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2002

LANDSCOPE EXPEDITIONS PROGRAM

ACCREDITED TOURISM BUSINESS · AUSTRALIA ·

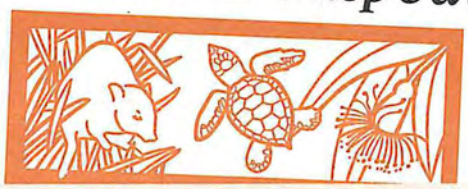
We have a place for you at the frontier of discovery

DEPARTMENT OF Conservation AND LAND MANAGEMENT

in association with

UWA EXTENSION
THE UNIVERSITY OF WESTERN AUSTRALIA

2002 LANDSCOPE Expeditions



LANDSCOPE

WA's CONSERVATION, FORESTS AND WILDLIFE MAGAZINE

Dear Friends,

Welcome to the 2002 program of *LANDSCOPE Expeditions*. This is a very special year marking ten years of *LANDSCOPE Expeditions*. It is also the International Year of Ecotourism and the Australian Year of the Outback.

We invite old friends and new to join scientists and regional staff and help us celebrate by taking part in field-based study and research projects throughout Western Australia.

We have some special opportunities for you in the coming year, starting in January with a turtle tagging expedition to Dirk Hartog Island aboard the *James Scheerer II* research vessel. In early June we will study migratory waders at Roebuck Bay, Broome and, later that month, visit the spectacular Mitchell Plateau in the Kimberley. Those with a real sense of adventure may choose to explore the rugged Barlee Ranges, on an August expedition into a 'restricted entry' nature reserve. In addition we'll revisit the Gibson Desert, the Peron Peninsula and Mount Augustus to help with ongoing projects. Some expeditions offer a tag-along option.

You get more on a *LANDSCOPE Expedition*. We are a nationally accredited research expeditions program, committed to high standards and continuous improvement. We provide you with a written briefing, scientific leadership, a trip diary, an illustrated expedition report and a reunion where you can share your experiences. And that's not all—if you're a repeat expeditioner, booking directly with us, we'll give you a 10% discount on any trip in this brochure (see p. 13).

You don't have to be a scientist to join a *LANDSCOPE Expedition*. These experiences are open to people from all walks of life, and the only qualifications are good health, an interest in nature conservation, a desire to be part of a team and a sense of humour.

Why not visit the outback with us in the cause of conservation?

Ron Kawalilak
EXECUTIVE EDITOR, *LANDSCOPE*

PS For more information on *LANDSCOPE Expeditions* visit our website at http://www.naturebase.net
Even if you can't join us on an expedition just now, you can still be part of the conservation and management of Western Australia's unique natural heritage by becoming a subscriber to our award winning *LANDSCOPE* magazine.

LOCKED BAG 29, BENTLEY DELIVERY CENTRE, WESTERN AUSTRALIA 6983

DEPARTMENT OF
Conservation
AND LAND MANAGEMENT

2002–2003

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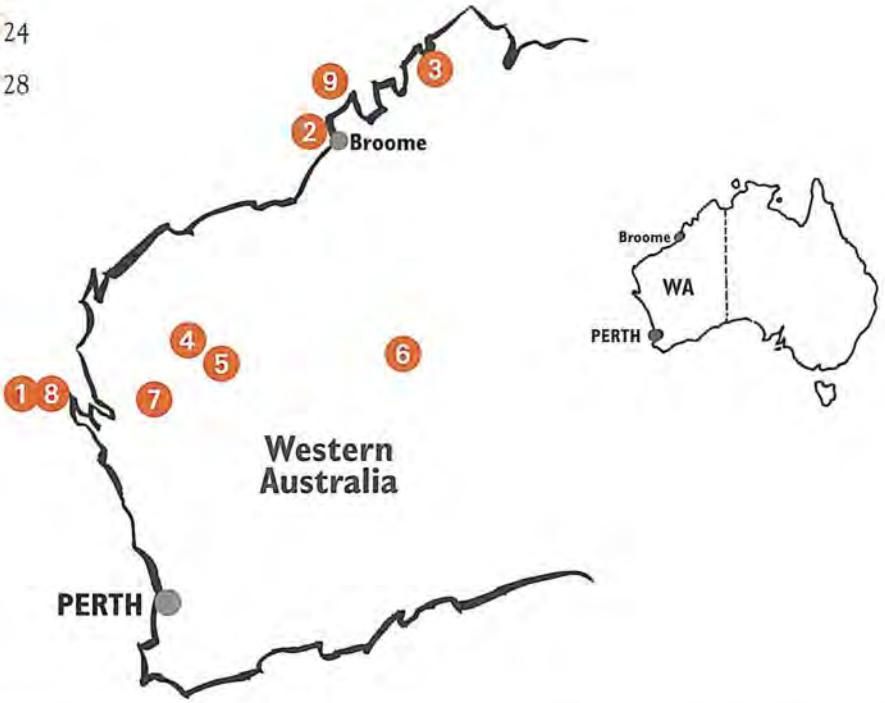
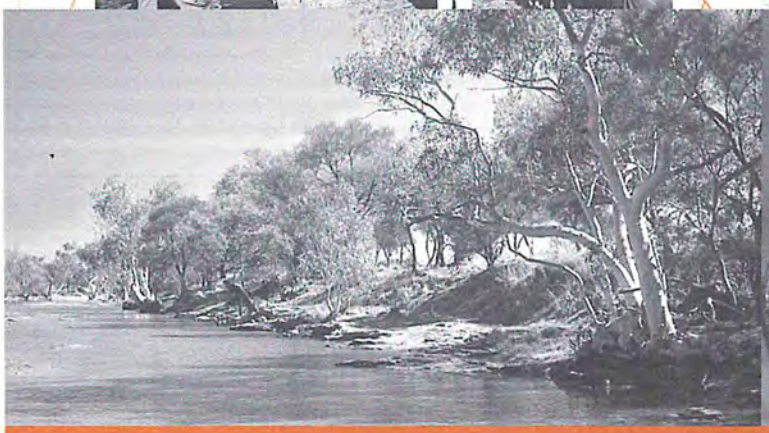
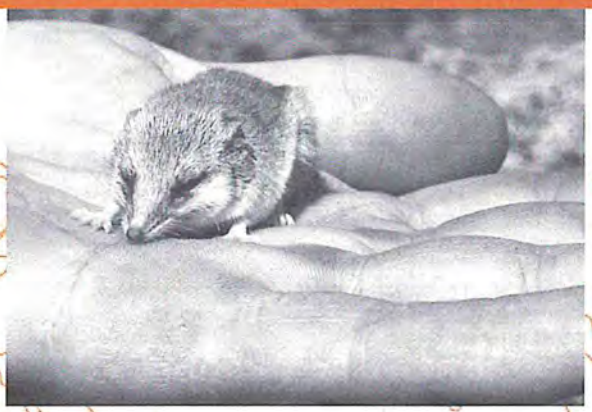
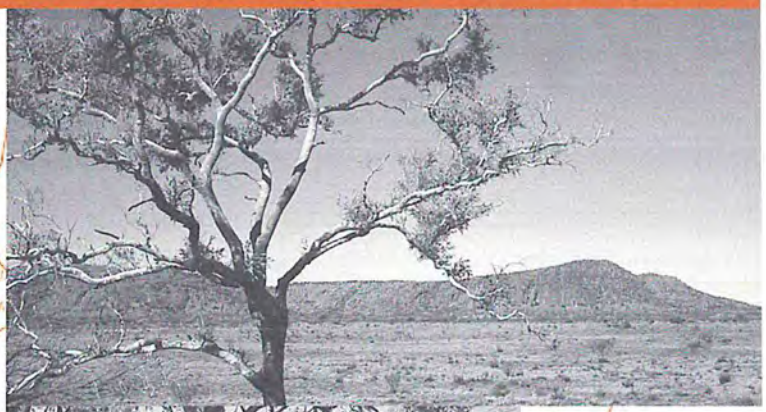


Cover: Dr David Webb, Dr Alfred Schwarzenbach and Margo Webb photographing *Grevillea juncifolia* on the red desert sands in the proposed Carnarvon Range Conservation Park, during the 2001 *LANDSCOPE Expedition*. Photo – Kevin Kenneally



Join us in the International Year of Ecotourism





2002

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 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.

The Department of Conservation and Land Management is responsible for the management and sustainable use of Western Australia's 23 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 native plants and animals throughout the State.

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. The Department 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 to be registered as a conservation volunteer.

You can visit and gain an understanding of remote or inaccessible places. You can have the satisfaction of knowing you have contributed to our knowledge of threatened environments and endangered species. Unique photo opportunities and the chance to see and handle 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.

UWA EXTENSION TRAVEL AGENT'S LICENCE NO. 9TA00454

DON'T MISS OUT – BOOK EARLY

Most expeditions have a limited number of places. Some expeditions are only offered once. Please book early so you don't miss out. Flights and accommodation in the north-west are in high demand—another good reason to make your travel plans early.

CONSERVATION AND LAND MANAGEMENT VOLUNTEERS

When you sign up for a *LANDSCOPE Expedition* you are automatically registered as a volunteer. You will be given a volunteer's hat and will receive free copies of *Conservation News*. You are also entitled to take part in a range of other volunteer activities, should you so wish. Being a volunteer offers you the opportunity to develop a greater awareness and understanding of nature conservation and to play an active role in managing the conservation estate. Volunteer activities are available in the areas of information, research, management, maintenance and campground hosting.

2002

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 rain forests (vine thickets) 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 southern ocean off Albany and Esperance.

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 science's 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 the 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 encourages 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 to identify specimens. Many conservation goals are difficult to achieve by scientists working alone—your support can make the difference.

2002 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 fieldwork 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 fieldwork 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.
- 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* aim to whet your appetite for nature, to give you a taste of scientific discovery, and to 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 teamwork, a flexible approach and a willingness to help in whatever way you can, helps to create the best results for nature conservation.

2002

Loggerhead Turtles of Dirk Hartog Island

Dirk Hartog Island, Shark Bay World Heritage Area, Western Australia

2002 Team A: 7–14 January, Team B: 14–21 January; 2003 Team A: 6–13 January, Team B: 13–20 January

David Charles, Operations Officer, Monkey Mia Reserve, Shark Bay District
Richard Hall, Marine Reserves Officer, Shark Bay District
Craig and Jessie Shankland, *James Scheerer II* research charter vessel, Shark Bay

The sandy beaches of Turtle Bay, at the northern end of Dirk Hartog Island, are among the few key nesting sites in Western Australia for the loggerhead turtle (*Caretta caretta*). The species is considered the most endangered turtle that nests in the Australian region and is declared threatened under the Western Australian Wildlife Conservation Act.

Expedition members will have the opportunity to observe egg laying, hatchling emergence (depending on season), and help tag female loggerheads that nest on Dirk Hartog Island each night at the peak of the summer season. Research results from the past few years indicate that this site is the largest breeding colony of loggerhead turtles on the Western Australian coast and in the south-east Indian Ocean Basin. Some 700 female loggerheads are estimated to nest at Turtle Bay each year.

Loggerhead turtle.

Until now the research has been particularly difficult because of the isolation of nesting sites and having to camp on the beach. However, by using the research vessel *James Scheerer II* as our base, the Turtle Bay location can now be accessed without undue disturbance to the nesting population.

The nesting site is very close to Cape Inscription, the landing site of Dutch explorer Dirk Hartog in 1616. There will be opportunities to explore this historic location with its lighthouse; to cruise to the western side of the island to view the spectacular cliffs and observe whale sharks; to fish; to snorkel over coral formations; and relax aboard the *James Scheerer II* or go beachcombing. The area is noted for its natural beauty and relative isolation.

FIELDWORK

Many people from all over the world visit the Shark Bay region each year to experience the famous dolphins of Monkey Mia. However, this expedition will provide a memorable introduction to the broader marine environment of this World Heritage Area and to rarely-visited island locations. Based aboard the research vessel, volunteers will help with observations of turtle nesting and egg laying, and assist with tagging of loggerhead turtles each night for six nights. By day, we will explore the island and the marine environment.

CONDITIONS

Expedition members will make their own way to Denham, Shark Bay. Participants will board the *James Scheerer II* research vessel in Denham on the morning of Day 1 and cruise approximately 45 nautical miles to the northern end of Dirk Hartog Island. The vessel will be based at Turtle Bay for the duration of the expedition, but there will be excursions down the east and west sides of the island. The *James Scheerer II*, launched in 2001, is a 17.6-metre motorised catamaran, purpose-built for research, charter and sightseeing in west coast conditions. A shallow draft allows her access to secluded bays and also minimises disturbance to seagrass beds. The vessel's main saloon/galley area and wheel- house are air-conditioned. Six cabins accommodate up to eight passengers. This expedition will be limited to six volunteers to enable you to sleep in comfort after your turtle-tagging shift. For your convenience and comfort, the vessel has a desalinator for fresh water showers, a laundry equipped with washing machine and dryer, and a library. The vessel will return to Denham town jetty by lunchtime on Day 7, and volunteers will be accommodated overnight in Denham. An expedition dinner will be held on the final evening. All meals and light refreshments, from lunch on Day 1 to breakfast on Day 8, are provided. Ample refrigeration is available on board.

RELATED INTERESTS

Observation skills and an interest in marine wildlife ecology, snorkelling, photography, historical research, island biogeography.

DEPARTURE POINT

The trip starts and finishes in Denham, Shark Bay, Western Australia. Denham is 833 kilometres from Perth and is serviced by regular coaches and flights from Perth.

2002

INCLUSIONS

Seven days' ocean-going transport on a 17.6-metre air-conditioned charter vessel, one night's shared accommodation and meals in Denham, research equipment and supplies, thermal mug, stubby holder, duffel bag, volunteer hat, written briefing, expedition diary and report. Linen and bedding are supplied both on board the *James Scheerer II* and at the overnight accommodation.

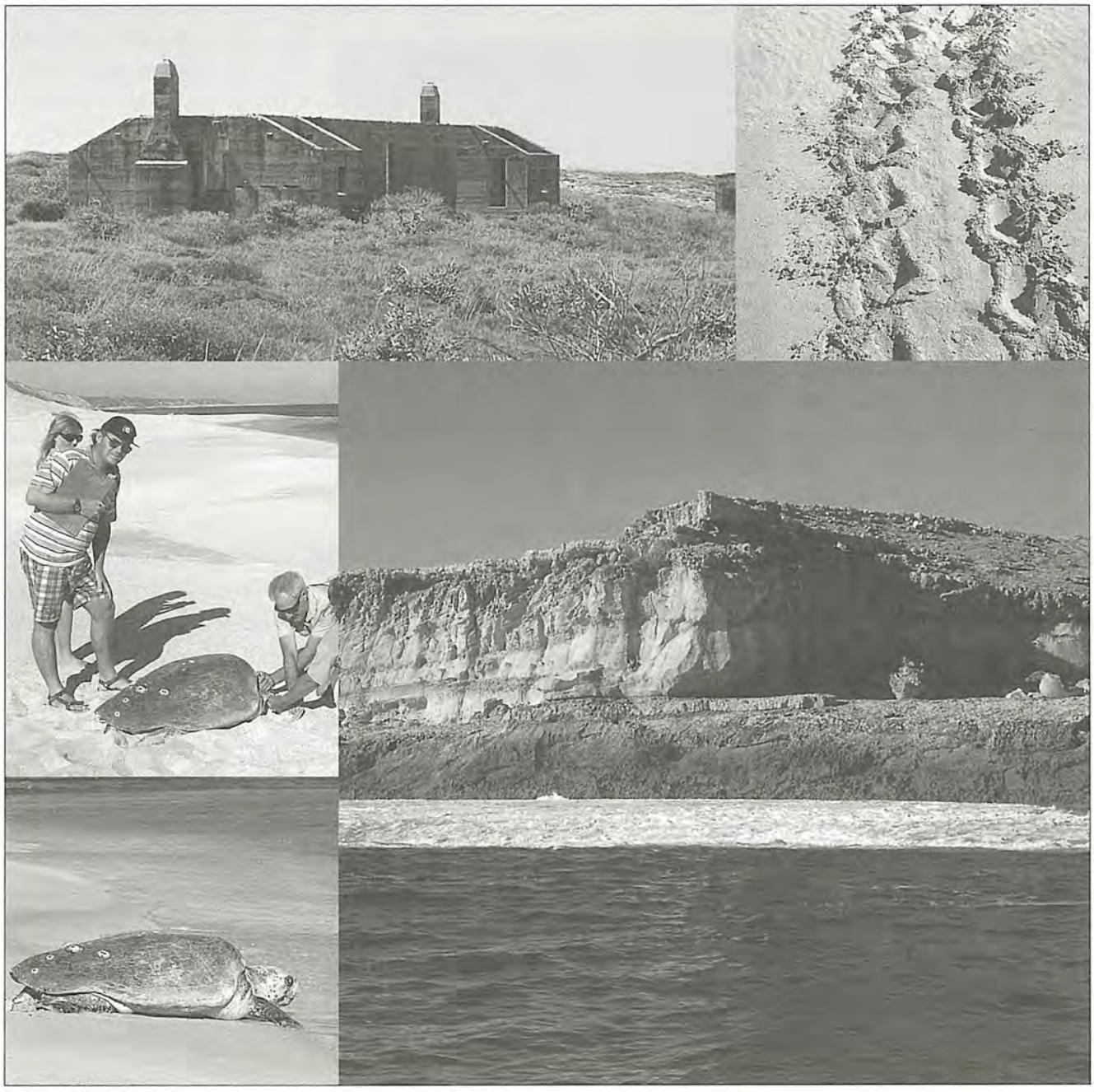
NOT INCLUDED

Travel to and from departure point.
Medical treatment or emergency evacuation expenses.
Alcoholic beverages and other personal expenses.
Snorkelling equipment and fishing gear.

CONTRIBUTION (includes GST)

2002 $1495
2003 TBA

Scenes from the Shark Bay World Heritage Area



2002

Life on Land's Edge—Birds of Roebuck Bay, Broome

Pearl Coast, Kimberley Region, Western Australia. June 7–15

Grant Pearson, Manager, Woodvale Research Centre, Perth; Dr Marc Lavaleye, Dr Petra de Goeij, Dr Theunis Piersma, Marine Biologists, Netherlands Institute for Sea Research (NIOZ), Texel Island, Wadden Sea; Dr Pieter Honkoop, University of Sydney; Dr Danny Rogers, Johnstone Centre, Charles Sturt University, Albury, NSW; Professor Robert Hickey, Central Washington University, USA Shirley Slack-Smith, Western Australian Museum, Perth, WA
Associate leaders: Jamie Wallis, Wallis Drilling and Ted Costello, Wanneroo Smash Repairs, Perth

Broome is one of Australia's most popular tourist destinations. But it's not only popular with people. Every Australian summer hundreds of thousands of migratory shorebirds congregate at Roebuck Bay, Broome on their southward migration from the frozen Siberian tundra.

Recent research suggests that Roebuck Bay contains the richest known intertidal mudflats in the world. These provide a smorgasbord of living organisms, the distribution and biology of which is poorly understood by science, but relished by the birds. Most have flown 10,000 kilometres to reach this Ramsar wetland of international importance. You are invited to join some of the foremost experts in the world at Broome Bird Observatory, to examine the relationships between these transequatorial migratory shorebirds and their food supply.

Migratory shorebirds at Roebuck Bay.

These highly specialised birds have an extremely tight energy budget. Unintended disturbance by people at their foraging and resting places can have a tremendous negative effect on the wordwide population. Developments along the coastal seaboard may threaten the delicate balance of invertebrate communities and it is important to collect baseline data before changes take place. This knowledge is essential if we are to achieve an insight into how human impacts, such as tourism and pollution, affect shorebird environments. The information you collect will contribute to the picture of Roebuck Bay as a shorebird habitat, and how the migratory shorebirds are faring.

FIELDWORK

Fitter members with a liking for "mud, glorious mud" may help collect samples on the intertidal area, using a global positioning system (GPS) to locate the sites. You will collect samples using coring procedures developed at Roebuck Bay in 1997 and Eighty Mile Beach in 1999. These will be sieved, flushed and sorted and the animal contents identified under microscopes. Samples will be collected by travelling across the shallows in hovercraft and research vessels, or on foot. You may also assist with a range of worker-friendly tasks suitable to all ages and physical conditions, with an emphasis on bird and habitat studies. Data collected will include shorebird counts, species composition and feeding behaviour. Bird counts will be made on Roebuck Bay at high tide, on the intertidal area at low tide, and in peripheral wetlands behind the Bay. Other tasks include sorting of specimens, classification and logistical support. You will also be able to study shells with Shirley Slack-Smith of the WA Museum.

CONDITIONS

The town of Broome is situated on Roebuck Bay at the edge of the Indian Ocean. We will meet in Broome and travel by road to the Broome Bird Observatory. Meals, basic accommodation, showers and toilets are provided but you will be expected to help with expedition chores. Expect sunny days and balmy nights at this time of year.

RELATED INTERESTS

Observation skills and an interest in invertebrates, birds, plants, marine fauna, shells, photography and Aboriginal culture will be useful.

DEPARTURE POINT

The expedition starts and finishes in Broome. Broome is 2,230 kilometres north of Perth and 1,860 kilometres south-west of Darwin. It is serviced by regular flights and coaches from Perth and Darwin.

INCLUSIONS

Pre-trip briefing paper, accommodation and meals at the Broome Bird Observatory, marine and land-based transport, research equipment and supplies, thermal mug, stubby holder, duffel bag, volunteer hat, field gear (except for personal items such as sleeping bags and binoculars), expedition diary and report, reunion.

NOT INCLUDED

Travel to and from departure point.
Medical treatment or emergency evacuation expenses.
Alcoholic beverages and other personal expenses.

CONTRIBUTION (includes GST)

$1975

2002

The Last Great Wilderness—Exploring the Mitchell Plateau

Mitchell Plateau, North Kimberley, Western Australia. June 17–26 Tag-alongs June 15–26

Kevin Kenneally, Scientific Coordinator, *LANDSCOPE Expeditions*; Daphne Edinger, Honorary Research Scientist, Western Australian Herbarium, Perth; Kevin Coate, Naturalist and Ornithologist, Perth; Dr Bernie Hyland, Principal Research Scientist, Tropical Forest Research Centre, CSIRO, Atherton; Dr Ric How, Senior Curator, Western Australian Museum, Perth; Chris Done, Manager, Kimberley Region, Kununurra; Tim Willing, Conservation Officer, Kimberley Region, Broome; Professor Linc Schmitt, Head, Department of Anatomy and Human Biology, The University of Western Australia, Perth

Experience one of the last great wilderness areas of the world as you begin your expedition with a charter flight from Broome over the stunning scenery of the Kimberley coast. With its rich tapestry of tropical plants and animals and the great complexity of its landscapes, this region is highly valued as a living laboratory. Join some of the foremost experts in the biology of the Kimberley on the Mitchell Plateau which comprises around 4,000 square kilometres of some of the most diverse habitats in northern Australia. Well known for its stunning scenery and wilderness values, it has become a mecca for scientists seeking insights into tropical biodiversity in the Kimberley. This relatively small area has the highest diversity of vertebrate fauna for any comparable area in Western Australia.

Dr Ric How and Kevin Kenneally undertook pioneering work on the biology of Mitchell Plateau in the 1970s. This study identified the importance of many animal and plant communities including rainforest patches. In 1981 and 1982 a more detailed analysis of plant and animal assemblages in different Plateau environments and over different seasons was completed by a team that also included Dr Linc Schmitt. Between 1987 and 1989 Dr Bernie Hyland and Kevin Kenneally were part of a team that conducted a survey of Kimberley rainforests under the National Rainforest Program. This culminated in the publication of *Kimberley Rainforests of Australia* in 1991. A number of rainforest patches on the Mitchell Plateau were identified from this study as being worthy of further study. Some of these have been fenced in order to monitor the effects of disturbance, particularly by fire and cattle. In 1993 a *LANDSCOPE Expedition* visited the Plateau, further extending our knowledge of the area. Building on these previous studies, this expedition will provide a useful comparison with data collected on earlier studies.

Mitchell Plateau. Photo – Kevin Kenneally

The Plateau is also renowned for its scenic attractions. Among the best-known of these is the Mitchell River and its tributaries, deeply incised into sub-horizontal sandstone, with waterfalls and permanent pools. In June 2000 the Mitchell River area was declared a national park and two conservation parks (Camp Creek and Laterite) were created on the Mitchell Plateau. These are the first parks to be declared in the Kimberley since the Purnululu (Bungle Bungle) National Park was gazetted in March 1987.

FIELDWORK

Working alongside tropical specialists on a broad range of exciting field projects you will contribute to our knowledge of the biodiversity of the Plateau region. Assist with live trapping of reptiles, marsupials, rodents and bats. Explore rainforest patches and collect plant specimens. Experiment with field identifications using a computer-generated, interactive CD-ROM on rainforest trees, shrubs and vines developed by Dr Hyland. Search for birds of interest on the Plateau, such as the black grass wren, chestnut-backed button-quail and the white-lined honeyeater. The data collected will be used to make recommendations for management of the area.

CONDITIONS

Expedition members will rendezvous in Broome prior to departing the same day for the Mitchell Plateau by chartered aircraft. At Mitchell Plateau we will be met at the airfield and transferred to our campsite. Bush camping with limited facilities is available at this site. Travel in the field will be in a 4WD, air-conditioned vehicle. Some tracks may be very rough. We will spend eight nights camping under the stars before departing via Drysdale River and the Gibb River Road for Silent Grove, where we will spend one night camping before returning to Broome via the Gibb River Road and Great Northern Highway. On site there will be opportunities for exploration. Botanical and fauna work and bird watching activities will be supplemented by visits to local attractions such as the Mitchell Falls and Aboriginal rock art sites. Meals and camping gear will be provided, but you will be expected to

help with camp chores. There will be a range of activities to suit differing levels of fitness among volunteers. Days will be warm but nights may be cool to cold.

Tag-alongs: A limited number of participants with their own four-wheel-drive vehicles, fitted with a UHF CB radio, may join the expedition.

RELATED INTERESTS

An interest in tropical botany, biogeography, fauna studies and animal handling, bird watching and photography will be useful.

DEPARTURE POINT

The trip starts and finishes in Broome.

INCLUSIONS

Air charter, ground transport, camp fees, meals, research equipment and supplies, thermal mug, stubby holder, duffel bag, volunteer hat, written briefing, camping and field gear (except for personal items such as sleeping bags and binoculars), expedition diary and report, reunion.

Tag-alongs: As above but transport, meals and camping gear are your own responsibility.

NOT INCLUDED

Travel to and from departure point.
Medical treatment or emergency evacuation expenses.
Some refreshments en route.
Alcoholic beverages and other personal expenses.
Optional scenic helicopter flights at Mitchell Plateau.

CONTRIBUTION (includes GST)

$4725
$1645 (Tag-alongs, per person)

Mitchell Falls and plunge pool. Photo – Kevin Kenneally

2002–2003

LANDSCOPE Expeditions

How to Apply

1. Complete the attached application form.
2. Enclose your $250 initial contribution to secure your place.
   Please consult the application form for detailed instructions on how to pay.
3. Mail to: *LANDSCOPE Expeditions*
   UWA Extension
   The University of Western Australia
   35 Stirling Highway
   Crawley WA 6009
   AUSTRALIA

We will then send you a receipt, forward your details to the project leader and advise you of the next stage.

PLEASE READ ON BEFORE SENDING YOUR APPLICATION.

GENERAL INFORMATION

WHY JOIN AN EXPEDITION?

You care about the environment. You care about sharing the world with all other species in a sympathetic, non-threatening way. You care enough to want these vital research expeditions to take place. Without your contribution, much research would not take place. You care enough to want to take part. *We* care enough to want *you* to have the satisfaction of helping our environment in a direct, practical way, by joining scientists in the field and contributing, both by your donation and your work involvement, to these very necessary projects. We also care that you have a lot of fun and personal satisfaction along the way!

LOYALTY DISCOUNT

A 10 per cent discount is offered to repeat expeditioners who book directly with *LANDSCOPE Expeditions* (and to new expeditioners who book directly with us on more than one trip in this brochure).

WHO CAN PARTICIPATE?

Almost anybody! Most research expeditions do not require previous training or experience—only a willingness to work and learn. Limited places are available and are usually allocated in order of receipt. However, if the expedition is over-subscribed, the final choice of participants will be made in conjunction with the principal researchers, to ensure the best possible research outcomes for each expedition. Wilderness experiences, skills in observation, drawing, photography and skills and qualifications such as first aid, 4WD competence, outback safety and bushcraft can be helpful but are not essential.

WHEN IS MY FULL CONTRIBUTION DUE?

Your full contribution is due 60 days prior to departure. After this time, spaces held by applicants with outstanding balances are subject to forfeiture and become available to new and wait-listed applicants. Late applicants should submit the full contribution when applying for a place.

WHAT DOES MY CONTRIBUTION COVER?

Your financial contribution makes the research possible. It covers costs incurred at all stages of the research project, and includes funding of scientific staff, field camps, expedition vehicles, food, accommodation, equipment, instrumentation, fuel and freight plus follow-up work. One hundred per cent of funds received flow directly back into the study and research projects.

WILL I NEED A DOCTOR'S CERTIFICATE?

It's very important that you realistically evaluate your own ability to meet the physical and emotional requirements of the project. Most expeditions will not require a medical certificate, but the case may be different for individual expeditions. However, if you are over 60, a doctor's certificate of fitness is mandatory.

WHAT HAPPENS IF I'M NOT ACCEPTED FOR A PROJECT?

Once the review process has been completed, you will be notified of the results of your application. If we are unable to place you on the expedition of your choice, you may remain on the waiting list or withdraw your application and your $250 will be refunded.

IF MY PLANS CHANGE, MAY I CANCEL?

If cancellation in writing is received by *LANDSCOPE Expeditions* more than 60 days prior to departure we assure a full refund (less an administrative fee of $100). For cancellations received between 30 and 60 days prior to departure we will refund 50% of your contribution. If a cancellation is received less than 30 days prior to departure your entire contribution is non-refundable. We regret that we cannot make exceptions to the cancellation policy for any reason, including personal emergencies. In the event of late cancellation, your contribution may be claimed as a tax deductible donation to research.

WHAT IF THE PROJECT IS CANCELLED?

If *LANDSCOPE Expeditions* cancel the expedition prior to departure, your contribution will be refunded in full. However, we are not responsible for non-refundable airline or other tickets or payments, or any such similar penalties that may be incurred due to the cancellation of an expedition. If, after departure, a trip has to be terminated due to unforseen circumstances, no refunds will be made. To avoid such penalties, we strongly recommend the purchase of trip cancellation insurance.

TRAVEL TO THE POINT OF DEPARTURE

Travel to the point of departure for the expedition (this varies with each project) is entirely your responsibility. However, for the purposes of coordination, please forward a copy of your travel itinerary to *LANDSCOPE Expeditions*.

WHAT IF I CHOOSE TO TAG-ALONG?

Some expeditions offer the opportunity for a limited number of people to tag-along in their own vehicles. Conditions differ from trip to trip and tag-alongs must adhere to the written instructions provided with the trip briefing paper. Should your vehicle break down, all reasonable assistance will be rendered, but no responsibility or liability will be taken by *LANDSCOPE Expeditions*, the Department of Conservation and Land Management, UWA Extension or their associates for breakdown expenses or recovery of vehicles.

EXPEDITION CONDITIONS

Research expeditions are located in various parts of the State of Western Australia. Many will be based in remote locations where you will experience wilderness conditions. Accommodation styles will vary from outback camps, where you will sleep in swags or tents, to research centres, to modest hotels/motels. Please refer to the expedition brochure for more details about the area you are interested in visiting. You may be some distance from medical facilities, however, radio contact will be maintained through the Royal Flying Doctor Service. If you have special needs (e.g. vegetarian diet) please advise us in your application, and be prepared to bring your own private supplies. Field research inevitably involves unforeseen situations, and flexibility and cooperation are essential.

TRAVEL INSURANCE

We strongly encourage you to obtain travel insurance to cover you for such contingencies as lost or stolen baggage, personal liability, cancellation due to illness, termination due to illness or death at home, and emergency assistance as a result of accident, illness or rescue operation. *LANDSCOPE Expeditions*, UWA Extension and their associates will not be liable for damage, losses or additional expenses incurred. Emergency transport, medical or hospital costs resulting from illness or accident during the expedition are entirely the responsibility of the person receiving such care.

UWA EXTENSION TRAVEL AGENT'S LICENCE NO. 9TA00454

2002–2003

LANDSCOPE Expeditions

Application Form

Tell us about yourself...

Title .....Given name .....Surname .....

Address .....

..... Postcode .....

Telephone number (home) ..... (business) ..... (fax) .....

Email address .....

Preferred name on name badge.....

Expedition choice:

1 ..... Dates .....

2 ..... Dates .....

Date of birth ..... Sex ..... Height ..... Weight ..... Hat size (S/M/L/XL).....

Occupation (indicate if retired) .....

Education/occupational background .....

Contact in case of emergency..... Relationship .....

Address .....

..... Postcode .....

Telephone number (home) ..... (business) .....

INTEREST IN EXPEDITION

Please tell us why you chose this project.

ABOUT YOURSELF

Supply a short description of yourself which can be shared with other team members.

How did you find out about this expedition?

Have you been on a previous *LANDSCOPE Expedition*? Please indicate year of last expedition.

MEDICAL CONDITIONS

Medical treatment may not be available near the research site, so it is important to list any special medical conditions you may have. (A medical certificate is required for participants over 60.)

☐ Diabetes ☐ Epilepsy ☐ Asthma ☐ Heart condition ☐ Allergies (please list below) ☐ Other

Do you have any other physical/medical conditions of which your Project Leader should be aware? (e.g. medication, sleepwalking, bad back, previous hospitalisation, major injuries or loss of consciousness). Please explain and supply approximate dates.

Do you smoke? ☐ Yes ☐ No Level of vision: Good ☐ Fair ☐ Poor ☐

Do you require a special diet? If so, please indicate. (Many expeditions take place in remote areas where fresh produce is limited or unavailable. If you require certain foods, please indicate here, as you may need to bring a private supply.)

PAYMENT DETAILS

Please return the signed and completed application with your $250 initial contribution to:
UWA Extension, The University of Western Australia, 35 Stirling Hwy, Crawley, Western Australia, 6009, Australia.
Cheques payable to: The University of WA—Extension

☐ Bank ☐ Master ☐ Visa/card number ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Expiry date ..... Cardholder's signature .....

I enclose $ ..... to be applied to my choice of research expedition(s) as indicated on the application form on page 15.

CONDITIONS OF PARTICIPATION

As members of a *LANDSCOPE Expeditions* research project, participants are expected to adhere to the regulations and policies of the Western Australian Department of Conservation and Land Management. Participants whose conduct or behaviour jeopardises the welfare or fulfilment of the project objectives may be required to withdraw.

I am aware that photographs of me taken by the project leaders or other members of the expedition, and material contained in the official trip diary may be used by *LANDSCOPE Expeditions* at their discretion unless otherwise advised in writing by me.

Neither UWA Extension, the Department of Conservation and Land Management nor their associates assumes responsibility, either financially or otherwise, for illness or injury which might occur during an expedition. Emergency transport, medical or hospitalisation costs resulting from illness or accident during the expedition are the responsibility of the person receiving such care. In cases where the Project Leader in consultation with medical authorities considers it necessary, a participant will be sent home or hospitalised.

I am aware that while participating in a field project under the research program certain exposures to risk may occur. These exposures include but are not limited to: accident and/or sickness without readily available medical facilities, the forces of nature, travel on the ground, on water and in the air, and others. In consideration of the right to participate in this program I do hereby assume all of the risks involved and agree to indemnify and hold the Department of Conservation and Land Management, The University of Western Australia, their associates, officers and employees harmless for any and all liability that may arise in connection with my participation in the activities which are part of the *LANDSCOPE Expeditions* program. I agree that these conditions shall be governed in all respects and interpreted in accordance with Australian laws.

LANDSCOPE Expeditions reserves the right to cancel or make changes to expeditions when conditions such as acts of war, terrorism, civil strife, forces of nature, airline or charter schedule changes require and/or cancel any expedition with an insufficient number of participants or for any other reason considered detrimental to the success of the project.

I HAVE READ AND FULLY UNDERSTAND THE CONDITIONS OF PARTICIPATION DETAILED ABOVE AND CONTAINED IN THIS BROCHURE.

SIGNATURE .....DATE.....

Exploring Barlee! Wildlife of Barlee Range Nature Reserve

Ashburton Region, Western Australia. July 22 – August 1

Dr Stephen van Leeuwen, Research Scientist and Dr Peter Kendrick, Regional Ecologist
Bob Bromilow and Michael Hughes, Technical Officers, Pilbara Region, Karratha

The Barlee Range Nature Reserve, located in the Ashburton, is a jewel in the conservation estate of north-western Australia. Spectacular landscapes range from the serene Yadjiyagga Claypan with its sentinel coolibahs and impressive Fitzgerald Range backdrop to the precipitous incised cliffs along Kookhabinna Gorge, a locality that harbours deep tranquil pools fringed by extensive river red gum and cadjeput forests.

The nature reserve was established in 1963 following requests from local pastoralists, who petitioned for the area to be set aside as a national park. However, following scientific advice from eminent biologists, the very reasons advanced by the pastoralists in their lobbying (remote nature, abundant wildlife and spectacular scenery, especially the gorge system along Kookhabinna Creek) were also advanced as reasons why the area should be set aside as a prohibited entry wildlife reserve. With very limited access and extremely rugged terrain, little was known about the flora and fauna of the reserve until the late 1990s, when Department of Conservation and Land Management staff commenced a biological survey.

Barlee Range Nature Reserve. Photo – Stephen van Leeuwen

The expedition will provide many opportunities for you to see close-up a wide range of the fauna and flora of an isolated and extremely rugged area within the Ashburton. The area is home to a variety of small mammals, including carnivorous marsupials and native rodents, many birds and an array of reptiles and frogs. Orange-leafnosed bats, long-tailed dunnarts, rock-wallabies, Pilbara olive pythons, grey falcons and Douglas's toadlets are among the fauna highlights that may be encountered, while botanically, the very restricted Barlee Range Nancy lily, spectacularly ornate wattles with minniritchi bark together with many common plants of the Pilbara's Hamersley Range will be encountered. You will also have the opportunity to observe impressive Aboriginal rock art galleries and stone arrangements.

FIELDWORK

Currently 34 mammal, 65 reptile, 6 amphibian, 8 fish, 124 bird and 515 plant species are known to occur on the reserve. Undoubtedly more species await discovery given the dissected and rugged nature of the terrain, lack of access to many areas and diversity of habitats. This expedition will endeavour to locate these species and add to our knowledge of the reserve's biota, building on the recently completed biological survey of the Barlee Range Nature Reserve. This objective will be accomplished through the resampling of some previously surveyed sites and by exploring many of the more remote and difficult-to-access areas of the reserve. A particular focus of survey activities will be on the Kookhabinna Creek and Gorge area and the plateau of the Fitzgerald Range although overnight excursions will be made to the Yadjiyagga Claypan, Kianga Spring and Talga Pool.

You will help monitor pitfall traps, check Elliott and cage traps, actively search for reptiles and frogs, record bird sightings and collect and press plant specimens. Opportunities may also exist to help with the collection of ants and documentation of their nests and to trap or net fish. Considerable time will be allocated towards exploring the Nature Reserve and visiting areas not previously surveyed.

CONDITIONS

The expedition will start and finish in Karratha. We will travel in 4WD vehicles to Barlee Range via Nanutarra on the North West Coastal Highway and bush camp under the stars, hopefully close to water on most evenings. Access to the reserve is limited and, where present, is very degraded and challenging. Most of the travelling will be on primitive tracks, across country or on foot. A permanent base camp will not be established, although a central supply depot will be provisioned. It is envisaged that two-to-three-day exploratory trips, which return to the central supply depot, will be undertaken. Meals and camping gear will be provided but you will be expected to help with camp chores. Temperatures in early August vary from the mid-teens to low-thirties (Celsius), depending on the strength of the easterly winds. Temperatures can be low at night, possibly as low as 5° Celsius. August is usually a dry month although, with an average of 10–15 mm of rainfall, a rainy day may be experienced. As some walking is necessary, especially to visit and fully appreciate the grandeur of

Kookhabinna Gorge, a moderate level of fitness is required. Participants who wish to use their own 4WD vehicles should liaise with the leaders at the time of booking.

RELATED INTERESTS

Arid zone wildlife and ecology, birds, mammals, reptiles, botany, photography, Aboriginal archaeology, outback driving, bushwalking, camping in remote areas under basic conditions.

DEPARTURE POINT

The expedition will start and finish in Karratha.

INCLUSIONS

Written briefing, transport from departure point, meals, research equipment and supplies, duffel bag, thermal mug, stubby holder, volunteer hat, camping and field gear (except for personal items such as sleeping bags and binoculars), expedition diary and report, reunion.

NOT INCLUDED

Travel to and from departure point.

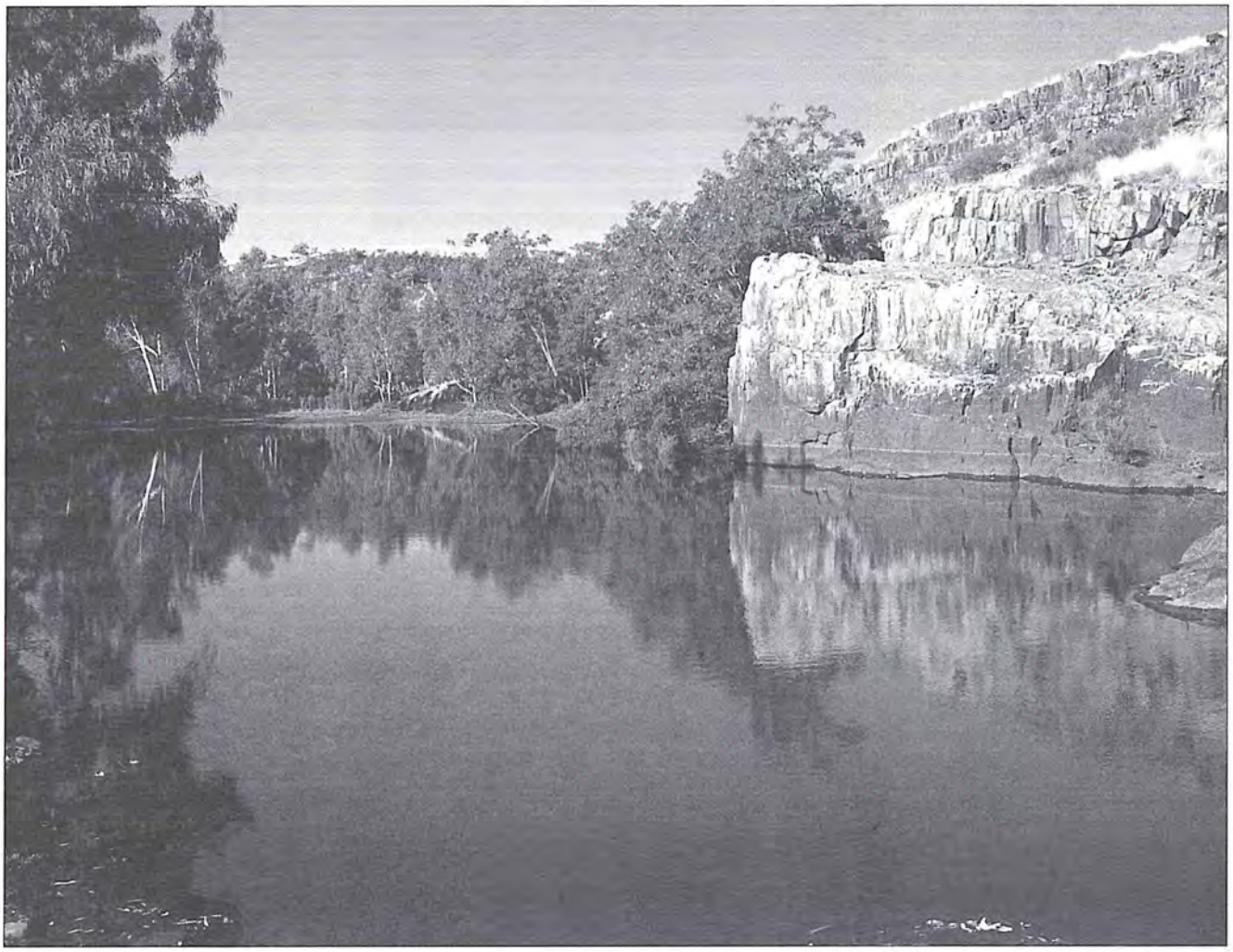
Alcoholic beverages and other personal expenses.

Medical treatment or emergency evacuation expenses.

CONTRIBUTION (includes GST)

$2695

Togobinna Pool, Kookhabinna Gorge, Barlee Range Nature Reserve. Photo – Stephen van Leeuwen



2002

Awash in Colour—Painting a Path through the Murchison

Murchison Region, Western Australia. August 9–18

Brian Hoey, Visual Artist, Perth

Sue Patrick, Senior Research Scientist, Western Australian Herbarium, Perth

The Murchison: Mount Magnet, Meekatharra, Mount Augustus. Lizard Rock, Cattle Pool, Emu Hill and Cobra Station. Colourful names and colourful subjects abound in this country. Visit monolithic Mount Augustus, and see some of the best wildflower scenery in the State with an artist and a botanist. Collect plants for the Western Australian Herbarium and, if you wish, record what you see in the form of a traveller's visual diary. No experience is necessary.

The Murchison region is poorly represented in plant collections and the expedition will build on our knowledge of this botanically interesting area. We will pay particular attention to the opportunistic collection of ephemerals, some of which only appear when conditions are favourable and may not be seen in other years. Differing geological formations and soil types will provide opportunities for expedition members to see a wide variety of Western Australia's myriad plant species.

Brian Hoey, with his artist's eye, has mapped out an itinerary with plenty of visual variety and will gently guide you in the art of drawing, painting or photographing the subjects of your choice along the way: pastel fields of everlastings in pink, yellow and white—nature's pointillisme; sunset at Lizard Rock; majestic Mount Augustus sleeping under the sun—a monolith bigger than Uluru; ancient Aboriginal rock art; outback townscapes; bush creeks and birdlife; windmills and waterholes; deep, blue, bottomless skies.

A scene from Stan Dilkes' 2000 expedition sketch book

FIELDWORK

Brian Hoey will be engaged in the production of a visual diary of the conservation landscape as a record of an expedition from an artist's point of view.

Sue Patrick will record and collect plants, particularly poorly known species, for the Western Australian Herbarium at a variety of locations and you may assist with collecting, identifying and processing specimens.

CONDITIONS

This expedition is fully accommodated, ranging from shearing sheds to country hotels. We travel from Perth on the Great Northern Highway via New Norcia to Dalwallinu. On day two we travel via Paynes Find to Wogarno Station. On day three we travel via Mount Magnet, Cue and Walga Rock to Meekatharra's Royal Mail Hotel-Motel. On subsequent days we visit Mount Gould, Mount Augustus, Dairy Creek, Cobra Station and Wooleen Station, spending the final night in Mullewa. We return to Perth via Coalseam Conservation Park, Carnamah, Moora and Mogumber. Most travel will be on sealed roads in a small coach. Expect warm days, cool nights and the best of outback hospitality.

RELATED INTERESTS

An interest in botany, ecology, photography and painting (optional).

DEPARTURE POINT

The expedition will start and finish in Perth.

INCLUSIONS

Transport from departure point, accommodation, meals, research equipment and supplies, duffel bag, thermal mug, stubby holder, volunteer hat, written briefing, visual diary, expedition diary and report, reunion. A list of basic watercolour painting equipment will be supplied to those who wish to try their hand at creating a visual diary.

NOT INCLUDED

Travel to and from departure point.
Sleeping bag, pillow and folding chair.
Art equipment.
Alcoholic beverages and other personal expenses.
Some refreshments en route.
Medical treatment or emergency evacuation expenses.

CONTRIBUTION (includes GST)

$2795

2002

Buckshot and Breakaways—Plants and Animals of the Gibson Desert

Gibson Desert Nature Reserve, Western Australia. August 12–23

Bruce Ward and Graeme Liddelow, Senior Technical Officers, Manjimup Region
Professor Tom Bragg, Dept Biology, University of Nebraska at Omaha, Nebraska, USA

So much of Australia's culture and history is based on the outback. Yet most Australians live on the perimeter of the continent and know little about the country's vast heartland. Australia's deserts are not vast areas of sand, but contain many landforms and vegetation types that are home to many different and unique animals. Explore the buckshot and breakaways, mulga and spinifex of the Gibson Desert under the guidance of researchers who have worked in the arid zone for many years.

Experience the vastness and isolation of this remote region and see animals and plants that few people ever view. For more than a decade scientific information has been collected on this vast area. Aspects of this study include the interaction of animals in a harsh desert environment and their predation by introduced cats and foxes. We are also investigating the impact on vegetation communities of fires started by lightning storms. This information is essential to the ongoing effort to re-establish our vanishing desert fauna. The department's long-term aim is to establish viable colonies of mammals that have become extinct from the Australian mainland.

Checking pit traps. Photo – Graeme Liddelow

FIELDWORK

You will assist with tracking cats and foxes and help to pit-trap native animals. Help to handle and identify small mammals and reptiles, search for animals in different habitats and identify birds. The flora of the desert is also being studied and plant specimens from areas of different fire ages will be collected for later identification.

CONDITIONS

The research area is 600 kilometres east of Wiluna and covers 1.8 million hectares. It includes vast, undulating spinifex plains, interspersed with mulga. In places there are salt lakes, claypans, temporary freshwater lakes, spinifex-covered sand dunes and low rocky ranges with occasional breakaways. Access is via the Gunbarrel Highway and we will travel from Perth in 4WD vehicles. En route we will camp for one night at the former Goongarrie homestead, and stay for one night at remote Carnegie Station. Once in the desert eight nights will be spent camping under the stars. Meals and swags are provided but you will be expected to help with camp chores. Bush showers and basic laundry facilities are available at base camp. On the return journey two nights may be spent in bush camps with no facilities (in the Young Ranges and near Empress Springs), and the final night at Goongarrie. Expect warm days and cold nights.

Tag-alongs: Participants with their own 4WD vehicles may join the expedition on a tag-along basis. Tag-along vehicles must be fitted with a UHF CB radio.

RELATED INTERESTS

Observation skills and an interest in wildlife ecology. Photography, map reading and bushcraft skills would be helpful. You should be comfortable walking and bush camping under desert conditions.

DEPARTURE POINT

The trip starts and finishes in Perth.

INCLUSIONS

Shared accommodation at Carnegie Station, ground transport, meals, research equipment and supplies, duffel bag, thermal mug, stubby holder, volunteer hat, written briefing, camping and field gear (except for personal items such as sleeping bags and binoculars), expedition diary and report, reunion.

Tag-alongs: As above, but transport, camping gear, accommodation and meals are your own responsibility.

NOT INCLUDED

Travel to and from departure point.
Medical treatment or emergency evacuation expenses.
Some refreshments en route.
Alcoholic beverages and other personal expenses.

CONTRIBUTION (includes GST)

$2895
$1100 (Tag-alongs, per person)

2002

Botanical Treasures in an Everlasting Landscape

Muggon Station, Murchison Region, Western Australia. August 31–September 7

Sue Patrick, Senior Research Scientist, Western Australian Herbarium, Perth
Greg Kitson, Operations Officer, Geraldton District
Daphne Edinger, Honorary Research Scientist, Western Australian Herbarium, Perth

Western Australia is renowned for its magnificent spring wildflowers but among the profuse and spectacular displays of everlastings are species that are struggling to survive. This expedition offers you the opportunity to gather critical botanical information while you experience the colour and vibrancy, vastness and peace of the outback.

The team will be based at Muggon Station, a former pastoral lease, for the duration of the expedition. Situated in the State's mid-west, Muggon's vegetation is representative of the arid zone flora, but varies widely. The study site is rich in diverse plant communities but we have little detailed information about them. A brief survey two years ago revealed a population of a new wattle, growing with one of the five species of poorly known plants that we also found here. We need to gather additional information on these populations and to find more. The information gathered will provide a record against which to record future changes that may take place as a response to the decrease in grazing pressure.

Breakaway country—Muggon Pastoral Station. Photo – Sue Patrick

We will collect from a range of landforms including low breakaways and hills, lateritic plains with drainage tracts, undulating to flat red sandplains, sand ridges and dunes, siltstone ranges, stony plains, claypans and saltlakes. Vegetation types include mulga low woodland, mulga and snakewood shrublands, bowgada shrubland, spinifex sandplain, saltbush, bluebush and samphire communities.

FIELDWORK

On this expedition you will help gather botanical information for the Western Australian Herbarium on the plant communities and the poorly known or rare species that may grow on the former pastoral lease. Once you reach the study site, you will help establish permanent quadrats in a wide range of plant communities on the different land types. Then you will search out, survey and document populations of rare and poorly known species. Opportunistic collections of plants representative of the station will be made and, back at camp, you will help process these. Recordings of fauna sightings will be kept to increase our biological knowledge of the area.

CONDITIONS

We will travel from Perth in 4WD vehicles and camp in the former shearers' quarters. Conditions are basic but there are showers and toilets. Meals and camping gear will be provided and everyone will help out with chores. Temperatures range from about 9° to 25° Celsius, but could be higher on some days. The nights may be quite cold. The terrain is not generally very rugged. A chain of lakes runs the length of the station, and there are sand dunes, stony ridges, breakaways and a siltstone range.

Tag-alongs: Participants with their own 4WD vehicles, fitted with UHF CB radios, may join the expedition on a tag-along basis.

RELATED INTERESTS

An interest in botany, photography, bird watching, wildlife conservation and bush camping will be useful.

DEPARTURE POINT

The trip starts and finishes in Perth.

INCLUSIONS

Ground transport, meals, research equipment and supplies, duffel bag, thermal mug, stubby holder, volunteer hat, written briefing, camping and field gear (except for personal items such as sleeping bags and binoculars), expedition diary and report, reunion.

Tag-alongs: As above, but transport, camping gear, accommodation and meals are your responsibility.

NOT INCLUDED

Travel to and from departure point.
Medical treatment or emergency evacuation expenses.
Some refreshments en route.
Alcoholic beverages and other personal expenses.

CONTRIBUTION (includes GST)

$2085
$700 (Tag-alongs, per person)

2002

Beyond the Dreaming—Project Eden

Peron Peninsula and Salutation Island, Shark Bay World Heritage Area, Western Australia. September 5–13

Keith Morris, Manager, Biodiversity Conservation Group, Woodvale Research Centre, Perth
David Pearson, Senior Research Scientist, Woodvale Research Centre, Perth
Graeme Liddelow and Bruce Ward, Senior Technical Officers, Manjimup Region

Be part of one of the most exciting wildlife conservation projects anywhere in the world. If successful, Peron Peninsula, within the Shark Bay World Heritage Area, could become the largest area in Australia where large numbers of threatened animals roam freely. Already some of the surviving wildlife is beginning to recover. The Shark Bay thick-billed grass wren, a subspecies confined to this area, is becoming more numerous on the Peninsula and spinifex-hopping mice are being caught in large numbers. Enjoy close encounters with native mammals and reptiles, and assist in the monitoring of reintroduced threatened species.

Project Eden is a bold plan that aims to remove virtually all introduced animals from a massive 1050 square kilometre area of the Shark Bay World Heritage Area. A feral animal-proof fence has been erected and feral sheep, goats and foxes have been controlled under a World Heritage plan. The reduction in feral cat numbers has allowed some native species to be reintroduced—woylies, malleefowl, bilbies, banded hare-wallabies and mala.

An island interlude. Photo – Keith Morris

Shark Bay is noted for its natural beauty and for the diversity of its land and seascapes. A highlight of this expedition is a two-day voyage to Salutation Island to monitor stick nest rat colonies and to search for the threatened Baudin Island spiny-tailed skink. We will also visit the famous dolphins of Monkey Mia.

FIELDWORK

Thousands of visitors from all over the world are attracted to this region every year but few are privileged to engage in the hands-on experiences that this expedition makes possible. See and handle native wildlife. Participate in radio tracking of released hare-wallabies. Help researchers trap woylies to check their breeding status. Also, capture small native mammals and reptiles using both pit-fall and Elliott live trapping techniques and handle, identify and record data on captured animals. Search for and monitor the movements of the threatened woma python and visit Salutation Island to study stick nest rat colonies. Help to photograph, collect, press and record plants of the Peninsula and assist with bird counts.

CONDITIONS

Road transport from Perth, meals and camping gear will be provided. The study site is on Peron Peninsula at Shark Bay, 800 km north of Perth. Base camp is at the former Peron Pastoral Station, 10 km from Denham, and 20 km east of Monkey Mia. Meals will be provided but you are expected to assist with camp chores. Conditions include basic showers and laundry facilities, as well as the nearby artesian bore. One night will be spent aboard the research vessel at Salutation Island. Days will be warm and the nights cool, with temperatures from 8°C to 24°C. Occasional rain showers could occur.

Tag-alongs: Participants with their own 4WD vehicles may join the expedition on a tag-along basis. Vehicles must be fitted with a UHF CB radio.

RELATED INTERESTS

An interest in wildlife ecology, photography, bird watching and botany.

DEPARTURE POINT

The trip starts and finishes in Perth.

INCLUSIONS

Transport, boat charter, camp bed and mattress (own sleeping bag and pillow required), meals, research equipment and supplies, duffel bag, thermal mug, volunteer hat, written briefing, expedition diary and report and reunion.

Tag-alongs: As above, but ground transport and camping gear are your responsibility.

NOT INCLUDED

Travel to and from departure point.
Some refreshments en route.
Alcoholic beverages and other personal expenses.
Medical treatment or emergency evacuation expenses.
Swags, sleeping bags, equipment such as binoculars.

CONTRIBUTION (includes GST)

$1995
$1295 (Tag-alongs, per person)

2002

Green Turtles of the Lacepede Islands

Lacepede Islands, West Kimberley coast, Western Australia

Team A: 5–11 December, 2002 **Team B:** 11–17 December, 2002

Keith Morris, Manager, Biodiversity Conservation Group, Woodvale Research Centre, Perth
Mike Lapwood, Marine Operations Officer, Kimberley Region, Broome
Andy Williams, Senior Technical Officer, Woodvale Research Centre, Perth

The sandy beaches of West Island, Lacepede group, 100 km north-west of Broome, are one of the most important nesting sites in Western Australia for the green turtle (*Chelonia mydas*). These long-lived relics of the dinosaur era are relatively abundant in Western Australian waters, however, green turtles are the most favoured species for indigenous hunting in both Australian and Indonesian/New Guinea waters. The species is considered threatened under the Western Australian *Wildlife Conservation Act* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. Over 5,000 green turtles have been tagged and monitored at the Lacepede Islands since 1986 and their movements tracked to Shark Bay, northern Australian waters and eastern Indonesian waters.

Lacepede Islands. Photo – Kevin Kenneally

Research results from the past few years indicate that this site is probably the largest breeding colony of green turtles on the Western Australian coast and in the south-east Indian Ocean Basin. Using a charter vessel as our base, the nesting beaches can be accessed without undue disturbance of the nesting population. The work on the Lacepede Islands will complement another program underway to develop a co-operative turtle management strategy with the Aboriginal communities on the adjacent Dampier Peninsula.

The Lacepede islands comprise four sandy cays (East, Sandy, Middle and West) surrounded by a coral reef. The famous French maritime explorer Baudin discovered them in 1801 and named them after the noted French naturalist Comte de Lacepede (1756–1825) because of the wildlife and abundant sea birds breeding there. The islands were mined for guano in the nineteenth century and remains of this activity are still evident. There will be opportunities during the day to explore other islands in the group, to fish, snorkel over coral formations, go beachcombing and bird watching or relax aboard the charter vessel. The marine area is noted for its natural beauty and relative isolation.

FIELDWORK

Participate in a turtle monitoring program and visit a remote island location. Volunteers will work in small teams and help with observations of turtle nesting, hatchling emergence (depending on season) and egg laying, and assist with tagging of green turtles each night for six nights. By day, we will explore the islands and the marine environment.

CONDITIONS

Board the *Kimberley Quest* in Broome and cruise 100 kilometres to West Island in the Lacepede group. The research vessel is a 25 metre fully air-conditioned charter boat, with all modern conveniences. Accommodation is in deluxe twin, deluxe double/twin and superior double cabins, all with private ensuites. The vessel will return to Broome port on day seven. Accommodation in Broome is your responsibility. All meals and light refreshments, from lunch on day one to breakfast on day seven, are provided. Ample refrigeration is available on board.

RELATED INTERESTS

Marine wildlife ecology, ornithology, snorkelling, photography, historical research and island biogeography.

DEPARTURE POINT

The trip starts and finishes in Broome. Broome is 2,400 kilometres from Perth and is serviced by regular coaches and flights from Perth and Darwin.

INCLUSIONS

Seven days' ocean-going transport, accommodation and meals on the charter vessel, research equipment and supplies, thermal mug, stubby holder, duffel bag, volunteer hat, written briefing, expedition diary and report, reunion.

NOT INCLUDED

Travel to and from departure point.
Medical treatment or emergency evacuation expenses.
Alcoholic beverages and other personal expenses.

CONTRIBUTION (includes GST)

$2970

Join us in the field— LANDSCOPE Expeditions invite you to work alongside us in the cause of conservation

DR THOMAS B. BRAGG is a Professor in the Department of Biology at the University of Nebraska at Omaha in the USA. His research is concerned with the effects of seasonal burning on plant community diversity and the impact of fire frequency on Nebraska sandhill prairies, re-established native prairies and adjacent woodlands. Tom's studies also include the determination of pre-European settlement fire frequency in Nebraska based on composite fire intervals from fire-scarred trees using tree-ring (dendrochronological) techniques. The Gibson Desert is now a study site for Tom's research on the impact of fire on grasslands on a worldwide basis.

BOB BROMILOW is a technical officer at Karratha. He has interests in computing, mapping, ant identification and flora and fauna surveys. Bob originally started with the Department of Fisheries and Wildlife in 1982 as a consultant on fox control.

DAVID CHARLES is the Operations officer for Monkey Mia Reserve. He has been working at Monkey Mia for 10 years and with the Department of Conservation and Land Management since 1995. David is involved with the on-ground management of the reserve which includes the human/dolphin interaction, tour operators, dolphin research and visitor services. He has been involved with the turtle tagging program in Shark Bay for the past four years and has been project coordinator for the past two years.

KEVIN COATE, naturalist and ornithologist, has been involved in nature based tourism in Western Australia since 1975. He has travelled extensively throughout the State and has written numerous articles, primarily on birds. He won Western Australian Tourism's FACET Golden Guide Award in 2000, and in 2001 he was a recipient of a "Premier's Award to Legends of the Hospitality and Tourism Industry", a one-off award which marked the start of the new millenium and the contribution of individuals to these industries over the previous thirty years.

CHRIS DONE is the Regional Manager for the Department of Conservation and Land Management in the Kimberley. He is based in Kununurra and has a background in forestry. He is particularly interested in land management and conservation issues in the region.

DR PETRA DE GOEIJ'S masters degree at the University of Amsterdam focussed on the feeding ecology of spoonbills. From 1991–1997 she was General Secretary of the International Wader Study Group and is its current conference organiser; she has led an expedition to Tunisia studying waders; has spent three months studying the feeding ecology of the red knot and great knot on the mudflats of Roebuck Bay; and completed her PhD at the Netherlands Institute for Sea Research (NIOZ) in 2001.

RICHARD HALL is the Marine Reserve Officer for Shark Bay Marine Park. He has worked as a ranger in the Tasmanian World Heritage Area and marine and coastal reserves for the past 8 years. He has worked from the sub-Antarctic to the tropics in a variety of roles. At the end of 2000 he moved to Western Australia to work at Shark Bay. He has expertise in marine mammal stranding and has advised conservation agencies along the eastern seaboard on stranding management. Richard has worked as team leader on the Dirk Hartog Island turtle tagging program.

DR ROBERT HICKEY is an Assistant Professor in the Department of Geography and Land Studies at Central Washington University. From 1997–2000 he was a senior lecturer in GIS at Curtin University, and retains a strong interest in Western Australia dating from that time. An expert in surveying and mapping, Bob has been involved in the mapping of mudflats in northern Western Australia.

Leader Profiles

BRIAN HOEY is a visual artist, author and consultant in cultural tourism, arts and heritage. He has been a pilot, stockman, pastoral contractor and company director. He has a passionate interest in the development of community arts and enjoys showing people Australian heritage and the outback.

DR PIETER HONKOOP is an analytical chemist with a masters degree in embryology and animal physiology (1992) and completed his PhD in 1998 at the Netherlands Institute for Sea Research (NIOZ). He is currently a Research Fellow at the Centre for Research on Ecological Impacts of Coastal Cities at the University of Sydney.

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.

MICHAEL HUGHES grew up in the Hamersley Ranges, and spent his youth working on cattle stations throughout the Pilbara. He joined the Forests Department in 1980 as a horticulturalist. Michael has worked on many fauna and flora surveys throughout the Pilbara, where his knowledge of the country and its plants and animals are greatly appreciated. His special interest is in the flora of the Pilbara, but he has a lifetime of knowledge and experience to share with expedition members.

DR BERNIE HYLAND is a principal research scientist at the CSIRO Tropical Forest Research Centre, Atherton, Queensland. He is an internationally recognised authority on Australian rainforests. Bernie has undertaken taxonomic research on major rainforest plant groups and is the principal author of the interactive CD-ROM *Australian Tropical Rain Forest Trees and Shrubs* published by CSIRO. He is currently researching tropical vines to incorporate into the CD-ROM.

DR PETER KENDRICK has worked as regional ecologist in Karratha since 1989. He received his PhD in evolutionary genetics and community ecology from the Zoology Department, The University of Western Australia. His special interests are in the biological survey of reptiles and mammals, and in arid zone land molluscs.

GREG KITSON is the Geraldton District Operations Officer. He has been with the Department of Conservation and Land Management since 1978, working in Pemberton, Kalbarri National Park and currently in Geraldton. Greg is involved with the on-ground management of Nature Reserves and Pastoral Leases, and fire control within the Geraldton District.

MIKE LAPWOOD is Marine Operations Officer for the West Kimberley District. Mike was formerly Marine Operations Officer to the Marine Conservation Branch where he was responsible for planning numerous biological and oceanographic surveys in Western Australia. He has a Master Class 5 skipper's ticket and Advanced Diving qualifications. Since moving to Broome, Mike has been involved in the Eighty-Mile Beach benthic surveys, Rowley Shoals Marine Park management and commercial operators' issues, offshore island reserves and indigenous hunting of turtles.

Leader Profiles

DR MARC LAVALEYE is a marine biologist specialising in marine molluscs at the Netherlands Institute for Sea Research (NIOZ). A diver, taxonomist and photographer, he has participated in many North Sea research cruises and four major marine expeditions. He has been a taxonomist on the Atlantic Islands for the Netherlands National Natural History Museum, has organised several expeditions on organisms of the Atlantic deep sea for NIOZ, and has worked with marine fauna in Mauretania, Kenya, Indonesia and Australia.

GRAEME LIDDELOW is a senior technical officer at Manjimup. He has been involved in both Project Eden and Desert Dreaming since the inception of Western Shield, which aims to rid the State of feral cats and foxes. He has been involved in forest ecology and management for over 20 years and with desert and arid land ecology projects for over 10 years.

KEITH MORRIS is the group manager of the Division's Biodiversity Conservation Group based at Woodvale where he is responsible for the management of all the nature conservation research projects. He has expertise with threatened fauna conservation, island fauna, introduced predator and rat control, marine turtles and forest fauna.

SUE PATRICK is a senior research scientist at the Western Australian Herbarium. She gained a degree in botany in the UK and worked as a natural historian in museums there before coming to WA in 1982. Since then she has undertaken botanical surveys in the midwest and the wheatbelt for threatened flora and has written Wildlife Management Programs for Declared Rare and Poorly Known Flora in the Moora and Geraldton Districts.

DAVID PEARSON is a senior research scientist based at Woodvale. His 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.

GRANT PEARSON is a senior technical officer with a long association with wetland and shorebird research in Western Australia. Manager of the Department of Conservation and Land Management's Wildlife Research Centre at Woodvale, he has jointly led expeditions by the Department, Curtin University and NIOZ to Eighty Mile Beach, Roebuck Bay and King Sound to determine the nature and distribution of the sediments and invertebrate fauna of the intertidal areas of these wetlands.

DR THEUNIS PIERSMA is a senior scientist at the Netherlands Institute for Sea Research (NIOZ) and Associate Professor at the Centre for Ecological and Evolutionary Studies at the University of Groningen. His disciplinary expertise encompasses animal ecology, estuarine ecology, environmental physiology of birds and ethology. He is vice chairperson of the International Wader Study Group; editor of *Ardea*, an international ornithological journal; and a member of the Estuaries Unit of the British Trust for Ornithology.

DR DANNY ROGERS has been a researcher, writer and editor with the Royal Australasian Ornithologists Union since 1988. He has extensive bird-watching and bird-banding experience, and has undertaken ornithological expeditions to the UK, Iran, Afghanistan, Pakistan, Sri Lanka, Siberia, South Korea, Thailand, Peninsular Malaysia, New Zealand and all states in Australia.

Leader Profiles

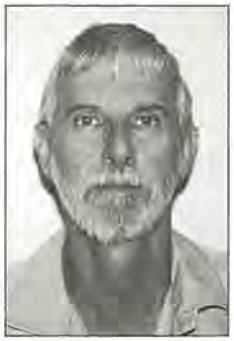
DR LINCOLN H SCHMITT is Associate Professor and Head of the Department of Anatomy and Human Biology at The University of Western Australia. His research is concerned with the nature and causes of variation in humans and other vertebrate species. He has studied the genetics and morphology of South Australian island populations of *Rattus fuscipes*, and the eco-physiology and genetics of mammals of the Mitchell Plateau, Kimberley. For 15 years he has been investigating the island vertebrates of Wallacea, eastern Indonesia, in order to interpret the enormous evolutionary activity of vertebrates in this region and their relationships to northern Australian species.

SHIRLEY SLACK-SMITH is the Curator of Molluscs at the Western Australian Museum. Shirley's research focuses on bivalves, particularly oysters—their taxonomy and ecology, and their potential for fisheries and aquaculture. She has dived widely, collecting and studying invertebrates of Australian and Indo-Pacific waters. Shirley has authored a number of field guides on dangerous cone shells and "sea stingers" as well as contributing to the "Fauna of Australia" series published by CSIRO.

DR STEPHEN VAN LEEUWEN is a botanist-ecologist at Karratha. He has 17 years' experience with the flora of north Western Australia, has a keen interest in arid zone ecology and is currently team leader for a biological survey of the southern Little Sandy Desert. His research interests include the relationship of the biota to its surroundings and how Aboriginal people interact with the land and use the biota.

BRUCE WARD is a senior technical officer at Manjimup. For the past 20 years he has worked in fire research, on fire behaviour and fire ecology studies. Since 1986 he has been involved in fire research in the arid zone, in hummock grasslands and on the Desert Dreaming project. In addition to his field work in the deserts, he has worked on *LANDSCOPE Expeditions* in the Gibson Desert and in Shark Bay.

ANDY WILLIAMS is a Senior Technical Officer with the Department of Conservation and Land Management, based at the Western Australian Wildlife Research Centre at Woodvale. He has worked in wildlife conservation for over 20 years. For many years he ran the marine turtle field operations at North-West Cape, monitoring nesting turtle beaches on the mainland and Muiron Islands. Recently, he has been involved in the Department's python research program, predominantly at Garden Island and Dryandra. Andy's other area of great interest and expertise is the Lepidoptera (butterfly) fauna of Western Australia.



TIM WILLING is the Conservation Officer with the Department of Conservation and Land Management based in Broome. He is a graduate from the School of Oriental and African Studies, University of London, and has lived in Broome since 1980. In 1985 he was awarded a Churchill Fellowship and undertook tropical horticultural studies in Africa and Madagascar. In 1996, he was a joint recipient, with Daphne Edinger and Kevin Kenneally, of the CSIRO Medal for Excellence in Research Achievement.

Behind the Scenes

LANDSCOPE Expeditions were included as a case study in the 2001 Australian Heritage Commission publication *Successful Tourism at Heritage Places*. Displaying the guide are (*left to right*) volunteer Daphne Edinger and staff Jean Paton, Kevin Kenneally and Marianne Lewis.

JEAN PATON has administered the expeditions program since its commencement in 1992. Jean was instrumental in setting up the first expedition to the Gibson Desert while at UWA Extension, The University of Western Australia. She has a long-standing interest in environmental education and has coordinated study tours throughout Western Australia. Jean was a member of the State's Nature Based Tourism Advisory Committee and helped develop Western Australia's Nature Based Tourism Strategy.

KEVIN KENNEALLY, a research scientist since 1973, has been the scientific coordinator for *LANDSCOPE Expeditions* since the program's inception and is also an expedition leader. He is an internationally recognised author and specialist on the Kimberley flora. Kevin 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), the CSIRO Medal for Research Achievement (1996) and is an Honorary Associate of the Western Australian Museum.

MARIANNE LEWIS is the Liaison Officer with *LANDSCOPE Expeditions*, a position she combines with that of Scientific Editor. Marianne has participated in an expedition to the Gibson Desert and an account of her journey can be read in *LANDSCOPE* magazine (Summer 1999–2000).

Volunteer Support

DAPHNE EDINGER graduated from The University of Western Australia with a BSc (Honours) 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 1982. She has conducted numerous botanical field trips throughout the State and has been with the *LANDSCOPE Expeditions* program as a leader since 1993. Daphne, Tim Willing and Kevin Kenneally were recipients of the 1996 CSIRO Medal for Research Achievement for the project and book *Broome and Beyond: Plants and People of the Dampier Peninsula*.

VAL TALBOT has provided invaluable assistance with the expedition administration in a voluntary capacity since 1993. She developed her enthusiasm for natural history when a child in the UK. Val has travelled the world and is a regular participant on *LANDSCOPE Expeditions*. A talented wildlife artist and birding enthusiast, she lived for 25 years in Zimbabwe, Africa. Val has now made her home in Western Australia, where she owns a horse stud.

YOUR AGENT

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LANDSCOPE EXPEDITION BOOKINGS

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