LANDSCOPE EXPEDITIONS
Working at the Frontier of Discovery

Expedition briefing

Desert grass trees (*Xanthorrhoea thorntonii*) in red sand swales at Lake Mason – Photo Kevin Kenneally.
Insets: Round-leaf pigface (*Disphyma crassifolium*), Sticky Cassia (*Senna glutinosa* ssp. *chatelainiana*) – Photos Kevin Kenneally, Echidna (*Tachyglossus aculeatus*), Fat-tailed Dunnart (*Sminthopsis crassicaudata*), Long-tailed Dunnart (*Sminthopsis longicaudata*) and a spiny-tailed gecko (*Strophurus wellingtonae*) on samphire (*Halosarcia* sp.) – Photos Mark Cowan.

Prospecting for Wildlife – Discovering The Biological Riches of the Murchison

Lake Mason, Murchison Region, Western Australia

12 – 21 September, 2005

Leaders:

Mark Cowan	Regional Ecologist, Goldfields Region, CALM Kalgoorlie
Kevin Kenneally	Scientific Coordinator, LANDSCOPE Expeditions, Perth
Daphne Edinger	Honorary Research Scientist, LANDSCOPE Expeditions, Perth
Dr Ric How	Senior Curator, Western Australian Museum, Perth
Kevin Coate	Naturalist and Ornithologist, Perth
Steve Thomas	Workcentre Coordinator, Regional Services Division, CALM Dwellingup

This expedition is offered by *LANDSCOPE*, a quarterly magazine devoted to wildlife, conservation and environmental issues in Western Australia. The expedition is run in association with UWA Extension, The University of Western Australia.

LANDSCOPE Expeditions—Working at the Frontier of Discovery

Department of Conservation and Land Management *in association with* UWA Extension, the University of Western Australia.

Prospecting for Wildlife – Discovering the Biological Riches of Lake Mason

September 12 – 21, 2005

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PILBARA

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Mt Augustus NP

Collier Range NP

Kennedy Range NP

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Mooka

Waldburg

GOLDFIELDS

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Karara

I N D I A N

O C E A N

West

Coastal

Highway

MOORA

Carlyarn NR

WHEATBELT

MERREDIN

Legend

Region boundary

District boundary

Lands and Waters managed by the Department of Conservation and Land Management, pre Gascoyne Murchison Strategy

Land acquired under the Gascoyne Murchison Strategy with financial assistance from the National Reserve System Program, September 2003

Produced by Information Management Branch, April 2005, IMB: 05014603

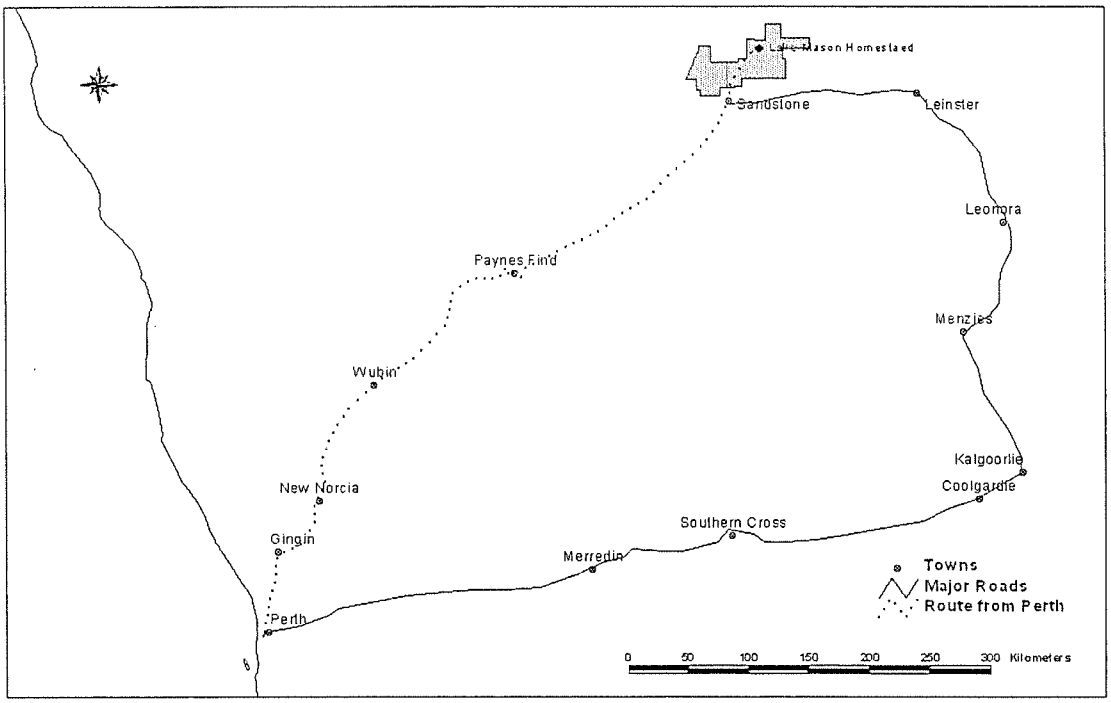
Government of Western Australia

Department of Conservation and Land Management

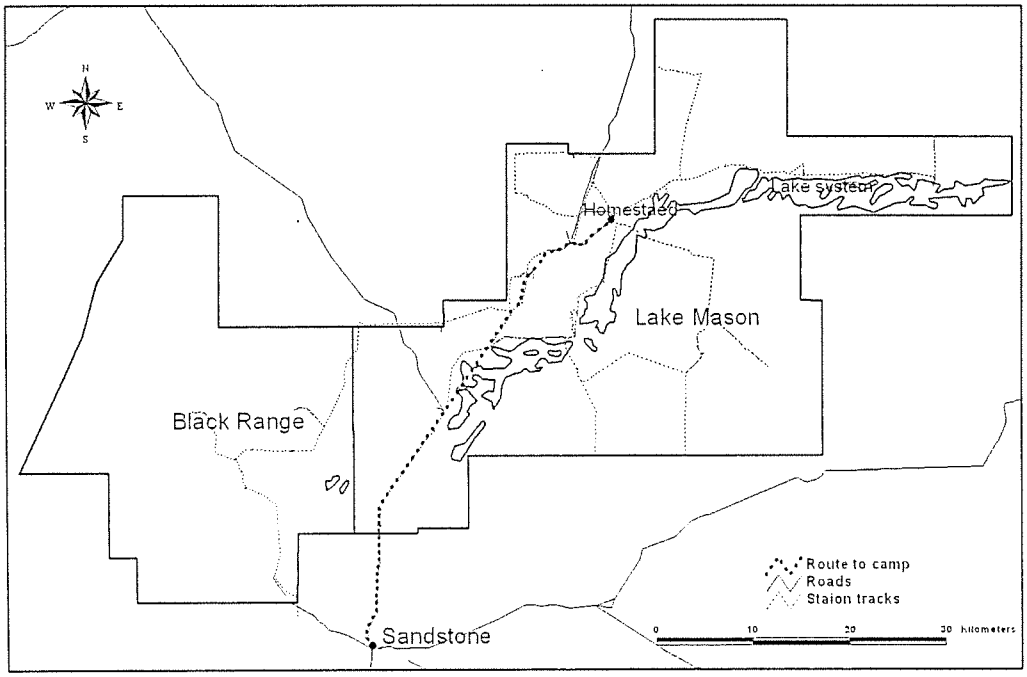
Conserving the nature of WA

MAPS

The Expedition's Route



Black Range and Lake Mason



RESEARCH AREA

The adjoining former pastoral leases, Black Range (79 329 ha) and Lake Mason (149 557 ha) are situated to the northeast of Sandstone in the Murchison Biogeographic Region.

The expedition will travel from Perth via the Great Northern Highway to Paynes Find, then to Sandstone and thence a further 50 kilometres to Lake Mason homestead where we will set up base camp around the old shearers quarters.

Black Range Station is generally flat with low rises and granites. Breakaways in the centre and east provide drainage systems flowing to the south. Spinifex dunefields are the predominant feature of the northwest section of the lease. The vegetation consists of spinifex growing on sandplain and dunefields, *Acacia* (mainly mulga) woodland and eucalypts.

Lake Mason Station is gently undulating dominated by the lake system and low hills. Ridges of banded ironstone and granite are a feature to the northwest. Lake Mason and the associated lake systems with fringing alluvial plains, gypsum (kopi) dunes and sandy banks link through the area from west to east. The vegetation consists of spinifex sandplain and some dunefields, *Acacia* (mainly mulga) woodland and scrub (mainly of *Eremophila* species) and scattered eucalypts. The lake frontage (and lake bed) consists of chenopod (samphire) shrublands and halophytes.

In pre-European contact times, Aboriginal people lived in the Lake Mason and Black Range lease area, using the land for hunting, gathering and cultural purposes. There is evidence of occupation at several sites.

The Sandstone-Wiluna Stock Route passes through the area, and there are historic wells and associated infrastructure.

LAKE MASON STATION PASTORAL HISTORY

From *"Sandstone: From gold to wool and back again"*© by Sally Senior

Lake Mason was named by surveyor S. Manning in 1906 after HGB (Harry) Mason, who passed through the Sandstone area in 1900 on an expedition from Cue to the South Australian border, searching for likely mineral and pastoral possibilities. With his party he had nineteen camels, twenty-six horses, plus some goats and fowls, the last presumably for fresh meat and eggs. One can only wonder how the fowls travelled from place to place. Everywhere he camped, he marked the spot, usually with a blaze on a tree. As he travelled eastwards from Cue he came upon some lake country surrounded by lush saltbush country, so decided to map the area, travelling right round the lakes. Wherever he found sufficient surface water he camped and rested his animals. These were the places he left blazes. Three of the blaze trees have been found on Lake Mason, all on corkbark trees (*Hakea lorea*), and a fourth should be somewhere near the south end of the leases, to the east of Limekilns well. The three found are:

1) In the creek at Montague well at the far north of the lease marked M3.
2) Out from Old Shed mill on a small peninsula/island on the edge of the lake bed marked M4.
3) Directly in front of the homestead, between the front (south) gate and the well marked M5.

The camping spots are marked on very old pastoral maps. As a result of these travels it would appear that he took up several small pastoral leases, between 20,000 and 67,000 acres spread

over the now Lake Mason, Booylgoo Springs and Depot Springs station leases. Pastoral leases 1148/102 – 1153/102. These leases were never used and must have lapsed or been surrendered.

In the late 1910s the pastoral industry was spreading eastward from the Murchison.

From 1916 until 1919, R.H.Hapgood held pastoral leases to the east and south of Berrigrin (an early mining town between Sandstone and Gidgee) which was later to become part of Lake Mason Station. This was known as "Berrigun" and ran from Montague to about 15 kilometres north of Sandstone, following the lake country. Here he bred horses for the growing transport needs and ran a few cattle. In 1916 the homestead was situated at what is now known as Old Shed windmill, just to the south of the mill amongst some casuarina trees. Later the first shearing shed was built there, hence the name.

The surveyed road from Birrigrin to Lawlers (an early mining town just south of Leinster) ran right past the old homestead. This was the shortest route between the two mining towns, but was seldom used, as there were only two waters on the track. Consequently the only two journeys were undertaken on camels, but if there was any rain these could not cross the salt lake because their feet slipped.

Sections of this road can still be identified by the differing tree heights and some of the square pointed wooden mile pegs that remain.

In late 1919 Lake Mason was sold to Messrs Senior, Inglis and Piercey who had all been together in the forces during World War I. These three men had looked into farming and pastoral ventures, and decided that a station property looked the best way to make money with the least capital outlay. No record exists to show why they chose the Sandstone area, but it could have been just because all other pastoral land closer in had already been taken. They applied for pastoral leases, and were awarded those that now comprise Lake Mason, and presumably purchased that which had belonged to Mr Hapgood. At this time the property was composed of five separate leases, the northern one including the Montague goldfield, one which had the homestead as it's centre, one which contained the land to the east of the lake, and the last extending southwards to within approx. ten miles of Sandstone township. These leases were later combined into the one Lake Mason lease as it is today.

Fred Senior was born in Yorkshire and came out to Perth with his parents on the S.S."Mauria" at the age of 18 yrs. His father took up a block on what is now the "Bowes Estate", near Northhampton WA, but went "broke" there. He wanted to go farming with his father, but as he was not prospering, his father persuaded him to go into the WA Bank, where he worked until joining up to fight in WW I. His father enlisted, and by the end of the war was in charge of horses in Egypt.

Fred Senior left his job with a bank in Perth and travelled to Sandstone by train to go out and inspect their land. He spent Christmas 1919 at the McMannaways Hotel in Sandstone, then hired a horse from the livery stable in Sandstone, and rode out to Birrigrin before continuing on to inspect Lake Mason.[1] 1919 had been a year of above average rainfall, with good spring rains, so the country was looking it's best for that time of year. The lush appearance of the country and the presence of what looked to be permanent surface water helped him decide on this block of land for the group to invest in. It looked perfect for the cattle venture they intended to start with, as fencing was almost nonexistent at that stage, and cattle could be managed relatively well without fencing. Fred Senior had wanted to start with sheep, but the other two insisted cattle were a better deal. They had each come out of the army with some savings, and decided to "get rich quick". The decision to invest in a pastoral venture instead of a farming one was reached because of their mistaken belief that pastoral land would bring in

[1]Diary of JGF Senior 1919.

more income, and quicker than farming. This was not the case, as the partnership received no income in the first four years, leading to two of the partners, Piercy and Inglis, abandoning their share and leaving within the first year, once they could see what the future had in store for them. Fred Senior stayed on, not receiving any wages, but being fed by the station until in 1925 when Messrs Senior, Hewbey, Gardner and Williams took over Piercy and Inglis's share, and Billy Williams managed Lake Mason for one year while Fred Senior went back to the bank for a year.

There were no fences to contain the cattle that they had there to begin with, so the cattle would wander far from home. Their main aim at first was to keep the cows close to Lake Mason until their first calves were born. These calves would always return to where they were born, and the cows would stay with their calves. However, until that time, the cows were inclined to wander, often endeavouring to return to their own place of birth. This caused many problems, with their owners often needing to be away for weeks at a time tracking them to return them home, to ensure that they had their calves on Lake Mason. The original cattle came from near Marble Bar, and Fred travelled across to inspect them just north of Meekatharra, but didn't actually purchase them until they reached Sandstone.

The dingoes were very bad in the early days, often attacking calves. On one occasion Fred and an aboriginal tracker, one by the name of Quartpot, followed one pack for ~ 800 miles, hearing them calling every night, before catching the last one which they had nicknamed "Bumblefoot" on Sturt Meadows Stn near Leonora. The manager of Sturt Meadows at that time sent him £50 for this job. The long distance was due to the wandering nature of their tracking. They travelled by horseback, with a packhorse to carry their food and camping gear. Mr Senior remembers him as a grey horse, which once they were 20 to 30 miles from home would be set free to follow. He would stop to feed, then come galloping up to the other two horses, neighing to them, and with everything flapping and clanging. His load contained swags, billies, bullets, a rifle, food and strychnine for poisoning the dingoes.

To keep it all in place, he needed a double sircingle[2].

Fred Senior was a very tough man; tough on everyone around him, but always tough on himself most of all. The first years were very hard, and he drew no wages for six years, living on savings. He had wanted to go into sheep, but his partners out-voted him and then pulled out of the partnership unable to cope with the lack of income and no money.

In the early days, the Agricultural Bank would readily lend money to pastoralists, but only on the condition that they did the improvements first. For instance, first you erected a fence, then they would advance you a loan equivalent to the cost of doing it. This was fine for the banks, but very hard for the pastoralists who had to exist on savings in the meantime. It took Fred 23 years to get out of debt.

In 1926 a new partnership agreement was drawn up, with Fred Senior to be the manager, and Hewby and Williams the other two partners. Senior and Williams eventually bought out Hewby for £750 in1931. Fred Senior married Margery Moore in 1926. At that time he took over the management of Lake Mason, changing from cattle to sheep.[3]. He had built a homestead for his new bride in the present position from materials obtained from one of the Sandstone hotels, McMannaway's Oroya Palace Hotel, recycled, and the shearing shed (the "Old Shed") was built from the Sandstone school, recycled, while he had a workshop and storeroom erected from the materials of the children's lunch shed at the school. Later, in the 1940s, he re-located the shearing shed to near the homestead, where it is today, using materials from Murphy's Store at

[2]Sircingle = a long strap passing round the load and the horse to help keep it in place.
[3]The late JGF Senior taped interview.

Youinmi. This was erected by Bill Lunt, who also built the wash house and outside bathroom for the homestead. At this stage (about 1924) the partners thought that the station should be able to pay each of them £5 per week, but it was soon found that the amount was barely £2. By 1928 Lake Mason was running 12 or 13,000 sheep, and new fencing was being done every year to accommodate them. In 1929, following two very dry years, Fred Senior turned 1000 ewes out into what was then open country and is now the 40 mile paddock, hoping that they could survive.[4] It rained, and they disappeared, only to return once the feed dried off, complete with lambs. Very few had been lost.

Fred Senior ran Lake Mason until handing over the management to his youngest son, Tom in 1950. His elder son, Blake had been on the station for 7 years with his father, but left to manage elsewhere just before he married. Tom and Blake bought Billy Williams' 3/8 share in Lake Mason from their father, then Tom managed the station with the help of his wife Sally and Richard Atkinson, until leaving the district in 1977. The station was managed by Roy Barber until sold to a group from South Australia in 1979; and then managed by Allan Humphries and his wife Diana until they bought out the other partners in the 1980s.

Before being sold by the Senior family, Lake Mason was shearing 8/10,000 sheep annually and sending approximately 2000 of the oldest sheep to the family farm at Esperance, leaving 6/8000 sheep under 4 yrs old for wethers and 5yrs old for ewes. The lower numbers were following dry years with either no planned lambing or a poor one, and the higher numbers following good seasons and good lambings. The wool cut per head increased from 7lbs in 1929 to 14lbs in 1978. Far greater numbers of sheep were carried in the 1930's and 1940's, but were found to be damaging the country which was unable to carry the larger numbers in the dry years, leading to massive losses, and the necessity to buy in sheep in good seasons. Keeping the flock young in the 1950's, '60's and 70's allowed for easier management of pastures, and the use of poorer quality land out from the lake country when feed was plentiful thus allowing the regeneration of pastures degraded in earlier years, and quicker return to profitable numbers of sheep once rains came.

Two trial plots were fenced off out from Old Shed mill by the Ag Dept in the 1960's. After ten years these were shown to be no different to the surrounding vegetation, as it was definitely regenerating.

PROJECT BACKGROUND

Lake Mason and Black Range Stations are situated in an area once dominated by pastoralism, however, the focus for the future is conservation. These properties contain a rich diversity of habitats, and initial biological surveys have revealed a rich assemblage of both mammals and herpetofauna. At the time of purchase by CALM (July 2000 for Black Range, October 2000 for Lake Mason) no formal biological survey of the area had been conducted, although pastoralist Sally Senior had kept records of wildlife noted during the 1960s and 70s, birds being her principal interest.

This project will allow the Department to continue to gather baseline biological data that will contribute towards improving our understanding of biological patterns and processes in this part of the rangelands. Additionally, because this part of Western Australia has not been the focus of any prior detailed biological survey, the results from this current work will contribute towards our understanding of the State's biogeography.

[4]JGF Senior letter to W Williams.

THE PROJECT

The objectives of this expedition are to:

- Determine areas of high biodiversity and conservation value.
- Carry out live trapping techniques for vertebrate fauna.
- Carry out ground searches for signs of threatened species, including the mulgara and the mallee fowl.
- Make a collection of botanical specimens.
- Record bird observations.
- Make a photographic record of sites visited.
- Gather information to provide a baseline for strategies to monitor conservation management.
- Make recommendations on conservation priorities as part of the Goldfields regional strategy.

Part of the Goldfields regional strategy is to document the biological values of the conservation estate in the region. This expedition will provide participants with the opportunity to view some of the rangelands' more cryptic and secretive animals in their natural surroundings, as well as view and catalogue the wonderfully diverse flora.

This expedition is one of a series of surveys to document the biodiversity of Lake Mason/Black Range. Staff from the Department's Goldfields Region have established a number of permanent quadrats that form the basis of these surveys. These quadrats represent the major diversity in landform, geology and vegetation that occur across the area. Each quadrat is the focus of intensive animal trapping and detailed botanical sampling.

Although there is quite a comprehensive fauna list for the general Sandstone area it is only over the past 12 months that any systematic survey work has been undertaken. As such, some of what we encounter will be new records for the immediate area and will contribute significantly to our understanding of species biology and biogeography.

VOLUNTEER ASSIGNMENTS

Conservation Volunteers

Being a volunteer allows you to discover first hand what the Department is doing. You will be part of a force of 2700 people involved in a wide range of activities that include tree planting, trail building, interpretation and assisting with scientific projects. If you wish to be involved with future CALM Volunteer projects, please contact CALM's Community Involvement Coordinator, Margaret Buckland, on (08) 9334 0251 on your return. The Department relies very much on its volunteer work force. In 2004 volunteers supplied 355,000 hours of effort. Volunteer assistance with remote area work, such as this expedition plans to carry out, is especially helpful.

LANDSCOPE volunteers will be primarily engaged in scientific fieldwork in the Goldfields region, however you will also assist with general tasks during the expedition.

Field Work

Principal activities:

- Assist in opening up fauna trapping sites.
- Assist with pit and Elliott trapping of small animals and reptiles.
- Assist daily in the checking and identification of captured animals.
- Assist with the collection and processing of plant specimens.
- Take field notes.

Additional important activities:

- Assist with bird observations, recording species, breeding and locations.
- Assist with invertebrate surveys.
- Assist with transporting equipment in the field.
- Assist with photography. Participants may wish to contribute slides that may be used in *LANDSCOPE* magazine.
- Compile data at the end of the day – write up notes; plot locations of specimens collected; assist in identification of specimens; compile bird lists.

Biological surveys provide data on the species occurring in a district and their distribution across it (the "what and where"). These data are the basis of many conservation measures such as reserve systems, and design and assessment of the conservation status of our native species for specific management. The most useful surveys are those that inventory a wide range of species, including plants, vertebrates and invertebrates.

On this expedition, you will assist with an ongoing biological survey and gain an understanding of biodiversity as you help map the flora and fauna of the area (birds, mammals, reptiles and frogs) as well as specific invertebrates, which could include ants, scorpions and certain spider groups. Reptiles are of particular interest because these arid environments in Australia are exceptionally diverse, with certain habitats containing as many as 20 species. In the Goldfields, most of the larger mammals, other than kangaroos, are extinct, however, the expedition will attempt to establish the distribution of the mulgara and one or two other dasyurids that still exist in the area.

The botanical survey will include opportunistic collecting, dependent on seasonal flowering conditions. You will also be involved in re-sampling 24 permanent quadrats that have been established on monitoring sites representing different fauna habitats. Here, you will assist in collecting plants and photographing flowering specimens. Opportunities will exist for bird watching, recording of bird sightings and any breeding activity. At night there may be spotlighting for nocturnal animals and mist-netting for bats, depending on time and conditions.

There will be some free time each day for people to follow personal interests such as painting or photography. There will be abundant photo opportunities throughout the day.

The topography is generally subdued, with some large breakaways, stony colluvial plains and low granitic hills and rises. The work will not be too taxing, but it can be hot during the day. If you are too tired to go back into the field after lunch, please advise the leaders. Your safety, health and comfort are paramount, so please carry water and wear your hats in the field as you will be in the sun a lot. You should take particular care when in rocky areas or breakaway

country as the surfaces can be a little unstable; it can be easy to lose your footing. In rocky areas in particular it is important to wear boots with good ankle support.

Diary:

An exercise book will be provided for volunteers to take turns recording each day's events in the trip diary. Anything goes! Each person takes a turn. This will be typed and a copy distributed to each expedition member as a memento of the trip. But it also provides valuable information to be included in the official **Expedition Report**, which is produced after each trip. Please include highlights of each day, interesting data, and anything of interest to you. Much information can be gleaned at 'show and tell' and 'meet the scientist' each evening when the leaders summarise the day's activities and plan for the following day. So, if you have the diary for the day, take it to 'show and tell' and record the day's events.

FIELD TRAINING

On arrival at camp there will be an orientation session, as well as briefings on research procedures and objectives, HF radio procedures, camp procedures and safety. On a daily basis, there will also be informal talks, reviews of progress, and sharing of expedition participants' discoveries.

The identification of wildlife in the field is a skilled business; it requires patience, a good eye, and aids such as field guides, binoculars and hand lenses. Many of our native fauna and flora species look very similar to each other, and telling them apart can be a humbling process for even the most experienced biologists. However, identification is a basic skill in field biology and by the end of our expedition, you should have a good grasp of the essentials. Expedition members will learn how to survey for plants using quantitative methods, as well as opportunistic searching. You will be trained in the use of keys and guides, and can discuss any aspect of the work with the leaders.

In addition to plant and animal identification, the leaders will demonstrate how to set and maintain traplines efficiently, how to handle animals without harming or stressing them, and how to search for those species that are difficult or impossible to trap. This may include some spotlight and head-torch searches at night, and searching through leaf litter and other hiding places during the day.

Team leaders will be happy to discuss any aspect of our work with expedition members, and are looking forward to a shared learning experience.

APPLICATION OF RESULTS

This type of survey is fundamental in documenting and monitoring biodiversity values on the conservation estate. The work conducted here will contribute to our knowledge of the distribution of the State's biota as well as providing an insight into the association of the station's flora and fauna with biotic and abiotic attributes[5]. Importantly, reference collections made here will be lodged with the WA Museum and WA Herbarium where they contribute in the broader context to our understanding of biogeography throughout the State.

[5] **Biotic**, meaning of or related to life, are living factors. Plants, animals, fungi, protist and bacteria are all biotic or living factors. **Abiotic,** meaning not alive, are non-living factors that affect living organisms. Environmental factors such as habitat (pond, lake, ocean, desert, mountain) or weather such as temperature, cloud cover, rain, snow, hurricanes, etc. are abiotic factors.

The results from this survey will form part of a departmental internal report, which will be applied to the future management of these stations. This work will also be published in the scientific literature.

EXPEDITION LEADERS

The investigators with whom you will be working at Lake Mason and Black Range have extensive experience in botanical and zoological research, and management of natural ecosystems.

Mark Cowan is the ecologist for CALM's Goldfields Region. He spent 10 years with the WA Museum's Department of Terrestrial Vertebrates before moving to CALM in 2000. His research interests include arid zone ecology and conservation biology, particularly in relation to terrestrial vertebrates; this has involved fieldwork throughout much of Western Australia

Kevin Kenneally (KK), a research scientist since 1973, has been the scientific coordinator for *LANDSCOPE* Expeditions since 1994. He is an internationally recognised author and specialist on the Kimberley flora and has conducted botanical investigations across much of the State. KK has led research expeditions into remote areas of Western Australia for more than 30 years. He was awarded a Churchill Fellowship (1979), the Australian Natural History Medallion (1984) and, with Daphne Edinger and Tim Willing, he was a recipient of the CSIRO medal for Research Achievement (1996). Kevin is an Honorary Associate of the Western Australian Museum, and president of the WA Gould League at the Herdsman Lake Wildlife Centre and vice president of the Kimberley Society. He was appointed a Member of the Order of Australia in the 2005 Australia Day Honours List.

Dr Ric How is head of the Department of Terrestrial Vertebrates at the Western Australian Museum, and has over 30 years' research experience in Australia, Indonesia and China. His research on the biogeography and ecology of mammal and reptile communities has spanned the tropical, temperate and desert regions of both Australia and Asia.

Kevin Coate (KC) is a naturalist and ornithologist who has been involved in nature based tourism in Western Australia since 1975. KC has travelled extensively throughout the State and has written numerous articles on the areas he has visited, as well as a number of papers, primarily on birds. In 2000 he was the winner of Western Australian Tourism's FACET Golden Guide Award. In 2001 KC was a recipient of a "Premier's Award to Legends of the Hospitality and Tourism Industry", a one-off award that marked the start of the new millennium and the contribution of individuals to these industries over the previous thirty years.

Daphne Edinger graduated from The University of Western Australia with a BSc (Hons) in zoology. A science teacher for 16 years, on retirement Daphne became an honorary research scientist with the Western Australian Herbarium, and has worked as a volunteer with Kevin Kenneally since 1983. She has conducted numerous botanical field trips throughout the State and has been with the *LANDSCOPE* Expeditions program as a leader since 1993. In 1996 she was a joint recipient, with Tim Willing and Kevin Kenneally, of the CSIRO Medal for Excellence in Research Achievement.

EXPEDITION REPORT

A copy of the expedition diary will be provided soon after the conclusion of the expedition, and this will be followed in due course by the expedition report.

FIELD LOGISTICS

RENDEZVOUS

Expedition members will meet at **6.30 am on Monday September 12th, 2005** at the car park adjacent to the UWA Extension offices, The University of Western Australia, in Clifton Street, cnr Stirling Highway, Nedlands (see attached map). There is access to toilets if required.

Gear will be loaded and the expedition will depart Nedlands at **7.00 am** sharp for Lake Mason via the Great Northern Highway. Transport will be in 4WD air-conditioned vehicles. If you are delayed for any reason in the morning, please contact Kevin Kenneally on his mobile, 0407 986 227. There will be regular stops during the journey, and opportunities to change seats along the way so everyone can get to know their fellow travellers.

ITINERARY

Day 1	**12 Sept**	**Monday**	**Perth to Lake Mason** Depart Perth and travel via the Great Northern Highway through Paynes Find, Mount Magnet and Sandstone before reaching Lake Mason and setting up our base camp late in the afternoon. Dinner will be followed by a talk about the project and logistics. Bush camp, with use of Station facilities.
Day 2	**13 Sept**	**Tuesday**	**Lake Mason** Commence trapping, plant collecting and bird watching activities.
Day 3	**14 Sept**	**Wednesday**	**Lake Mason** Continue trapping, plant collecting and bird watching activities.
Day 4	**15 Sept**	**Thursday**	**Lake Mason** As above
Day 5	**16 Sept**	**Friday**	**Lake Mason** As above
Day 6	**17 Sept**	**Saturday**	**Lake Mason** As above
Day 7	**18 Sept**	**Sunday**	**Lake Mason** As above
Day 8	**19 Sept**	**Monday**	**Lake Mason** As above
Day 9	**20 Sept**	**Tuesday**	**Lake Mason** Close all traps, prepare all specimens and equipment for departure early in the morning.

Day 10 21 Sept Wednesday Lake Mason to Perth

Depart camp after breakfast and travel to Perth, arriving at approximately 1700 hours.
End of expedition.

THIS ITINERARY IS PROVISIONAL AND MAY BE VARIED AT THE DISCRETION OF THE EXPEDITION LEADERS.

DAILY SCHEDULE AT LAKE MASON

Research activities include trapping, plant collecting and bird watching. Expedition members will be placed into groups; during the expedition tasks will be rotated between groups so that all expeditioners have the opportunity to experience the range of activities.

0600 hours Arise, have breakfast, and begin day's activities.

0630 hours **Check traplines.** Traplines will need to be checked before the heat of the sun threatens the animals, and bird watching is best early in the morning. By its very nature, fauna surveying is a repetitive business. Traps are opened, then checked each day to retrieve fauna, and this can take up most of the morning for those involved. The captured animals are identified and recorded, then returned to their point of capture if they are not required as specimens.

0700 hours **Commencement of field work.** The botanical survey will be based largely on opportunistic collecting, but you will also be involved in resampling permanent quadrats in the areas where fauna surveys take place. Bird surveys will be made throughout the day.

1200 hours **Lunch, followed by afternoon activities.**
There are a variety of interesting geological formations on the stations including breakaway systems and some large domed expanses of granite. These areas are generally biologically rich as well as visually interesting and we will take the opportunity of visiting some of them over the course of the expedition. Mining has also been a part of the area's history and several large open cut mines exist to the north of Lake Mason. One of these has permanent water and is accessible via a track. In hot weather there may be the opportunity for a refreshing dip! Some of the dune areas support a wide variety of plant species that differ from that over the surrounding landscape. Due to this and their position in the landscape they present an interesting opportunity for botanising and photography and thus will also be the focus of an afternoon's activity.
Depending on conditions, some of the ephemeral lakes at Lake Mason may contain water and present an opportunity for observation of some interesting bird life.
Kaluwiri, on the northern boundary of Lake Mason, is also now managed for conservation and depending on conditions and time, there may be the opportunity of visiting the area and undertaking some survey work.

1630 hours **Return to campsite.** Showers and preparation of evening meal.

1800 hours **Dinner.**

1900 hours **'Show and tell'** and **'Meet the scientist'.**
Other evening activities may include spotlighting for nocturnal animals and mistnetting for bats, depending on conditions.

2000 hours Time will be set aside for compilation of data at the end of the day. Bed!

TEAM DEVELOPMENT

LANDSCOPE Expeditions are research-oriented, nature-based experiences; working as a team is an important part of the overall experience. Team spirit will be enhanced and developed by having all meals together, sharing in preparation and clean-up, and reporting on the day's activities and results.

ACCOMMODATION

At Lake Mason, a bush camp will be set up adjacent to the old shearers' quarters. Some basic facilities, such as showers and toilet, will be available. Some survey work will take place on adjoining Black Range Station, but we will return to base camp at Lake Mason each evening.

Meals and camping gear will be provided, but you will be expected to help with camp chores.

Water, washing and ablutions: Facilities include two showers and two toilets. Hot water for showering and washing etc. is provided by a wood chip heater that needs lighting daily and stoking at intervals. There is a plentiful water supply for this from the bore however drinking water is provided from rainwater tanks and although there should be plenty please use water sparingly.

Tag-alongs: Transport, camping gear and meals are your own responsibility.

General: Make sure you have everything you need to take you through to the end of the trip—spare torch batteries, spare camera batteries, extra film, memory sticks etc. There will be no chance to buy more once we reach Lake Mason.

We will have a campfire to sit around and discuss the day's activities each evening. This will be out in front of the main kitchen area. There will also be power supplied to the kitchen area in the evening via a small generator. This will enable processing of specimens to continue after dark if necessary as well as provide lighting for cooking, eating and washing up. There is no power to any other areas around the camp, including accommodation, shower and toilets so it will be necessary to have a torch readily available after dark.

FOOD AND DRINKS

All meals from lunch on Day 1 to breakfast on Day 10 will be covered by your contribution. You may be required to assist with meal preparation on a rotational basis. If any special diets are needed you must advise *LANDSCOPE* Expeditions administration as soon as

possible to ascertain if these can be accommodated; please advise Cheryl Tonts by telephone (08 9334 0319), fax (08 9334 0498), or email (cherylt@calm.wa.gov.au).

Some cask wine will be supplied by the expedition. If you have a favourite beverage (beer, spirits, etc) you will need to bring a supply. You may also wish to bring a small stash of lollies, snacks or "trail mix" to your liking.

PHYSICAL CONDITION

The expedition will not demand an elite level of fitness. However, some level of physical fitness is required to service the traps each day. Expeditioners should be prepared to cope with cool to hot days (20—35°C) and cool to cold nights, down to 0°C. There will be as much walking, exploring and searching, as you want, so ensure that you have comfortable, solid boots. You will maximise your enjoyment of the activities by ensuring a reasonable level of fitness in the weeks leading up to commencement of the expedition.

SAFETY AND HEALTH

Your safety, health and comfort are of paramount importance.

Sunburn: This is possibly the greatest medical problem that arises. You must guard against it. Loose-fitting, long-sleeved shirts, full-brimmed hats, sunglasses, sunscreen lotion, and lip-block are all essential.

Dehydration: This can be a significant issue in high temperatures. To guard against dehydration, it is vital to always carry an adequate supply of drinking water with you in your daypack. Drinking water will be available from the station's rainwater tanks, and you must fill your bottle regularly. Remember to drink plenty of water during the day, fortified with Staminade (or similar product) if you are susceptible to negative effects of heat.

Safety mates: To improve volunteer safety in the field, expeditioners will be assigned a 'safety mate' for the duration of the expedition. You will be advised who your "safety mate" is prior to the expedition departing. At all times, you should know where your 'safety mate' is. If you cannot locate your 'mate' and are concerned as to their whereabouts, please advise a leader. This system is designed to improve safety in the field. Leaders will explain the "safety mates" protocol on Day 1.

Insect pests: Depending on the conditions in the weeks prior to your departure, mosquito borne diseases could be in the area, and you should take precautions against getting bitten, particularly at night when you are sleeping. There will be flies in the region, so do bring a fly net for your hat. *Please familiarise yourself with the enclosed brochures from the Health Department of Western Australia.*

Medications: Check that you have any required prescriptions filled beforehand. If you think you may need antihistamines for possible allergic reactions, see your doctor and obtain appropriate medication.

Snakes: For safety reasons volunteers are not to handle snakes. There are some quite venomous snakes in the desert regions. Boots and gaiters are recommended. Two elasticised pressure bandages should be carried on you at all times as a first aid treatment for snakebite. A good head torch and a spare, small, back-up torch is recommended if you need to be moving around at night.

Bats: Only Ric How and Mark Cowan are to handle bats. Others may assist but not touch the animals, due to the possible presence of lyssavirus, a virus carried by bats that is similar to rabies. Ric and Mark have been inoculated against this disease, which has a long incubation period and can prove fatal in humans. Should you come across a sick bat on this trip, do not attempt to "rescue" it, but avoid it and advise leaders.

Dingoes: Be alert to the presence of dingoes and do not encourage them in any way; dingoes have been known to attack humans.

Clothing and footwear: Long pants and boots that protect your ankles are recommended. If you prefer wearing shorts, bring some canvas gaiters or leggings; shorts leave your legs susceptible to sunburn, insect bites, scratches, and spinifex. Spinifex spines often break off under the skin, leading to small but painful infections. The spines are very hard and sharp, and can penetrate all but the strongest materials. The open fabric of many running shoes is no barrier to spinifex spines, and leather boots with ankle protection, suitable for walking around in desert conditions, are therefore recommended – well worn in to avoid blisters. You will need comfortable light shoes to wear in camp, or in the evenings; however, a pair of thongs for showertime will be useful. Canvas garden gloves may be used to protect the hands when in the field.

Safety at night: A good head torch and a spare, small back-up torch are essential. If you get up at night, use a torch to illuminate the ground, and put your boots on (not thongs or open sandals) to minimise bite risk, as reptiles, etc can be active at night. Keep boots inside a bag at night so nothing crawls into them.

Camp hygiene: In camp, wear **disposable gloves** if helping with food preparation. These will be supplied. Separate bowls will be supplied for washing up, and the rinse bowl should contain some Milton preparation. A separate bowl will be supplied for washing hands, together with a plunger pack of antibacterial hand-washing liquid.

Personal hygiene: For washing bodies and clothing, Peter G's liquid soap is a good soap to use in hard water. Medicated soaps such as gamophen, or sandalwood, which is natural to the bush, are also good choices. Don't use highly scented soaps, or perfumed toiletries, as these are irresistible to flies in particular. Away from camp, baby wipes can be used for cleaning hands, and can be burnt later. Take some pegs and a bit of line. A small container (eg one litre ice-cream container) may be useful for personal washing.

Wilderness survival: *Please familiarise yourself with the enclosed Wilderness survival card, and carry it in your daypack when in the field.* It is easy to become disoriented when walking away from tracks or vehicles. Carry your water bottle, a box of matches and a whistle, and a compass at all times when away from habitation. If lost, only light a fire as a last resort, and make sure to clear a space first to prevent a wildfire. Take careful note of landscape features to guide you back to the vehicle or study area if you move away.

Most importantly, never leave the group without telling one of the leaders or your safety mate where you are going, and preferably you should be accompanied by at least one other person.

First aid: The expedition will carry a comprehensive first aid kit.

FIELD COMMUNICATIONS

A satellite phone will also be carried while in the field. However, most of our communications will be through CALM's office at Kalgoorlie (08 9021 2677) as we will be in the field for most of the day.

The Department's vehicles are in regular radio contact with the Kalgoorlie office.

Mobile phones do not work at Lake Mason Station or Sandstone .

If you need to be contacted urgently while you are away, communication can be established through the *LANDSCOPE* Expeditions office: Tel: 9334 0319.

ADVANCE PREPARATION

FIELD SUPPLIES

Check each item carefully. Warm clothing for the evenings is advised. You should bring enough changes of clothing to last for at least four days. Limited laundry facilities are available. Small and large plastic bags can be useful for dirty clothes, dust protection, or to store clothes and boots in overnight to prevent insects getting into them. Include a couple of large, sturdy, orange/green plastic garden bags with ties to protect your baggage from dust during transport.

It is not possible to run to the local deli if you have forgotten anything.

CHECK LIST	
❑	comfortable hiking boots (with ankle protection)
❑	gaiters (Goretex – available from camping stores)
❑	light shoes for around camp (not open at the heel or toe)
❑	thongs for the shower
❑	thick walking socks
❑	underwear
❑	long trousers
❑	shorts
❑	long-sleeved, loose-fitting shirts
❑	casual clothes for travelling
❑	t-shirts
❑	jumper or warm jacket (or tracksuit)
❑	beanie or cap to wear at night
❑	sunglasses
❑	one litre leak-proof water bottle
❑	toiletries (plus liquid soap for hard water, e.g. Peter G's soap)
❑	towel
❑	sleeping bag (rated to zero degrees) and liner
❑	small pillow
❑	insect repellent and sunscreen
❑	personal first aid (including two elasticised pressure bandages)
❑	prescription medicine and spectacles
❑	matches or lighter
❑	head torch, **spare batteries** (Petzl with halogen globe)
❑	small robust torch plus batteries and spare globe
❑	small daypack to carry camera, film, water bottle, snacks, etc.
❑	camera, camera batteries, and film (**plenty** of film – six to10 rolls)
❑	binoculars (field glasses), field guides, hand lens for botany
❑	notebook and pen
❑	small compass, whistle
❑	tissues/wipes
❑	pocket knife
❑	lots of enthusiasm and smiles
	This space is for you to list other items you want to take:
❑	
❑	

LANDSCOPE Expeditions will supply a canvas bag for your gear, a volunteer's full-brimmed hat, a stubby holder, a thermal mug and luggage tag. Tents and self-inflating mattresses will be provided for the duration of the expedition.

REFERENCE MAP

The following map will be useful:

1. Perth – Alice Springs (Gunbarrel Highway). RAC of WA Inc.

REFERENCE LIST

Beard, J. S. (1980). *A new phytogeographic map for Western Australia.* Western Australian Herbarium Research Notes, 3: 37-58.

Beard, J. S. (1990). *Plant Life of Western Australia.* Kangaroo Press, New South Wales.

Bindon, P. (1996). *Useful Bush Plants.* Western Australian Museum, Perth.

Burnside, D., Holm, A., Payne, A. and Wilson, G. (1995*). Reading the Rangeland-A guide to the arid shrublands of Western Australia.* Dept Agriculture, Perth, Western Australia

Carnegie, D. W. (1989). *Spinifex and Sand.* Hesperian Press, Perth, Western Australia.

Churchill, S. (1998). *Australian Bats.* New Holland Publishers, Sydney, Australia.

Cogger, H. G. (1996). *Reptiles and Amphibians of Australia.* Reed International, Melbourne.

Gard, R. & E. (1990). *Canning Stock Route: A travellers' guide for a journey through history.* Western Desert Guides, 80 Glenelg Avenue, Wembley Downs WA 6019.

Jessop, J. (ed). (1985). *Flora of Central Australia.* Reed Publishing.

Menkhorst, P. and Knight, F. (2001). *A Field Guide to the Mammals of Australia.* Oxford University Press, Melbourne, Australia

Mitchell, A.A. & Wilcox, D.G. (1994). *Arid Shrubland Plants of Western Australia.* UWA Press, Perth.

Moore, Philip (2005). *A guide to Plants of inland Australia.* Reed New Holland, Sydney.

Paczkowska, G. and Chapman, A.R. (2000). *The Western Australian Flora: A descriptive catalogue.* Western Australian Herbarium, CALM, Perth.

Senior, S. (1995). *Sandstone: From Gold to Wool and Back Again.* Sandstone Shire, Sandstone, WA.

Storr, G. M., Smith, L. and Johnstone, R. E. (1999). *Lizards of Western Australia I. Skinks.* Revised Edition. University of Western Australia Press, Perth.

Storr, G. M., Smith, L. and Johnstone, R. E. (1983). *Lizards of Western Australia II. Dragons and Monitors.* Western Australian Museum, Perth.

Storr, G. M., Smith, L. and Johnstone, R. E. (1986). *Snakes of Western Australia.* Western Australian Museum, Perth.

Storr, G. M., Smith, L. and Johnstone, R. E. (1990). *Lizards of Western Australia III. Geckos and Pygopods.* Western Australian Museum, Perth.

Strahan, R (ed.). (1995) *The Mammals of Australia.* Australian Museum / Reed Books.

Thackway, R. and Cresswell, I. D. (Ed's). (1995). *An interim biogeographic regionalisation for Australia*: A framework for setting priorities in the national

reserve system cooperative program. Version 4.0. Australian Nature Conservation Agency, Canberra.

Triggs, B. (1996). *Tracks, Scats and other Traces.* A Field Guide to Australian Mammals. Oxford University Press, Melbourne.

Tyler, M. J., Smith, L. A. and Johnstone, R. E. (2000). *Frogs of Western Australia.* Revised Edition. Western Australian Museum, Perth.

Wilson, S. K. and Knowles, D. G. (1988). *Australia's Reptiles. A photographic reference to the terrestrial reptiles of Australia.* Collins Australia, Sydney.

THE FOLLOWING *LANDSCOPE* MAGAZINE ARTICLES, LISTED IN CHRONOLOGICAL ORDER OF PUBLICATION , ARE RELEVANT TO THE ARID ZONE :

Burbidge, A. 'Endangered', *LANDSCOPE*, Spring 1988

Pearson, D. 'Desert Gem', *LANDSCOPE*, Summer, 1988/89

Burbidge, A. 'Desert Bigfoot', *LANDSCOPE*, Summer 1989/90

Kealley, I. 'Wanjarri', *LANDSCOPE*, Autumn 1991

Kinnear, J. and King, D. *'1080 : The Toxic Paradox', *LANDSCOPE*, Winter 1991

Pearson, D. 'Dragons of the Desert', *LANDSCOPE*, Winter 1991

Cooper, B. and Gough, D. 'She'll Be Right, Mate', *LANDSCOPE*, Autumn 1992

Kinnear, J. 'Vexing the Vixens', *LANDSCOPE*, Winter 1992

Christensen, P. and Thompson, C. 'Back in the Outback', *LANDSCOPE*, Summer 1992/1993

Burrows, N. and Christensen, P. 'Hunting the Hunter', *LANDSCOPE*, Summer 1994/95

Morris, K., Armstrong, R., Orell, P. and Vance, M. 'Bouncing Back', *LANDSCOPE*, Spring 1998

Lewis, M. 'Desert Impressions', *LANDSCOPE*, Summer 1999-2000

The expedition will carry some reference books.

WEB SITES

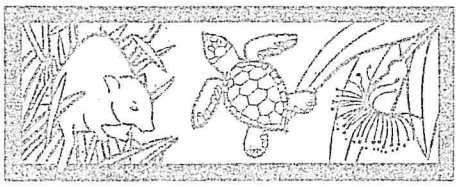
The following websites may be of interest:

http://www.naturebase.net
http://www.calm.wa.gov.au/plants_animals/index.html
http://www.ea.gov.au/biodiversity/index.html
http://www.museum.wa.gov.au
http://www.cazr.csiro.au/arid_frame.htm
http://www.naturebase.net/florabase

NOTES

APPENDICES

LANDSCOPE Expeditions



Lend your body to research...

LANDSCOPE Expeditions are non-profit, self supported study and research projects. Since their inception in 1992, the expeditions have been offered by the Department of Conservation and Land Management (CALM) publication *LANDSCOPE*, a quarterly magazine devoted to wildlife, conservation and environmental issues in Western Australia. The expeditions are offered in association with UWA Extension, a department of The University of Western Australia.

CALM is responsible for the management and sustainable use of Western Australia's 25 million hectares of national parks, conservation parks, marine parks, State forests and timber reserves, nature reserves and marine nature reserves. It is also responsible for conserving the State's rich diversity of plants and animals.

UWA Extension has been operating as a public outreach arm of The University of Western Australia since 1913. It is a Centre for Continuing Education and promotes community awareness in a variety of ways, including educational travel.

Scientists and regional staff identify the research projects and lead the expeditions. CALM and UWA administer the expeditions. The private sector and local communities are contracted to provide logistical support.

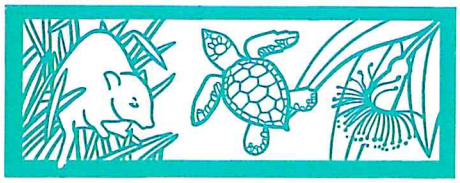
LANDSCOPE Expeditions answer the need for research to protect the environment, while they respond to the demand for first class interpretation by scientists and specialists. They provide paying volunteers with an opportunity to work alongside scientists and promote wider cooperation in addressing conservation and land management challenges in Western Australia. Anyone can be involved subject to fitness. You must be 13 years of age or over to be registered as a conservation volunteer.

You can visit and gain an understanding of remote places and natural ecosystems. You can take part in important wildlife recovery programs. You can have the satisfaction of knowing you have contributed to our knowledge of threatened environments and endangered species. Unique photo opportunities and close encounters with unusual animals are a bonus.

Participants are not the only beneficiaries. The community also profits from the enriched lives of its members, and from the benefits that flow on from research findings and outcomes. Future generations benefit from the natural and cultural resources that volunteers help to identify and conserve. And, on a global scale, *LANDSCOPE* Expeditions help to perpetuate cultural and biological diversity.

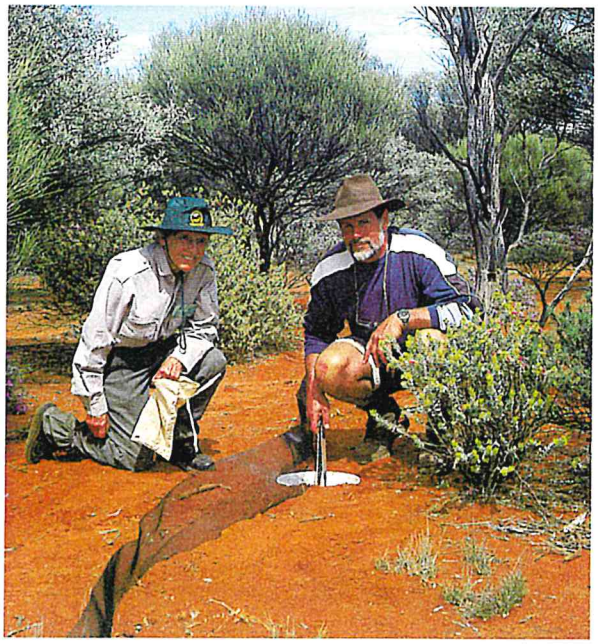
Appendix 1: *LANDSCOPE* Expeditions background information

Distant places, close encounters



...of the scientific kind

Western Australia covers almost a third of the Australian continent, stretching from the tropical Kimberley to temperate areas west of Albany. The coastline alone is nearly 13 000 kilometres long. Of Australia's 80 recognised natural biogeographic regions, no fewer than 26 occur in Western Australia—more than in any other State. These biogeographic regions are defined principally by landform, soils and vegetation types. They range from the monsoon forests (rainforests) and savannas of the northern Kimberley through the diverse desert regions and the mulgas and mallees of arid inland Western Australia to the tall karri forests of the Warren Region in the south-west. Coastlines cover a similar diversity of environments from the extensive coral reefs, mudflats and mangroves of the tropical Kimberley through the shallow sandy embayments of the west coast to the granite promontories and islands in the ocean off Albany and Esperance to the south.



Checking pit traps at Lake Mason. Photo – Kevin Kenneally

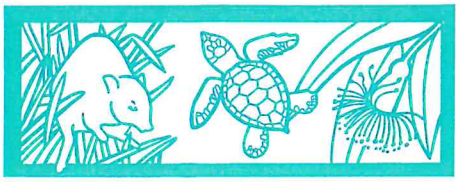
These extensive land and seascapes provide a magnificent natural setting for a vast array of plant and animal species. In this huge natural laboratory, scientists can pursue their research interests. However, such a diverse and extensive State also poses a formidable hurdle for scientists in determining the first among many questions that are essential to effective research and conservation—what occurs where? A major emphasis of the scientific research undertaken by *LANDSCOPE* Expeditions is directed toward answering this intriguing and pivotal question.

In the sparsely populated western third of the continent, the distribution of most plant and animal species is very poorly known and many *LANDSCOPE* Expeditions are focused on trying to improve scientists' understanding of species' distributional patterns. Detailed records and prudent collections are made of many species, using the most scientifically acceptable methods and techniques, so that biologists from many institutions can carry out more detailed studies. Such documentation and collection has the dual purpose of helping to define the distribution of many botanical and zoological species as well as facilitating research by State herbaria and museums on the level of variation within species. Studies of specimens and records of species from a wide geographic area are often the precursors to the description of species new to science.

The conservation reserve system in Western Australia is not comprehensive, adequate or representative. Many land surface types and their associated wildlife are not represented in reserves, or are very poorly represented. This pattern was documented in the 1995 'Interim Biogeographic Regionalisation for Australia (IBRA) Report', which demonstrated that many of Australia's major bioregions are poorly served by the existing conservation reserve system. While some land systems may have been well represented within reserves, others remain completely unrepresented. Bioregions provide a framework for identifying gaps in the reserve system. Conservation reserves should protect representative samples of each bioregion. *LANDSCOPE* Expeditions help identify which areas should be included to protect and enhance the State's biodiversity.

LANDSCOPE Expeditions encourage the public to travel with us to distant places for close encounters of the scientific kind. You are a vital partner. Join us and be part of a scientific team—record observations, collect, prepare and help identify specimens. Many conservation goals are difficult to achieve by scientists working alone—your support can make the difference.

LANDSCOPE Expeditions



You can make a difference

When you travel with *LANDSCOPE* Expeditions, you help in a variety of ways:

FUNDING

- You and your financial contribution make the research possible. This alone is a significant factor in making the expedition a success.

SCIENTIFIC DISCOVERY

- You can help by collecting key information. Although some interpretations will be made in the field, much of the synthesis takes place back in the laboratory, where final identifications and analyses are made and results prepared for publication. You will discover that field work can be repetitive and time consuming as it has to be done in a systematic way. Outcomes are not always obvious at first—but there's always the chance of that surprise discovery.
- Extra pairs of hands and eyes are of great benefit in helping to achieve goals, as field work is very intensive. Leaders will maximise time spent on fieldwork, but will provide instruction in techniques as time permits.
- You may be asked to collect plant specimens and make animal sightings to increase our knowledge of the distribution of species. However, with plants, only representative specimens will be kept. Do not be disappointed if some are discarded, as redundancy is often part of the scientific process. With bird observations, it is the collective experience that confirms the sighting and produces advances in our knowledge.

YOU DON'T NEED TO BE A SCIENTIST

- Anyone can be of help—be assured that your assistance will make a contribution to nature conservation in Western Australia. Remember scientists and leaders have spent many years developing their level of expertise—they welcome your questions and are there to guide you.
- Your point of view or personal expertise may help in unexpected ways. Please feel free to share your ideas.

Establishing vegetation quadrats at Lake Mason. Photo – Kevin Kenneally

- Expect to return home with a broader understanding of the natural world, the role of scientific methods, the value of nature conservation and the rewards of knowing you have contributed to pioneering studies in remote areas. *LANDSCOPE* Expeditions aims to whet your appetite for nature, give you a taste of scientific discovery, and provide an experience that may not otherwise be a part of your life.

IT'S NOT ALL SCIENCE

- Many elements combine to make an expedition successful, not just the scientific activities. An affinity for team work, a flexible approach and a willingness to help in whatever way you can, help to create the best results for nature conservation.

Appendix 2: Lake Mason Plant Species List as of 15/5/05

Appendix 2: Lake Mason Plant Species List as of 15/5/05

Species	Apr-04	Sep-04	Mar-05
Abutilon cryptopetalum	4041		
Abutilon fraseri		4936	
Abutilon oxycarpum ssp. prostratum		4685	
Acacia aneura(fine lf.)		4715, 4724, 4736	
Acacia aulacophylla	4028		
Acacia ayersiana		4826	
Acacia ayersiana or aneura (need pods)		4723	
Acacia burkittii		4651, 4697, 4977	5014
Acacia ?coolgardiensis ssp. *effusa*		4721, 4791	
Acacia craspedocarpa		4988	
Acacia grasbyi		4853	
Acacia jennerae	3985		
Acacia ligulata		4967	
Acacia murrayana			5016
Acacia nyssophylla		4888	
Acacia oswaldii			5010
Acacia prainii		4819, 4623	
Acacia pruinocarpa			4994
Acacia quadrimarginea		4737, 4777	
Acacia ramulosa gp.		4891	
Acacia ramulosa var. linophylla		4734, 4738	5004
Acacia ramulosa var. ramulosa		4716, 4898	5002
Acacia sibina		4942	
Acacia sp. nov.		4838	
Acacia stowardii		4983	
Acacia tetragonophylla		4827	
Acacia victoriae		4885	
Actinobole uliginosum		4707	
Aluta maisonneuvei ssp. auriculata	4015B	4800	
Alyogyne pinoniana	4006		
Amphipogon caricinus		4941	
Amyema fitzgeraldii	4040		
Amyema gibberula ssp. gibberula (on Grevillea)		4712	
Amyema miquellii			4997
Anacampseros sp.		4814	
Anagallis arvensis		4953	
Angianthus cornutus		4691	
Anthotroche pannosa	4013		
Aristida contorta	4063		

Aristida holathera var. holathera		4011	
Atriplex bunburyana			5001
Atriplex holocarpa		4672A	
Austrostipa elegantissima		4673	
Austrostipa platychaeta		4881	
Austrostipa scabra		4775	
Baeckea sp. Sandstone C.A. Gardner sn.	*P*	4015A	
Boerhavia repleta		4056	
Bonamia rosea		4789	
Brachychiton gregorii		4835	
Brachyscome ciliaris		Q1	
Bromus arenarius		4974	
Brunonia australis		4901B, 4912	
Bulbine semibarbata		4991A	
Calandrinia creethae		4706, 4909	
Calandrinia eremaea		4631, 4790, 4843	
Calandrinia monosperma		4989	
Calandrinia polyandra		4684	
Calandrinia ptychosperma		4675	
Calandrinia schistorhiza		4833, 4846	
Calandrinia sp. 'ridged papillate'		sn	
Calandrinia stagnensis		4859	
Callitris tuberculata		4016	
Calocephalus multiflorus		4961	
Calotis hispidula		4690A	
Calotis multicaulis		4668	
Calytrix amethystima		4750, 4813	
Calytrix carinata		3997	
Calytrix eriosipetala	*P*	4812	
Calytrix sp. nov		4807A	
Casuarina pauper		4886	
Cassytha sp. (sterile; to be collected later due S of hmstd)			
Cephalipterum drummondii		4643, 4904	
Cheilanthes lasiophylla		4053	4771
Cheilanthes seiberi ssp. sieberi		3976	4728
Chenopodium cristatum			4638A
Chenopodium gaudichaudianum			4701
Chenopodium melanocarpum			4638B, 4689, 4917
Chrysitrix distigmatosa		4018	
Chrysocephalum apiculatum		4010	
Chrysocephalum puteale		4020	4735

Convolvulus clementii		4972A	
Crassula colorata var. acuminata		4960	
Cratystylis subspinescens			5011
**Cucumis myriocarpus*	3998		
Cuphonotus andreanus		4628	
Cuscuta epithymum		4832	
Cymbopogon obtectus		4776	
Dactyloctaenium radulans	4047		
Dampiera plumosa		4944	
Dampiera roycii	4002	4793	
Daucus glochidiatus		4659, 4951	
Daviesia grahamii		4804, 4980	
Dianella revoluta ssp. divaricata		4919	
Dicrastylis brunnea		4787	
Dielitzia tysonii		Q17	
Disphyma crassifolium		4852	
Dissocarpus paradoxus	3987		
Dodonaea adenophora	3999		
Dodonaea microzyga var. acrolobata		4761	
Dodonaea petiolaris	4055	4774	
Dodonaea rigida		4926	
Drosera macrantha ssp. eremaea		4783	
Duboisia hopwoodii		4795	
Dysphania glomerulifera ssp. eremaea	4048	4852	
Dysphania kalpari	4072	4902	
Dysphania rhadinostachya		4870	
Einadia nutans		4655B	
Emex australis		4655A	
Enchylaena tomentosa	4057		
Enekbatus eremaeus		4799	
Enneapogon caerulescens ssp. caerulescens	3990		
Enneapogon caerulescens ssp. occidentalis	4050		
Eragrostis eriopoda	4014		
Eragrostis lacunaria		4971	
Eragrostis pergracilis	4044	4911	
Eremophila alternifolia		4690, 4927	
Eremophila arachnoides ssp. arachnoiodes		4876	
Eremophila clarkei		4901, 4938	
Eremophila decipiens ssp. decipiens		4883	
Eremophila enata	4039	4752, 4897A, 4902B	
Eremophila eriocalyx		4713, 4818	
Eremophila exilifolia		4710, 4984	

Eremophila falcata		4933
Eremophila foliosissima	3995	4717
Eremophila forrestii		4677
Eremophila fraseri		4871
Eremophila glabra ssp. albicans	3989	
Eremophila glabra ssp. tomentosa		4682
Eremophila hughesii ssp. hughesii		Q18
Eremophila jacunda ssp. jacunda		4740, 4816, 4958
Eremophila lachnocalyx	4077	4923
Eremophila latrobei	4051	
Eremophila longifolia	3984	4978
Eremophila malacoides		4681
Eremophila metallicorum		4730, 4844, 4872, 4955
Eremophila oldfieldii ssp. angustifolia		4851, 4916
Eremophila oppositifolia ssp. oppositifolia	4078	4696, 4874
Eremophila pantonii		4760
Eremophila aff. pendulina		4725
Eremophila platycalyx ssp. platycalyx	4061	4782
Eremophila platythamnos	4019	
Eremophila serrulata	4068	
Eremophila shonae ssp. shonae	4029	4811
Eremophila spectabilis ssp. brevis	number?	
Eremophila spuria	4003	
Eremophila subfloccosa ssp. lanata		4928
Eriachne helmsii x mucronata	4004, 4012	
Eriachne mucronata		Q1
Eriachne pulchella ssp. pulchella		4808
Eriochiton sclerolaenoides		Q24
Erodium cygnorum		4630, 4920
Erymophyllum ramosum		4914
Eucalyptus carnei		4768
Eucalyptus gongylocarpa		4805
Eucalyptus gypsophila	3972, 3983	4887
Eucalyptus kingsmillii	4022	
Eucalyptus kochii ssp. amaryssia	4005	4930
Eucalyptus lucasii		4982
Eucalyptus oldfieldii ssp. pauper	4023	4889
Eucalyptus trivalvis		4722
Euphorbia australis		4687
Euphorbia boophthona		4869
Euphorbia drummondii		4688, 4772
Euryomyrtus inflata	*P3*	5018 Kaluwiri
Exocarpos aphyllus		4678

Exocarpus sparteus		4943	5015
Frankenia cinerea		4929	
Frankenia pauciflora		4666	
Gastrolobium laytonii	4066		
Glinus oppositifolia		4646	
Glischrocaryon flavescens		4949	
Gnephosis arachnoidea		4907	
Gnephosis brevifolia		4633	
Gnephosis tenuissima		4770	
Goodenia aff. maideniana		sn	
Goodenia havilandii	4036	4783B	
Goodenia macroplectra		4990	
Goodenia mimuloides		4653, 4679	
Goodenia muekeana	4007	4714	
Goodenia peacockiana		4828	
Goodenia tenuiloba		4733	
Grevillea acacioides		4802	
Grevillea didymobotrya ssp. didymobotrya		4963	
Grevillea exstorris		4809	
Grevillea inconspicua	*P*	4840	
Grevillea juncifolia		4803, 4965	
Grevillea nematophylla ssp. supraplana	3993	4902A	
Grevillea sarissa ssp. sarissa		4705	
Gunniopsis sp. 'Lake Mason'		4708	
Gyrostemon ramulosus			5017
Hakea francisiana		4785, 4946	
Hakea leucoptera ssp. sericipes		4868	
Hakea lorea			5005
Hakea preissii		4698, 4850	
Hakea recurva		4626	
Hakea recurva ssp. arida		4815A	
Halgania integerrima	4038		
Haloragis odontocarpa	3973		
Halosarcia halocnemoides ssp. halocnemoides		4648	4998
Halosarcia indica ssp. bidens		4649	
Halosarcia undulata	3978		
Hannafordia quadrivalvis ssp. quadrivalvis		4855	
Helipterum craspedioides		4780	
Hemigenia sp. 'Edah'	4026	4806	
Hemiphora elderi		4947	

Hibiscus gardneri	4067	4731	
Hibiscus sturtii ssp. grandiflorus		4935, 4987	
Homalocalyx thryptomenoides		4890	
Indigofera georgei		4746, 4903	
Isoetopsis graminifolia		4753	
Isotoma petrea	4070	4745	
Kennedia prorepens		4794	
Keraudrenia velutina ssp. elliptica			
Labichea eremaea	*P1*	4948	
Lawrencella davenportii		Q3	
Lawrencia helmsii		4672B	
Lemooria burkittii		4635A, 4858	
Lepidium muelleri-ferdinandii		4660	
Lepidium oxytrichum		4629	
Lepidium phlebopetalum		4878	
Lepidium platypetalum		4762	
Leptosema chambersii		4711	
Leucochrysum fitzgibbonii		4915	
Lobelia winifridae		4959	
Lomandra leucocephala var. robusta	4021	4892	
Lotus cruentus		4660A	
Lycium australe	3986	4702	
Lysiana murrayi	3991	4692, 4896	
Maireana amoena	3980	4657	
Maireana carnosa		4845	
Maireana convexa		4718, 4719, 4820	
Maireana georgei		4669, 4931, 4934	
Maireana glomerifolia		4683, 4939	
Maireana planifolia		4639	
Maireana planifolia x villosa	4032	4720, 4821,4740A	
Maireana pyramidata	3977	4658, 4703, 4704	5000, 5012
Maireana thesioides		4825	
Maireana tricoptera		4744	
Maireana triptera	4058	4670, 4848	
Maireana ±villosa	4080		
**Marrubium vulgare*		4899	
Marsdenia australis		4894	
Melaleuca xerophila	3982	4681A	
Menkea australis		4632	

Micromyrtus sulphurea		4748, 4805, 4806B	
Mirbelia rhagodioides		4981	
Mirbelia seorsifolia		4797,4798B	
Monachather paradoxus	4045	4906	
Myriocephalus guerinae		4635B, 4645, 4726	
Myriocephalus pygmaeus		no no.?	
Newcastelia hexarrhena		4969	
Nicotiana cavicola		4749	
Nicotiana rosulata ssp. rosulata	4033	4759, 4950	
Olearia humilis		4647	
Olearia pimeleoides		4624, 4924	
Olearia plucheacea		4767	
Olearia stuartii	4025		5020 Kaluwiri
Parietaria cardiostegia		4922	
Paspalidium basicladum		4788	
Paspalidium clementii	4027, 4045		
Peplidium sp. C Evol. Fl. & Fauna Arid Aust.	3981	4857	
Petalostylis cassioides	4043		
Philotheca brucei ssp. brevifolia	4030	4810	
Philotheca brucei ssp. brucei		4751	
Philotheca brucei ssp. cinerea	4030		
Pimelea microcephala		4694	
Pittosporum angustifolium		4691, 4834	
Plantago drummondii		4905	
Podaxis pistillaris	3992, 4001		
Podolepis canescens		4758, 4954	
Podolepis capillaris	4031		
Podolepis kendalii	4042	4757	
Podolepis lessonii		4755, 4860	
?Pogonolepis sp.		4709, 4861	
Polypogon montspeliensis		4900A	
Porana sericea		4663, 4895	
Portulaca oleracea		4674	
Prostanthera albiflora		4747B, 4765	
Prostanthera althoferi		4747C, 4925	
Prostanthera althoferi ssp. longifolia	4860		
Prostanthera campbellii		4991	
Prostanthera sericea		4747A, 4769	
Prostanthera wilkeana	4030		
Psydrax latifolium		4918	
Psydrax rigidula		4873	

Psydrax suaveolens		4867
Ptilotus aervoides		Q11, 15
Ptilotus albidus		4763
Ptilotus exaltatus		4897
Ptilotus gaudichaudii		4847
Ptilotus helipteroides		4764, 4837
Ptilotus macrocephalus		4667, 4865A
Ptilotus polystachyus		4865B
Ptilotus roei	3996	4903
Ptilotus schwartzii	3971	
Rhagodia drummondii		4823 4996
Rhodanthe sp.		4822
Rhodanthe battii		4779A, 4921, 4952
Rhodanthe charsleyae		4664
Rhodanthe chlorocephala ssp. splendida		4756
Rhodanthe floribunda		4882
Rhodanthe humboldtiana		4975
Rhodanthe maryonii		4690B
Rhodanthe propinqua		Q10, 17
Rostraria pumila		4957
Rulingia loxophylla		4792
Rynchcarrhena linearis		4940
Santalum lanceolatum		4910
Santalum spicatum		5008
Sarcostemma viminale ssp. australe		5019 Kaluwiri
Scaevola spinescens		4836
Scaevola aff. spinescens		4995
Scaevola parvifolia ssp. acuminata	4037	
Scaevola parvifolia ssp. parvifolia		4970
Schoenus subaphyllus		4979
Sclerolaena cuneata		4650, 4671
Sclerolaena densiflora		4642
Sclerolaena diacantha		Q14, 23, 24
Sclerolaena fusiformis		Q1
Sclerolaena patenticuspis		4541
Sclerostegia disarticulata		4932 4999
Senecio glossanthus		4661
Senna artemisioides ssp. artemisioides		4956, 4985
Senna artemisioides ssp. filifolia		4700, 4875

Senna artemisioides ssp. helmsii		4986
Senna glutinosa ssp. chatelainiana		4824, 4842
Senna sp. 'Austin'		4913
Senna sp. 'Meekatharra'		4680, 4781
Setaria dielsii	4046	
Sida atrovirens		4732
Sida calyxhymenia		4831, 4699
Sida excedentifolia	4024, 4071	
Sida fibulifera	4000	4662
Sida sp. 'unisexual'		4625
Sida spodochroma	4076	4786
Sisymbrium orientale		4627, 4976
Solanum cleistogamum		4773
Solanum coactiliferum		4968
Solanum hoplopetalum		4992
Solanum nigrum		
Solanum orbiculatum		4695
Solanum plicatile	4009	
Spartothamnella teucriiflora	3970	4636, 4866
Stackhousia megaloptera		4798
Stackhousia muricata		4830
Stenopetalum filifolium		4729
Streptoglossa liatroides		4884
Stylidium induratum		4807, 4962
Stylidium limbatum		4945
Swainsona beasleyana		4937
Swainsona canescens	4073	
Swainsona halophila		4652
Swainsona sp.		4972
Synaptantha tillaeacea		4864
Tetragonia eremaea		4637
Tetragonia cristata		4686
Thryptomene costata	4062	4778
Thysanotus exiliflorus		4727, 4783A
Thysanotus manglesianus		4815
Tietkensia corrickiae		4535C
Trachymene bialata	4074	
Trachymene ornata		4766
Tribulus astrocarpa	4035	4676
**Tribulus terrestris*	3988, 4049	
Tricanthodium skirrophorum		4880
Triodia basedowii	4017	
Triodia lanigera	3994	
Typha domingensis		4900

Velleia daviesii	4008	
Velleia hispida	3974	4734
Velleia rosea	4034	4754
Vittadinia eremaea		4973
Wahlenbergia tumidifructa		4863
Waitzia acuminata		Q18
Xanthorrhoea thorntonii		4796
Zygophyllum ammophilum		4640
Zygophyllum eichleri		4634, 4841, 4877
Zygophyllum eremaeum		4667
Zygophyllum halophilum		4839 Gi2
Zygophyllum ovatum		4879 Q11

Appendix 3: Amphibians and Reptiles of Lake Mason

Appendix 3: Amphibians and Reptiles of Lake Mason

Species names in **bold** have been recorded from Lake Mason/Black Range, otherwise records are from that general area of the Murchison Bioregion.

Hylidae (Tree Frogs)
Cyclorana maini
Cyclorana platycephala

Myobatrachidae (Ground Frogs)
Limnodynastes spenceri
Neobatrachus aquilonius
Neobatrachus centralis
Neobatrachus kunapalari
Neobatrachus sutor
Neobatrachus wilsmorei
Pseudophryne guentheri
Pseudophryne occidentalis

Agamidae (Dragon Lizards)
Caimanops amphiboluroides
Ctenophorus caudicinctus
Ctenophorus isolepis
Ctenophorus nuchalis
Ctenophorus ornatus
Ctenophorus reticulatus
Ctenophorus salinarum
Ctenophorus scutulatus
Lophognathus longirostris
Moloch horridus
Pogona minor minor
Tympanocryptis cephala

Gekkonidae (Geckos)
Diplodactylus conspicillatus
Diplodactylus granariensis rex
Diplodactylus maini
Diplodactylus pulcher
Diplodactylus squarrosus
Diplodactylus stenodactylus
Gehyra variegata
Heteronotia binoei
Nephrurus vertebralis
Nephrurus wheeleri wheeleri
Oedura marmorata
Rhynchoedura ornata
Strophurus assimilis
Strophurus ciliaris ciliaris
Strophurus elderi
Strophurus strophurus
Strophurus wellingtonae
Underwoodisaurus milii

Pygopodidae (Legless Lizards)
Delma butleri
Delma fraseri petersoni
Delma nasuta
Lialis burtonis
Pygopus nigriceps

Scincidae (Skinks)
Cryptoblepharus carnabyi
Cryptoblepharus plagiocephalus
Ctenotus ariadnae
Ctenotus atlas
Ctenotus calurus
Ctenotus grandis grandis
Ctenotus helenae
Ctenotus leonhardii
Ctenotus pantherinus ocellifer
Ctenotus quattuordecimlineatus
Ctenotus schomburgkii
Ctenotus severus
Ctenotus uber uber
Ctenotus yuinmery
Egernia depressa
Egernia formosa
Egernia inornata
Egernia striata
Eremiascincus richardsonii
Lerista bipes
Lerista desertorum
Lerista gerrardii
Lerista macropisthopus macropisthopus
Lerista muelleri
Menetia greyii
Morethia butleri
Tiliqua multifasciata
Tiliqua occipitalis

Varanidae (Monitor Lizards)
Varanus brevicauda

Varanus caudolineatus
Varanus eremius
Varanus giganteus
Varanus gouldii
Varanus panoptes rubidus
Varanus tristis tristis

Boidae (Pythons)
Antaresia perthensis
Antaresia stimsoni stimsoni

Elapidae (Front-Fanged Snakes)
Acanthophis pyrrhus
Brachyurophis approximans
Brachyurophis fasciolata fasciolata
Brachyurophis semifasciata
Demansia psammophis cupreiceps
Parasuta monachus
Pseudechis australis
Pseudechis butleri
Pseudonaja modesta
Pseudonaja nuchalis
Simoselaps bertholdi
Suta fasciata

Typhlopidae (Blind Snakes)
Ramphotyphlops bicolor
Ramphotyphlops bituberculatus
Ramphotyphlops hamatus
Ramphotyphlops waitii

Appendix 4:
Bird Species Recorded In the Sandstone-Yalgoo Area

Appendix 4: Bird Species Recorded In The Sandstone-Yalgoo Area

Casuariidae
Emu

Podicipedidae
Hoary-Headed Grebe

Pelicanidae
Australian Pelican

Ardeidae
White-Necked Heron
White-Faced Heron

Threskiornithidae
Straw-Necked Ibis
Glossy Ibis

Anatidae
Black Swan
Freckled Duck
Australian Shelduck
Pacific Black Duck
Grey Teal
Pink-Eared Duck
Hardhead
Australian Wood Duck

Accipitridae
Black-Shouldered Kite
Square-Tailed Kite
Whistling Kite
Brown Goshawk
Collared Sparrowhawk
Little Eagle
Wedge-Tailed Eagle
Spotted Harrier
Black Falcon
Peregrine Falcon
Australian Hobby
Brown Falcon
Nankeen Kestrel

Megapodiidae
Mallee Fowl

Phasianidae
Stubble Quail

Turnicidae
Little Button-Quail

Rallidae
Australian Spotted Crake
Black-Tailed Native Hen
Eurasian Coot

Otididae
Australian Bustard

Charadriidae
Banded Lapwing
Hooded Plover
Red-Capped Plover
Black-Fronted Dotterel
Red-Kneed Dotterel
Inland Dotterel

Recurvirostridae
Banded Stilt
Black-Winged Stilt
Red-Necked Avocet

Laridae
Silver Gull
Whiskered Tern
Gull-Billed Tern

Columbidae
Rock Dove
Laughing Turtle Dove
Diamond Dove
Common Bronzewing
Crested Pigeon

Psittacidae
Regent Parrot
Australian Ringneck
Mulga Parrot
Elegant Parrot
Bourke's Parrot
Budgerigar

Cacatuidae
- Cockatiel
- Red-Tailed Black Cockatoo
- Short-Billed Black Cockatoo
- Galah
- Major Mitchell's Cockatoo

Cuculidae
- Pallid Cuckoo
- Horsefield's Bronze Cuckoo
- Shining Bronze Cuckoo

Tytonidae
- Barn Owl
- Masked Owl

Strigidae
- Southern Boobook

Podargidae
- Tawny Frogmouth

Aegothelidae
- Australian Owlet-Nightjar

Caprimulgidae
- Spotted Nightjar

Halcyonidae
- Red-Backed Kingfisher
- Sacred Kingfisher

Meropidae
- Rainbow Bee-Eater

Motacillidae
- Richard's Pipit

Hirundidae
- White Backed Swallow
- Welcome Swallow
- Tree Martin
- Fairy Martin

Campephagidae
- Black-Faced Cuckoo-Shrike
- Ground Cuckoo-Shrike
- White-Winged Triller

Petroicidae
- Jacky Winter
- Red-Capped Robin
- Hooded Robin
- Western Yellow Robin
- Southern Scrub-Robin

Pachycephalidae
- Golden Whistler
- Rufous Whistler
- Gilbert's Whistler
- Grey Shrike-Thrush
- Crested Bellbird

Cinclosomatidae
- Chiming Wedgebill
- Chestnut Quail-Thrush
- Chestnut-Breasted Quail-Thrush

Dicruridae
- Grey Fantail
- Willie Wagtail
- Magpie-Lark

Pomatostomidae
- White-Browed Babbler
- Grey-Crowned Babbler

Pardalotidae
- Striated Pardalote
- Southern Whiteface
- Western Gerygone
- Weebill
- Inland Thornbill
- Chestnut-Rumped Thornbill
- Slender-Billed Thornbill
- Yellow-Rumped Thornbill
- Redthroat
- Shy Heathwren

Maluridae
- Splendid Fairy Wren
- Variegated Fairy Wren
- Blue-Breasted Fairy Wren
- White-Winged Fairy Wren

Sylviidae
- Little Grassbird
- Rufous Songlark
- Brown Songlark

Neosittidae
- Varied Sitella

Climacteridae
- White-Browed Tree-Creeper
- Rufous Tree-Creeper

Dicaeidae
- Mistletoebird

Zosteropidae
- Silvereye

Meliphagidae
- Brown Honeyeater
- Black Honeyeater
- Pied Honeyeater
- Singing Honeyeater
- Yellow-Plumed Honeyeater
- White-Plumed Honeyeater
- White-Eared Honeyeater
- Brown-Headed Honeyeater
- White-Fronted Honeyeater
- Yellow-Throated Miner
- Spiny-Cheeked Honeyeater
- Red Wattlebird
- White-Fronted Chat
- Orange Chat
- Crimson Chat

Passeridae
- Zebra Finch

Artamidae
- Masked Woodswallow
- White-Browed Woodswallow
- Black-Faced Woodswallow
- Little Woodswallow
- Grey Butcherbird
- Pied Butcherbird
- Australian Magpie
- Grey Currawong

Corvidae
- Little Crow
- Australian Raven

Ptilonorhynchidae
- Spotted Bowerbird

Appendix 5: Mammals of Lake Mason

Appendix 5: Mammals of Lake Mason

Dasyuridae
Kultar *(Antechinomys laniger)*
Mulgara *(Dasycercus cristicauda)*
Wongai Ningaui *(Ningaui ridei)*
Wooley's False Antechinus *(Pseudantechinus woolleyae)*
Fat-tailed Dunnart *(Sminthopsis crassicaudata)*
Little long-tailed Dunnart*(Sminthopsis dolichura)*
Hairy-footed Dunnart *(Sminthopsis hirtipes)*
Long-tailed Dunnart *(Sminthopsis longicaudata)*
Stripe-faced Dunnart *(Sminthopsis macroura)*
Ooldea Dunnart *(Sminthopsis ooldea)*

Macropodidae
Euro *(Macropus robustus)*
Red Kangaroo *(Macropus rufus)*

Tachyglossidae
Echidna *(Tachyglossus aculeatus)*

Muridae
House Mouse *(Mus musculus)*
Spinifex Hopping-mouse *(Notomys alexis)*
Ash-grey Mouse *(Pseudomys albocinereus)*
Desert Mouse *(Pseudomys desertor)*
Sandy Inland Mouse *(Pseudomys hermannsburgensis)*

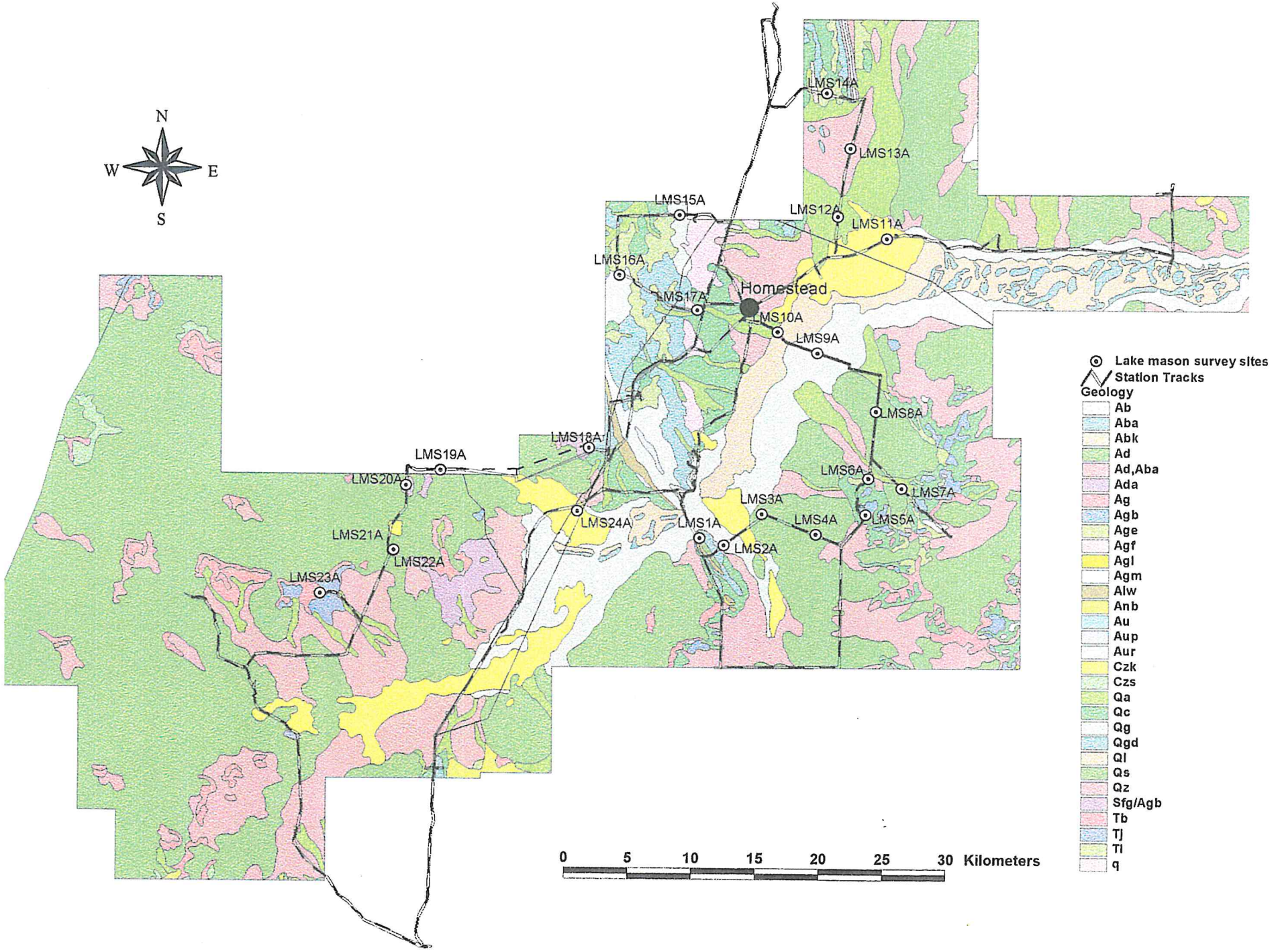
Canidae
Dingo *(Canis lupis dingo)*
Fox *(Vulpes vulpes)*

Felidae
Cat *(Felis catus)*

Molossidae
Inland Freetail Bat (*Mormopterus planiceps)*
White-striped Freetail Bat *(Tadarida australis)*

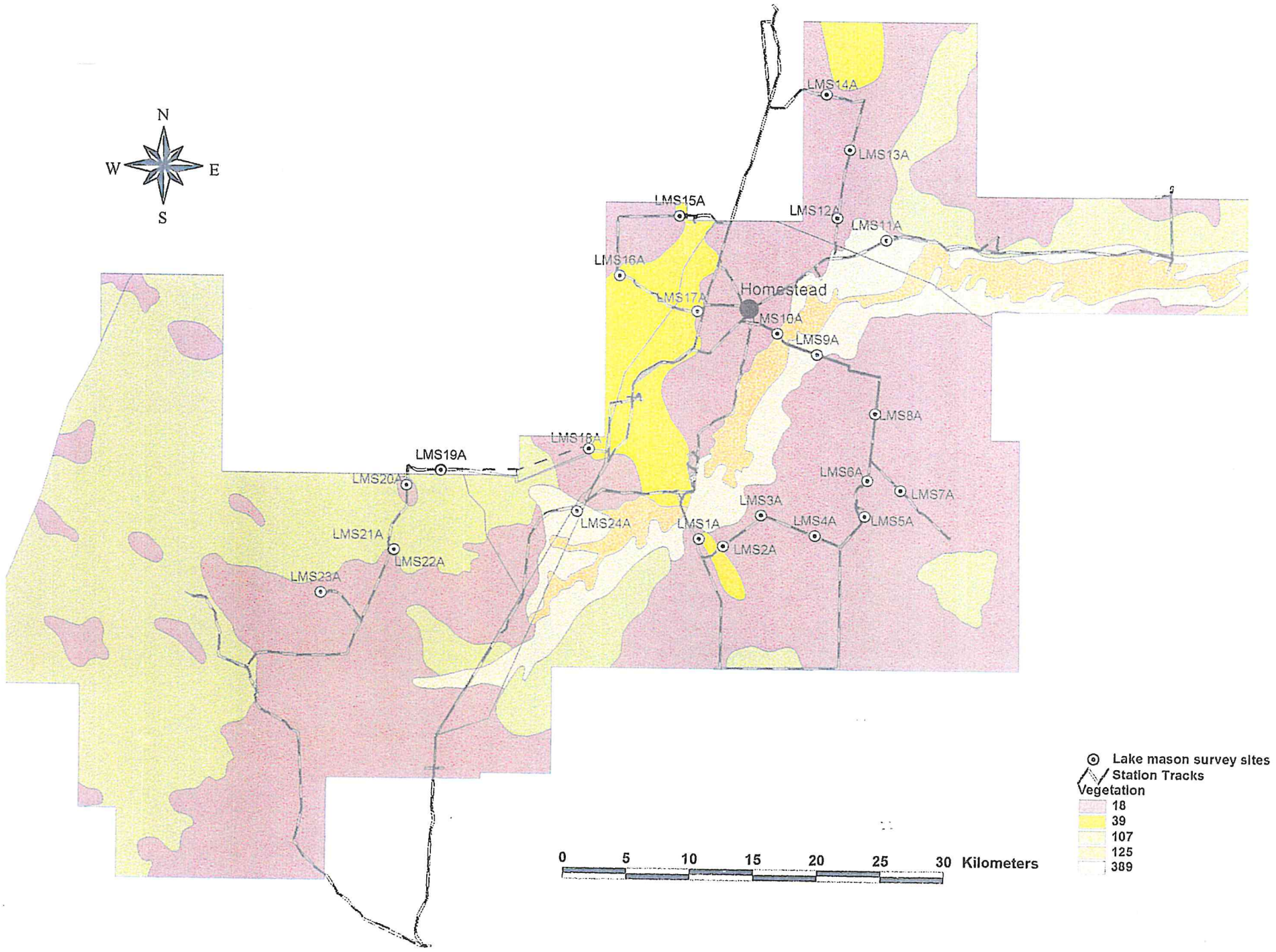
Vespertilionidae
Gould's Wattled Bat *(Chalinolobus gouldii)*
Lesser Long-eared Bat *(Nyctophilus geoffroyi)*
Inland Broad-nosed Bat *(Scotorepens balstoni)*
Inland Forest Bat *(Vespadelus baverstocki)*
Inland Cave Bat *(Vespadelus finlaysoni)*
Southern Forest Bat *(Vespadelus regulus*

Lake Mason/Black Range Biological Survey Sites



Appendix 6: Geology of Lake Mason showing survey sites

Lake Mason/Black Range Biological Survey Sites



Appendix 7: Vegetation of Lake Mason showing survey sites