

Expedition briefing



BEYOND THE DREAMING

PROJECT EDEN

September 5–13, 2002

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LANDSCOPE Expeditions – Working at the frontier of discovery



Department of Conservation and Land Management *in association with*



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Beyond the Dreaming Project Eden

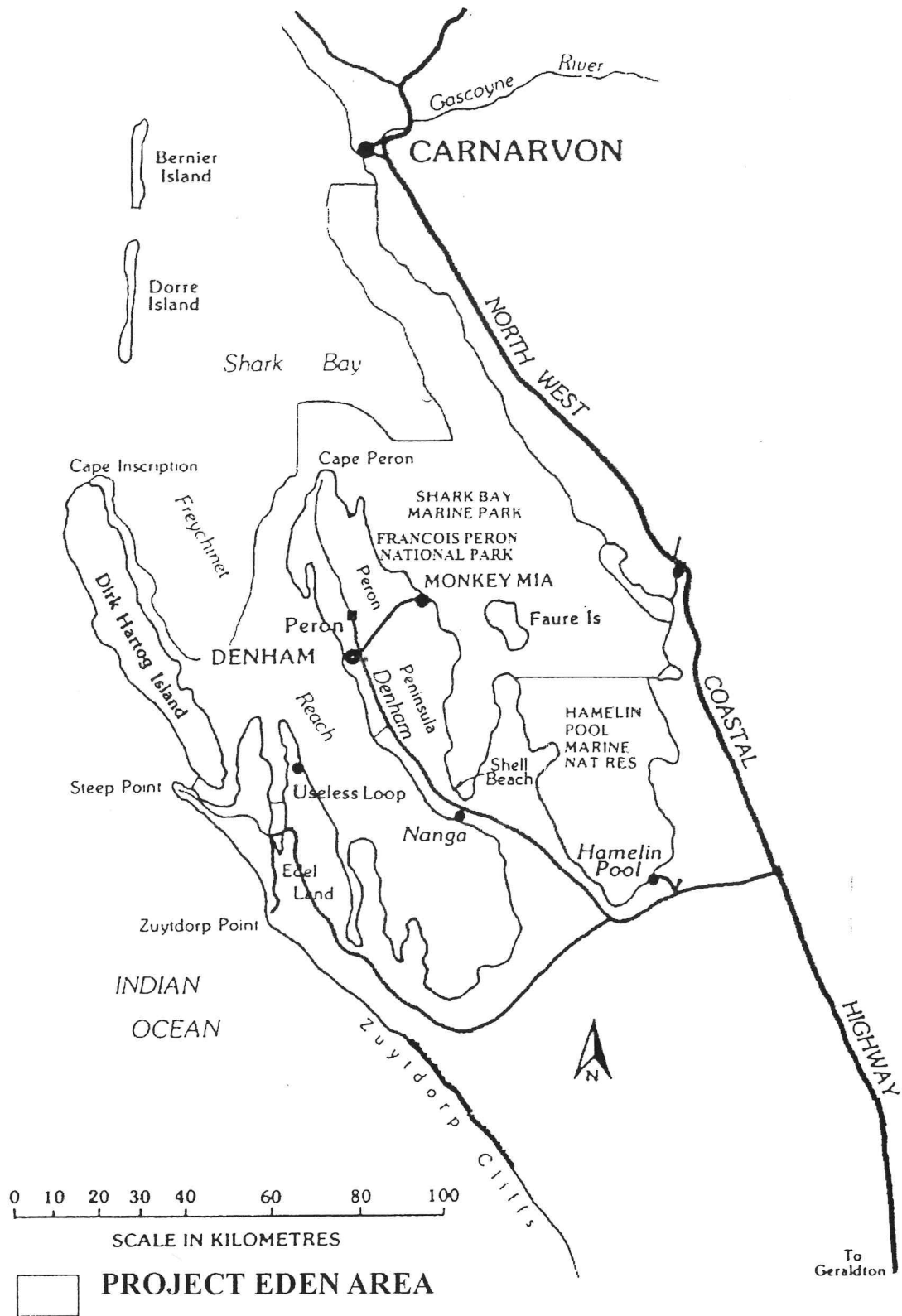
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**RESEARCH
PROJECT**

Figure 2. Map of study area



THE PROJECT

The Department of Conservation and Land Management's (the Department) *Project Eden* aims to remove virtually all feral cats, foxes, sheep, goats and rabbits from the 1,050 square kilometre area of the Shark Bay World Heritage Area, and to reintroduce the original fauna that has disappeared from Peron Peninsula. If this project is successful, the Peninsula could become the largest area in Australia where significant numbers of threatened animals are able to roam freely.

Project Eden is part of a broader fauna recovery programme – *Western Shield*. *Western Shield* aims to control feral predators over 4.7 million hectares of the Department's estate in the south-west of Western Australia, and then to reintroduce up to 23 species of mammal, bird and reptile into areas where they once lived.

Peron Peninsula is joined to the mainland by a narrow neck, enabling invasion by introduced animals to be controlled by fencing, trapping and baiting. The Department's research has shown that foxes and feral cats have been responsible for the disappearance and decline of dozens of native species, including at least 10 mammal species that were once found in the Shark Bay area. These include animals such as the banded hare-wallaby, western barred bandicoot, stick-nest rat, and the Shark Bay mouse, which are presently restricted to a few offshore islands. *Project Eden* will reintroduce these animals to the Peninsula. Other species that may be reintroduced include the chuditch, woylie, red-tailed phascogale, mala and bilby. Because of its size the Peninsula could support large populations of each of these species, and this will further contribute to the area's natural heritage conservation value.

Project Eden is being carried out in two phases. The first part of the project has been achieved, ie the erection of the feral animal-proof fence across the narrow neck of the Peninsula, and the control of foxes. Feral sheep and goats have also been controlled under a World Heritage plan. The number of feral cats has been reduced to a sufficiently diminished level, and some reintroduction has commenced. In 1997/98 woylies and malleefowl were released into François Peron National Park and, in September 2000 as part of that year's *LANDSCOPE* Expedition, bilbies were released for the first time. Subsequent monitoring has indicated that woylies and mallee-fowl have become established, and populations are expanding. Bilbies have also persisted, and breeding has occurred. However, it is too early to assess the success of this translocation. Mala and banded hare-wallabies were released during 2001, however, an increase in feral cat abundance resulted in excessive predation, and this translocation was not successful.

A successful cat-baiting program in April 2002 has again reduced cat numbers, and further translocations are planned. A captive breeding facility for mala, banded hare-wallaby, western barred bandicoot, and bilby has also been established on Peron Peninsula; Expeditioners will have the opportunity to visit this facility.

Participants in this *LANDSCOPE* Expedition will assist in the ongoing monitoring of bilbies, woylies, and malleefowl, as well as the small vertebrates such as hopping mice, dunnarts, and reptiles. Other threatened reptiles, such as the woma python will also be searched for and monitored.

The Expedition will voyage to islands in the Freycinet Estuary, south of Denham. Greater stick-nest rats were released on Salutation Island in 1991 and trapping will monitor these. We will visit nearby Three Bays and Baudin Islands where interesting reptile species occur.

VOLUNTEER ASSIGNMENTS

LANDSCOPE volunteers will be primarily engaged in fieldwork at the Peron Peninsula project site, however, they will also assist with general tasks around the homestead, and with research activities during our overnight stay at Salutation Island.

Field Work

Principal activities:

- Assist with:
 - Daily checking of the pit and Elliott traps for small mammals and reptiles.
 - Identification and measurement of captured animals.
 - Trapping woylies and bilbies.
 - Radio-tracking of woma pythons.
 - Locating feral animal tracks.
 - Daily bird surveys.
- Collect and sort invertebrate samples.
- Search for threatened reptile species.
- Undertake plant surveys in monitoring plots.
- Monitor stick-nest rats on Salutation Island.

Lab Work

Assist in compilation of data at the end of the day:

- Summarise trapping data sheets and enter into database.
- Write up notes.
- Plot feral animal tracks.
- Assist in identification of specimens.

Camp Work

- Assist with general camp maintenance.
- Assist with meal preparation and clean up.

FIELD TRAINING

In addition to orientation there will be briefings on:

- The project and research objectives.
- Camp procedures.
- Safety.

There will also be informal talks on *Project Eden*, feral animal control, reserve management, and local flora and fauna. There will be an opportunity to visit Monkey Mia and listen to talks by the researchers working with the dolphins. Visits will be made to the captive breeding facility. There will be opportunities to see some of the spectacular Shark Bay scenery.

Pit trapping is likely to trap a range of small mammals such as the spinifex hopping mouse, sandy inland mouse, and a variety of marsupial mice, as well as the ubiquitous house mouse. Reptiles found will probably include snakes, geckos, and skinks. When the larger cage, Elliott and Bromilow traps are put out, they must be placed under bushes for shade, so that animals do not become distressed from heat while waiting to be checked. Checking of traps will be finished by lunch time.

APPLICATION OF RESULTS

The results of the work associated with *Project Eden* are being reported in scientific journals, and contribute to the body of scientific knowledge on feral animal control, and arid land ecology and management. Results obtained from the project should provide answers to questions about the re-population, with threatened species, of arid lands.

Project Eden is involved with practical reserve management in relation to feral predator control. With phase one of the project having been successfully completed, the re-establishment of species that have become locally extinct is now proceeding. This *LANDSCOPE* Expedition will help in solving some of the practical problems associated with the second phase of the project, with volunteers providing valuable assistance in the field.

EXPEDITION LEADERS

The leaders of this Expedition have extensive experience in ecological research and management of natural ecosystems. **Keith Morris**, Senior Principal Research Scientist, has worked in the Shark Bay area for over 13 years, and has been involved in wildlife surveys of the islands as well as the reintroduction of the Shark Bay mouse and the greater stick-nest rat.

Senior Research Scientist **David Pearson's** research interests include rock wallaby conservation, desert fauna, Aboriginal ethno-ecology, and the management of fire for conservation in desert lands. In the last few years he has worked primarily on threatened reptiles, particularly carpet and Pilbara olive pythons.

Graeme (Tub) Liddelow, Senior Technical Officer, has worked for over 20 years on forest ecology and management, as well as almost 10 years on desert and arid land ecology.

Bruce Ward, Senior Technical Officer has also worked extensively in the south-west forest and the desert.

Kathy Himbeck is the Fauna Reintroduction Officer for Project Eden, and is based in the Department's Shark Bay District Denham office. She has had extensive experience trapping small and medium-sized mammals, as well as radio-tracking.

Research Assistant **Joanne Smith** will provide logistical support to the Expedition. Joanne is a former librarian now working as personal assistant to the Group Manager of the Department's Biodiversity Conservation Group. Joanne has had considerable experience catering for *LANDSCOPE* Expedition groups in recent years, her most recent being to Roebuck Bay in June this year.

Keith, Tub and Bruce have been involved with *Project Eden* and other *LANDSCOPE* Expeditions since 1995. Keith has also been involved in the Montebellos Magic *LANDSCOPE* Expedition to the Pilbara islands, and Tub and Bruce have, since 1992, led numerous expeditions to the Gibson Desert Nature Reserve. Dave Pearson has led *LANDSCOPE* Expeditions to the Queen Victoria Desert. Kathy has been involved in *Project Eden* since 2000.

EXPEDITION REPORT AND REUNION

A report on the outcomes of the Expedition will be provided to all participants following the trip. A reunion for all 2002 Expeditions will be held on Friday evening, 22nd November, 2002. You will be reminded closer to the date and advised of venue and other arrangements. This will be a great opportunity to see other participants' photographs and review the results of the 2002 *LANDSCOPE* Expeditions program.

**FIELD
LOGISTICS**

RENDEZVOUS

Volunteers will meet at **0630 hours** (6.30 am) on **Thursday 5 September 2002**, at the University of Western Australia (UWA) Extension Offices, Clifton Street (cnr Stirling Highway), Nedlands. There will be access to toilets if required.

The leaders will meet you, and personal gear will be loaded into the Department's vehicles. The Expedition will leave at 0700 hours, travelling via the Brand and North West Coastal Highways to Peron Homestead at Shark Bay.

If you are delayed for any reason, please phone Jean Paton on 0411 029 045. There will be regular stops during the journey, and opportunities to rotate passengers between the vehicles so everyone can get to know their fellow travellers along the way.

ITINERARY

Day 1 5 Sep Thur Perth to Shark Bay

0700 hours: Depart Perth and travel to Peron Homestead at Shark Bay (ETA approximately 1800 hrs).

- Set up camp before dinner
- Introductory talk on the project
- Allocation of tasks for the next day, and the whole trip.

Day 2 6 Sep Fri Peron Homestead, Shark Bay

- Visit Monkey Mia dolphins.
- Activities start and will include:
 - Setting pit and Elliott traps for small vertebrates
 - Set invertebrate pit traps
 - Setting traps for woylies and bilbies.

Day 3 7 Sep Sat Peron Homestead, Shark Bay

- Check traps for small vertebrates, and woylies and bilbies
- Start on the bird surveys
- Check roads for feral predator tracks
- Data entry of day's records
- Searching for signs of animal activity, including woma pythons and other threatened reptiles
- Visit captive breeding colony.

Day 4 8 Sep Sun Peron Homestead, Shark Bay

- As for previous day

Day 5 9 Sep Mon Peron Homestead, Shark Bay

- As for previous day

Day 6 10 Sep Tues Peron Homestead, Shark Bay

- As for previous day, plus
- Close traps.

Day 7 11 Sep Wed Peron Homestead to Salutation Island

- **0730 hours:** Depart Denham on charter boat for Salutation Island
- Set up trap grid for stick-nest rats
- Set traps on Three Bays Island for skinks.

Day 8 12 Sep Thur Salutation and Three Bays Islands to Denham

- Check and close traps, return to Denham via Baudin Island
- Dinner at the Heritage Resort, Denham.

Day 9 13 Sep Fri Shark Bay to Perth

- Pack up camp
- Drive back to Perth, via stromatolites at Hamelin Pool
- Return time is not expected to be before 1800 hours, however there may be an opportunity to phone ahead when we are just outside Perth, to identify an exact time.

This itinerary is provisional and may be varied at the discretion of the Expedition leaders.

DAILY SCHEDULE

0600 hours Breakfast and briefing on day's activities

0700 hours Begin day's activities (as per Itinerary above)

1200 hours Lunch

1630 hours End of day's activities
Showers and preparation of evening meal

1800 hours Dinner

1900 hours At the end of each day's work there will be time set aside for compilation of data, and discussion of each day's activities ("Show and Tell")

1930 to
2300 hours Opportunity to search for nocturnal reptiles

There will be some free time each day for people to follow personal interests. There will be plenty of photo opportunities throughout the day. The country is flat and the work will not be too taxing.

TEAM DEVELOPMENT

Team spirit will initially be built by travelling together in the Department's vehicles to Shark Bay – there will be regular stops, and team members will be rotated between the vehicles. Having meals together, sharing in preparation and clean-up, working and living together, and being involved with this exciting project will enhance on-site team spirit.

RESEARCH AREA

The study area is on the Peron Peninsula in the Shark Bay World Heritage Area, which is 800 kilometres north of Perth. We will be staying at the former Peron Station homestead 10 kilometres from Denham; Monkey Mia is 20 kms to the east. Peron Peninsula is 1050 km² in area, of which approximately half is in the François Peron National Park. The whole area is noted for its natural beauty, and diversity of land and seascapes.

Salutation Island is a 160 ha nature reserve located 70 km south of Denham in the Freycinet Estuary. Three Bays and Baudin Islands are about 5 ha, and lie 10 km west of Salutation Island.

ACCOMMODATION and LOGISTICS

We will be camping in the former Peron Station homestead, so please don't expect the "Ritz"; the old house is fairly sparse building that had a facelift a few years ago. There are showers, toilets and a laundry facility (with washing machine) so heaps of clothes won't be necessary. More importantly, there is the famous "hot tub" (an artesian bore) at the homestead. This will be appreciated especially after a hard day in the field. Bunk beds and mattresses will be provided. A mosquito net will be essential if you plan on sleeping out in the open, or ashore when we are on the islands.

You should have four items of luggage – your *LANDSCOPE* Expeditions duffel bag, sleeping bag (lightweight, compact but warm), daypack, and pillow. Bag labels are provided, however, as all the bags look the same, you may wish to mark your bag with a coloured ribbon, or something else that helps you spot your bag quickly. You may also wish to bring a large orange garbage bag with ties to protect your bag from damp, dust, or rain.

For the voyage to Salutation Island we will use Shark Bay Charter Service's *Ocean Invader*, a 55 foot West Coaster. Meals and accommodation are provided on board, however, you will need your sleeping bag and pillow, and a plastic ground sheet, and mosquito net if you want to sleep outside or ashore. Drinks may be purchased from the boat's fully licensed bar. Please follow the skipper's safety instructions while on board.

FOOD AND DRINKS

Food will be provided, and participants and organisers will share in the preparation of meals each day on a rotation basis. Please advise Jean Paton by 15 August, 2002 if you have special dietary requirements (Work 08 9334 0401; Mobile 0411 029 045; email: jeanp@calm.wa.gov.au). Drinks other than tea or coffee will be at your expense. On arrival in Shark Bay, a stop will be made at the bottle shop in Denham for that "something extra" to enjoy with your evening meal. There may be other limited opportunities for you to restock your personal supplies, however, we recommend you bring all you need with you at the start of the trip. The Expedition will supply some cask wine.

PHYSICAL CONDITION

The Expedition will not demand elite fitness. However, some level of physical fitness is required to service the traps each day.

There will be as much walking, exploring and searching as you want, but it is wise to regulate your activities according to your physical condition.

If you are over 60 years of age, *LANDSCOPE* Expeditions' office must be supplied with a doctor's certificate of fitness.

ENVIRONMENTAL CONDITIONS

Climate: The area is usually warm at this time of year with an average daytime temperature of 30°C, and night time temperatures around 20°C.

Terrain: Walking on bush tracks, some of them sandy, will be an essential part of the work, either radio-tracking woylies and malleefowl, looking for feral predator tracks or searching for signs of animals. It is therefore imperative that your footwear is comfortable. The area is not very hilly.

Clothing and Footwear: Acacia shrubland and spinifex are the dominant vegetation types, so long pants and boots that protect your ankles are recommended. If you prefer to wear shorts, bring some canvas gaiters or leggings; shorts leave your legs susceptible to sunburn, insect bites, scratches, and spinifex; gaiters can be purchased from camping stores. You will need comfortable, light shoes to wear around the homestead. Spinifex spines and grass seeds are very hard and sharp, and can penetrate all but the strongest materials. Acacia (wattle) branches are also very hard and sharp, and can cause injury if walked into. Spinifex spines often break off under the skin, leading to small but painful infections. The open fabric of many joggers is no barrier to spinifex spines, so leather boots with ankle protection, well worn in to avoid blisters, are recommended for field work. Canvas garden gloves may be useful for some work.

MEDICAL AND SAFETY ADVICE

Please familiarise yourself with the enclosed brochures from the Health Department of Western Australia.

Sunburn 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 essential. If you are too tired to go back into the field after lunch, please advise the leaders – your safety, health and comfort are paramount. Please wear your hats in the field, you will be in the sun a lot.

Two elastic 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 are essential. Use a torch if you get up at night to illuminate the ground, and wear your boots (not thongs or open sandals) to minimise bite risk. Keep boots inside a bag at night so nothing crawls into them.

Insect repellent and fly nets for your hats will make it more pleasant as flies can be a nuisance during the day. Mosquitoes can also be a problem during the night if you wish to sleep outside on the Peron Homestead verandah. Sandflies occur in coastal regions—especially if there has been recent rain. Repellents are effective, and antihistamine tablets and creams are advised if you are particularly susceptible to insect bites. Ticks may be encountered. 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.

At meal times, wear disposable gloves if helping with food preparation; these will be supplied. For washing bodies and clothing Peter G's liquid soap is a good soap to use, as are medicated soaps such as gamophen, or sandalwood, which is natural to the bush. 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.

To guard against dehydration, it is vital to always carry an adequate supply of drinking water with you in your daypack. Do not drink water that has not been treated. All water used for human consumption on this Expedition will be rainwater from a tank, or be treated.

The presence of the highly venomous Mulga, or King Brown snake on Peron Peninsula, and the Gwardar on Salutation Island make it essential to:

- Use caution in approaching any snakes
- Wear appropriate footwear and leggings at all times (no thongs or sandals)
- Carry your pressure bandages at all times.

Most importantly, never leave the group without telling one of the leaders where you are going, and always be accompanied by at least one other person.

The Expedition will carry a comprehensive first aid kit.

FIELD COMMUNICATIONS

There is a telephone at the homestead for emergencies. However, most of our communications will be through the Department's office at Denham (08 9948 1208) as we will be in the field for most of the day.

The Department's vehicles are in constant radio contact with the Denham office and some of the Department's vehicles also have RFDS radios.

Mobile phones do not work at Peron Homestead, but do operate within the Denham townsite.

If you need to be contacted urgently while you are away, communication can be established through LANDSCOPE Expeditions office: Jean Paton 9334 0333, or 0411 029 045.

**ADVANCE
PREPARATION**

FIELD SUPPLIES

It is important that you bring loose-fitting clothes to protect you from the sun. A warm jacket for the evenings will be essential. Bathing costumes for the "hot tub", and shorts for when we go to Monkey Mia to see the dolphins will be necessary. Small plastic bags have a range of uses. Include a large, sturdy plastic garbage bag with ties to protect your bag from dust during transport.

Check List

- sturdy, comfortable, worn-in walking boots or shoes with good tread
- light shoes for around camp
- thick walking socks
- underwear
- long trousers, loose and tough
- shorts
- Bathers (essential for the "hot tub")
- long-sleeved, loose-fitting shirts
- casual clothes for travelling and around camp
- t-shirts
- jumper, warm jacket, or 'polarfleece'
- warm beanie or cap to wear at night
- cord or scarf to anchor hat (if not using the Department's Volunteer Hat)
- sunglasses
- fly net (essential - drops over hat)
- gaiters (optional) (useful protection if you like wearing shorts)
- canvas garden gloves
- sleeping bag
- sleeping bag sheet (protects the bag and adds warmth)
- mosquito net if you plan on sleeping outside
- pillow
- 1-litre water bottle, leak-proof
- personal toiletries, including tissues
- towel
- Chux, Wet Ones, or Baby Wipes
- resealable small plastic bags
- insect repellent and sunscreen
- personal first aid, prescription medicine and spectacles
- matches or lighter
- small robust torch plus spare batteries and spare globe. (A head torch is preferable as it leaves both hands free)
- small daypack to carry camera, film, water bottle, snacks, etc
- camera and film
- binoculars (field glasses), and field guides if you have an interest in the local bird life
- notebook and pen
- compass and whistle
- small clothesline and a few pegs
- pocket knife
- lots of enthusiasm and smiles

LANDSCOPE Expeditions will supply a canvas bag for your gear, a Volunteer full-brimmed hat, a stubby holder and a thermal mug.

REFERENCES:

Useful, pocket-sized guides to the region and local wildlife are the Conservation and Land Management *Discovering Shark Bay Marine Park and Monkey Mia*, in the Discovering series, and *Animals of Shark Bay*, from the Bush Book series. These are included in your briefing package.

REFERENCE LIST

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Thompson, C. and Shepherd, R. Return To Eden, LANDSCOPE, Autumn 1995.

Thompson, C. *Animals Of Shark Bay*, Bush Books, Conservation and Land Management, Perth, 1996.

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Wilson, B. Peron the Explorer, LANDSCOPE, Summer 1991/92.

The Expedition will carry a reference library. Please bring your own field guides if you wish.

NOTES