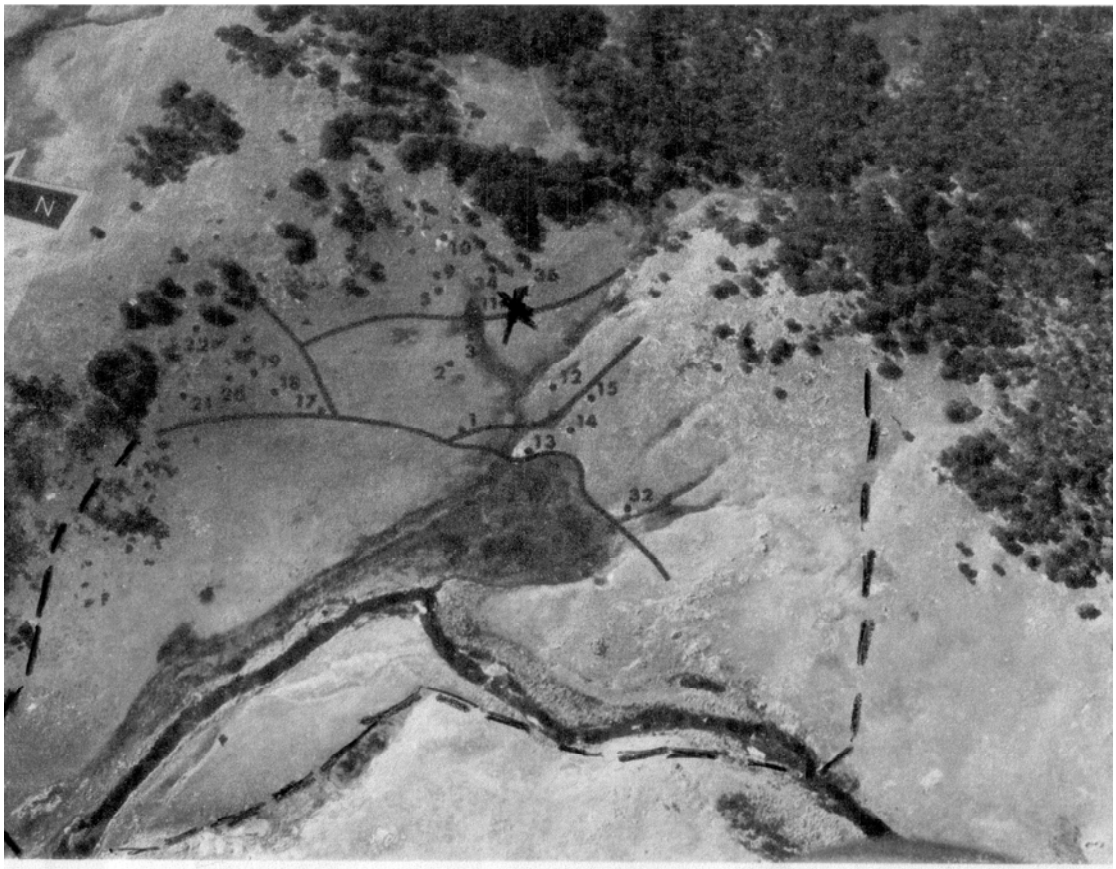
Dr Ken Myers was the senior researcher and it was to his plan that the others worked, that is, to tease out the details of how the animal behaved so that more effective methods could be developed for different conditions.
A controversy raged for some time over whether the mosquito or the rabbit flea was the more effective in spreading the virus. Australian researchers found that only two of around 200 species of mosquito were effective, whilst in Britain they found that the rabbit flea was effective. Eventually it was realised that both were right.
The most effective rabbit flea to be imported was the Spanish flea, due to its tolerance of dry conditions.

Rabbit behaviour in natural populations is studied by means of periodic observations of marked rabbits from hides set high above ground. In this photograph an observer, Clive Hale, approaches his hide in the Snowy Mountains, south eastern New South Wales to commence his evening watch.

Photo John Dunsmore

The hut, track and study site.

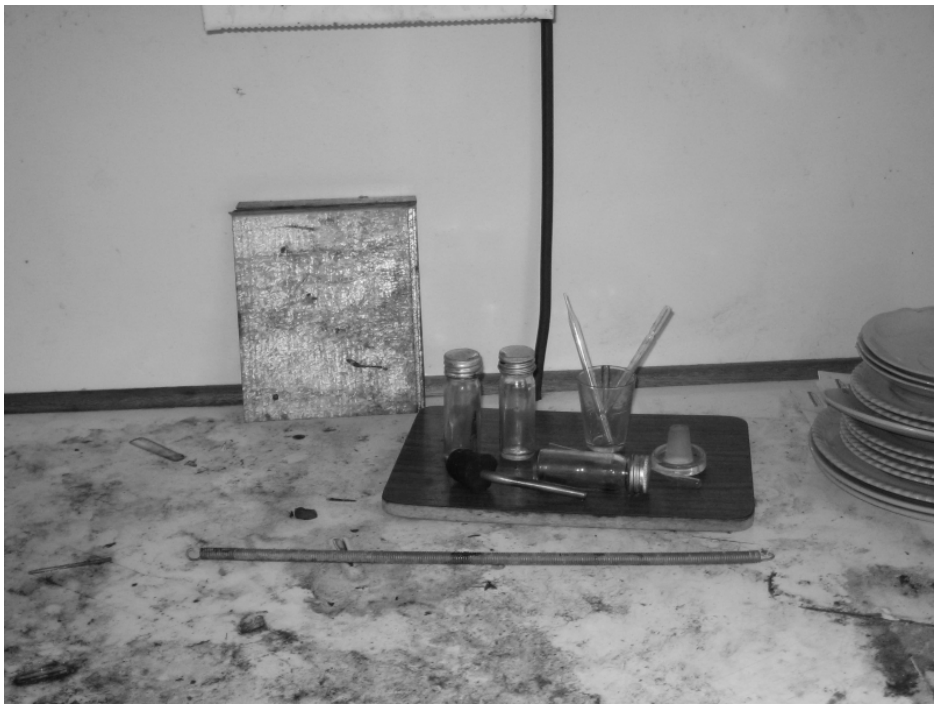




-vertical photograph of the study complex on which the observation hide, the warren complexes, and the warrens
e vicinity of the hide (indicated by a cross) 20 mm represents a distance of about 100 m; this would be reasonabl
a. The line running diagonally across the upper left corner is the boundary of the Kosciusko National Park; it reve
tation from inside to outside the Park.

The study site was extended later to take in the area enclosed by the dotted line, approximate boundary only.

The hut is situated a short distance off the power line road leading from Nimmo hill to the Gungarlin river. It is of timber frame clad with asbestos cement with a three bunks, chairs, and kitchen cupboards. Some pieces of equipment used by the field workers are still there such as a McCartney bottle used to keep parasites in, a rubber stopper and tube used to give water to captive animals, pipettes, glass stopper, a marker from the study site and some glass tumblers (perhaps to hold port and/or muscat!!).



Some equipment and plates still in the hut in December 2005 photo G Scully

The routine.

"We used to leave Canberra Monday morning, have a cup of tea in Cooma, buy a bit of tucker and get up to Snowy Plain just after lunch, set up camp and start watching rabbits about 2 o'clock. After observations were finished just after dark, the traps were set using oats soaked in a salt solution." (*John Libke)*

The men would then return to the hut for dinner.

Every morning traps were checked, rabbits weighed, tagged, blood samples taken, fleas counted, myxo checked and pregnancy tests done.

Visits were done Monday to Fridays on a weekly basis during breeding season, late August to December, and fortnightly at other times.

On some evenings they would do a transect around the study site to count animals (including wombats and roos) outside the study site. The route was to drive to the river, cross the bridge, drive upstream past the dredge, cross back over on a rickety bridge and circle back to the hut.

The track to the study site is overgrown and somewhat difficult to follow in an approximately NW direction for about a kilometre. On the way the track goes through a large clearing on the western side of which is a large clump of gooseberries. Searching found no remains of an earlier hut, but a caravan was parked in this clearing for a few years before the hut was built.

The study site began at the tree-line, extended 300 metres upstream to some visible rocks and across the river to a smaller area on a clearly visible flat area. A rabbit trap, 2mX2m, steel frame covered with chicken wire and having four doors is located on the high side of the study area. This is known as a Smeuse trap (after the designer).

Peter Fullagar, Bill Price and Peter Haycock with Smeuse trap, photo - G Scully

A wooden hut was built as a hide 4.5 metres above the ground at the top of the study area from where the rabbits were observed. The floor area was 1 ½ metres square and each wall had a window from which the rabbits could be watched by telescope or binoculars. There was also a mini grid area where the watching was more intense.
A Stevenson screen was next to the hide to give daily readings on temperature, rainfall, humidity and evaporation.

Hide, study site and winter snow. Photo- Clive Hale

There were around 32 warrens identified with small markers and grid areas were identified by larger markers.

Salt trials were conducted on the flats across the river. One occasion remembered by Bill Price was when using a boat to cross the river John Libke stepped on the corner of the boat and filled it with water. They then decided to build a bridge from pieces of steel aircraft landing matting which worked well until a winter flood washed it away.
A second and smaller hide was built later, some time after 1966, overlooking the flat at GPS 0639100 – 5989800. The pipe base of this structure is till in place.

Pipe base of smaller hide at opposite side of study site, photo – G Scully

About 40m from the main hide is a creek bed with a glacial moraine growing some "scruffy" shrubs which are quite rare (not identified by those present).
Traps adjacent to the creekline were also rabbit traps possibly used by by researchers from the Howard Florey Laboratory of Experimental Physiology of the University of Melbourne who did studies here on problems related to mineral deficiencies in rabbits and native animals. Rabbits were presented with a series of soft wooden pegs, each of which was soaked in a solution of one or other of those salts found in blood; those pegs impregnated with ions of sodium, potassium and magnesium were chewed avidly by rabbits, thus opening up a potentially useful method of poisoning.

Another useful method to reduce the rabbit population is described in the CSIRO Wildlife Division paper listed in the references by C.S.Hale and K Myers.
"The technique consists of laying a trail of a greasy substance carrying a poison (lanolin carrying sodium fluroacetate, 1080, was used) along the floor of the burrow. Rabbits tread on the trail, then on to the soil, and ingest the poison when they clean their forepaws."

The researchers commented on how long the grass was and how many flowers there were. Since then the rabbit population had crashed and few were seen by us. In particular the trigger plant, rich comparatively in sodium, which was sought out by the rabbits, was quite prolific. Considerable work was also done on the parasitology of the rabbit, for example it was found at Snowy Plain that the stomach worm and small intestinal worm reach what appear to be damaging proportions in female rabbits in the breeding season with a similar increase in the males.

One of John Libke's fond memories is that Professor Denton invited him, along with others, to a thank you meal in Melbourne, and that his airfares as well as the meal were paid for. John is planning to revisit the hut in early December 2006 with a group of members of the Kosciuszko Huts Association.

Acknowledgements:
My thanks to the researchers who returned to Snowy Plain with me in December 2005, Peter Fullagar, PeterHhaycock, Ederick Slater and Bill Price.
Particular thanks to John Libke and wife May for many enjoyable afternoon teas, Chris Davey for his photos, Joseph Foreshaw and David Spratt.

References:
CSIRO Division of Wildlife Research, Annual reports, 1963-1980.
J.D.Dunsmore, The Rabbit in Subalpine Southeast Australia, Australian Wildlife Research, 1974 1, 1-16.
C.S.Hale and K Myers, Utilisation of the Grooming Habit of the Rabbit for Poisoning Rabbits, CSIRO Technical Memorandum No 2, Jan. 1970
John Libke, interview with Graham Scully, August 2005.

John Libke, August 2006, photo – G Scully

APPENDIX
Some of the people involved

Dr Ken Myers	Officer in Charge of the Snowy Plain work
Clive Hale	Behavioural, population and salt studies. With Ken Myers worked on the grooming habit of rabbits for poisoning.
Bill Price	Technical officer ,Ditto
John Libke	Technical officer, Ditto + isotopes
Dr Jon Dunsmore	Ditto + parasites
Dr Joseph Foreshaw and Russell King	As above
Dr Peter Fullagar and Chris Davey	Population studies
Dr Richard Williams	European rabbit fleas and myxo
Peter Haycock	Technical officer, working with Dick Williams and Jon Dunsmore, sampling for rabbit parasites. for David Spratt he collected soil samples for soil mites, native mammal collections in both large mammals (wallabies, kangaroos) and small mammals (antechinus, mastocomys), and tanabid flies for life cycle work on the kneeworm of kangaroos.
Dr Barry Richardson	Genetics, ANU
Ian Parer	Myxo
Ederic Slater	Photographer
Dr Ken Williams	Population studies, site comparisons
Robert Moore	Ditto
Dr Horner and Dr Taylor(USA),	Rattus fuscipe studies
Eric Schneider and Doug Hayes	Population studies and shot samples with Dr Ken Myers
David Spratt	Parasite studies
Dr Derek Denton	Sodium balance studies
Sir Edward Florey laboratory studies	Worked with Dr Denton on sodium balance studies