





# PEARLS OF THE PILBARA

White beaches, warm blue waters, coral and solitude . . .  
this is not a description of an exotic Pacific island,  
but one of the many islands off Western Australia's  
Pilbara coast.

Rich in history, wildflowers and wildlife, these islands  
are isolated yet interest from the public grows.

To aid in their protection, marine reserves are proposed  
in the waters around two of the main island groups.

by Dorian Moro and Fran Stanley



**M**ore than 300 islands lie off the Pilbara coast between North West Cape and Port Hedland. They support unique ecosystems and internationally important turtle rookeries, and they provide a haven for seabirds and threatened marsupials and rodents. They vary from small cays and rocky islets to an island of more than 20,000 hectares. Although most are arid and offer little drinking water, shade or shelter, their beauty and isolation are attracting growing numbers of visitors.

### THE EXPLORERS

Archaeological evidence shows Aboriginal people occupied the Montebello Islands from about 30,000 years ago until the most recent sea level rise 4,500 years ago. The Yapurarra people inhabited the Dampier Archipelago and adjacent Burrup Peninsula from at least 18,000 years ago until very recently. They used rafts to travel between the islands and made extensive use of the marine life for food. Their shell middens, stone 'factory' sites, rock engravings, hunting hides, fish traps and habitation sites make this one of the richest archaeological areas in Australia.

The European history of the islands along the Pilbara coast is as colourful as their names. The first shipwreck recorded in Australian waters, the



*Tryal*, ran aground on Tryal Rocks, nine nautical miles north-west of the Montebello Islands, in 1622. Ninety-three people died. The 36 survivors landed on North West Island, the first British landing on Australian soil. The wreck wasn't found until 1969, as the captain lied about his position to avoid court martial on his return to England. Several other famous expeditions passed along this coastline between 1699 and the late 1800s.

From 1870 to 1872, a whaling station on Malus Island processed humpback whales taken by longboats operating around the Dampier Archipelago. Remains of the trypots and ovens used to extract oil from the blubber can still be seen at Whalers Bay. Flying Foam Passage, between Angel, Gidley and Dolphin islands, became a major pearling area between 1870 and 1900. Up to 500 European, Malay, Chinese and Aboriginal people worked in this industry.

The first British atomic weapons

#### Previous page

A female loggerhead turtle returning to ocean after laying eggs.  
Photo - Jiri Lochman

Below: Barrow Island forms one of WA's most important conservation reserves.

Photo - Marie Lochman

test was carried out at the Montebello Islands in 1952, when a nuclear device was detonated below the waterline in an old frigate, *HMS Plym*. Two more atomic bombs were tested in 1956. Remnants of twisted metal, ruined bunkers and vehicles are still present today, and radiation remains a hazard on two islands.

Today, Barrow, Varanus, Thevenard and Airlie islands have oil and gas facilities and associated accommodation amenities on them. Many of the marine areas near these islands support oil and gas platforms as well as pearling and tourism.

### MARINE CONSERVATION RESERVES

The unique marine ecosystems of the Pilbara are being recognised by two proposed marine conservation reserves in the Dampier Archipelago-Cape Preston and Montebello-Barrow islands areas.

The warm, nearshore waters of the Dampier Archipelago are one of the





most biologically rich areas in Western Australia. However, they lie just offshore from Dampier, the largest port in Australia, which moves 75 million tonnes of goods each year worth five to six billion dollars. The region also supports significant commercial fin fishing, prawn trawling, pearling and aquaculture. Recreational fishing, diving and other pursuits are very popular in the archipelago, as nearby towns have one of the highest rates of private vessel ownership in Australia.

The second proposed reserve encompasses the clear waters around the Montebello and Lowendal islands and Barrow Island. The abundance and diversity of coral species on the reefs around these islands have been described by the WA Museum as among the highest of all tropical marine ecosystems off Western Australia. The reefs represent an important ecological link between the fringing reefs of the Ningaloo Marine Park and the oceanic reefs around the Rowley Shoals Marine Park.

Both areas support a variety of communities, including mangroves, coral reefs, sandy beaches, rocky shores, soft sediment habitats, extensive areas of coral rubble and limestone pavements covered in seaweed.

Community advisory committees have been appointed to consider appropriate boundaries, purpose and management strategies (including zoning) for each reserve. Draft management plans will be available for formal public comment. The proposed reserves will protect the marine environment and ensure the various uses are managed in a sustainable, integrated and equitable manner.



## ISLAND GROUPS

There are eight main offshore island groups along the Pilbara coast, including the islands of the Exmouth Gulf (see 'East of the Gulf', *LANDSCOPE*, Summer 1992–1993). Each one harbours a variety of plant and animal life.

## DAMPIER ARCHIPELAGO

A total of 42 islands makes up this archipelago. Many are reserves for the conservation of flora and fauna, preservation of archaeological sites and recreation. The flora of the Dampier Archipelago is predominantly Eremaean (desert tropical) in character and similar to that on the adjacent mainland. However, the unique rock pile formations on Dolphin, Angel and Gidley islands have a higher number of Kimberley plant species.

The archipelago supports 12 species of native land mammals and at least eight species of marine mammals including whales, dolphins and dugongs.

**Above left:** Staghorn and plate corals form part of the wealth of marine life surrounding the Dampier Archipelago. Photo – Patrick Baker

**Top:** Dampier is the largest and busiest port in Australia. Photo – John Kleczkowski/Lochman Transparencies

**Above:** Humpback whales migrate through the waters surrounding the Dampier Archipelago. Photo – Geoff Taylor/Lochman Transparencies

At least 102 species of birds (25 of which breed on the islands), two species of frogs and 41 species of reptiles (including four marine turtle species that nest in the archipelago) have been recorded. Western Australia has the only large population of hawksbill turtles remaining in the entire Indian Ocean, and Rosemary Island contains the State's largest hawksbill rookery. Other important fauna includes the Rothschild's rock-wallaby (*Petrogale rothschildi*) and the threatened Pilbara olive python (*Morelia olivacea barroni*).



## WHAT'S IN A NAME?

Many Pilbara islands have names as colourful as their history. Explorer Nicholas Baudin named many islands after prominent French citizens. Below are some island names and their origins. Source: L Marchant (1982). *France Australe*, and Dept of Land Administration.

Date	Island group	Island name	Proponent	Named for
1699	Dampier	Rosemary	William Dampier	Plants resembling 'rosemary' collected on the island
1801-1803	Dampier	Malus	Nicholas Baudin	Etienne Louis Malus, physicist and academician
		Legendre		Adrien Marie Legendre, mathematician, geometrist
		Hauy		Rene Just Hauy, celebrated French minerologist, or Ventin Hauy, educator of blind
		Delambre		Jean Baptiste Joseph Delambre, distinguished French astronomer and mathematician
	Montebello			Battle of Montebello, where Napoleon defeated the Austrians in North Italy
		Trimouille		Distinguished French family, La Trimouille, that expelled the English from France
		Hermite		Admiral Jean Marthe Adrien L'Hermite, who fought against the British
		Muiron		Napoleon's close friend killed by his side at the battle of Arcole, or Napoleon's pseudonym 'Colonel Muiron'
		Thevenard		French Minister Antoine Jean Marie comt de Thevenard
		Serrurier		Jean Mathieu Philibert Serurier, military commander under Napoleon
1818	Dampier	Enderby	Lt P P King	Samuel Enderby, a valued friend of Philip Parker King
		Gidley		Philip Gidley King, father of P.P King
		Lewis		Renamed East and West Lewis Islands by J E Coghlan
		East/West Intercourse		Conversation held between P P King and local Aborigines
	Barrow		John Barrow, secretary of British Admiralty	
1861	Dampier	Dolphin	Francis Thomas Gregory	Named after his ship the <i>Dolphin</i>
1883-1902	Great Sandy	Shoill	Commander J.E. Coghlan	Robert Shoill, Government Magistrate at Roeburne, WA
1950s	Montebello	Alpha, Primrose Bluebell, Carnation	Royal Navy Hydrographic Survey	Themes reflecting the Greek alphabet and European flowers, etc. Includes several other islands.
1985	Lowendal	Varanus Abutilon Parakeelya	CALM	Spiny-tailed goanna ( <i>Varanus acanthurus</i> ) A shrub with yellow flowers A succulent plant with pink flowers
1990s	Montebello	Triodia, Grevillea Kurrajong, Dryandra Ptilotus, Acacia	CALM	Temporary names after West Australian plants. Includes several other islands.

### MONTEBELLO ISLANDS

The Montebello Islands are a mosaic of limestone and white sandy beaches. They support more than 100 plant species, including the State's most offshore mangrove stands. Golden bandicoots, spectacled hare-wallabies, spinifexbirds and black-and-white fairy-wrens became extinct here after the introduction of cats and black rats onto the islands by pearlshivers or via shipwrecks in the late 1800s. The rats and cats are being eradicated under CALM's

Montebello Renewal project (see 'Montebello Renewal', *LANDSCOPE*, Summer 1996-97).

Because of their isolation and lack of feral mammal species, the Montebello Islands are ideal for the protection of threatened species. Populations of mala (*Lagorchestes hirsutus*) and djoongari (*Pseudomys fieldi*) have been translocated to Trimouille and Northwest islands respectively (see 'Moving Mala', *LANDSCOPE*, Autumn 1999). A legless

lizard, *Aprasia rostrata rostrata*, is known only from Hermite Island. The islands support important breeding areas for marine turtles and seabirds, including the largest roseate tern colonies in Western Australia.

### LOWENDAL ISLANDS

This archipelago of more than 40 islands, islets and rocky stacks is composed of eroded limestone that is almost two million years old. The largest islands, Varanus, Bridled,

**Right:** An aerial view of the Dampier Archipelago.

Photo – Dennis Sarson/Lochman  
Transparencies

**Below right:** The islands of the Pilbara are prime nesting areas for the majestic osprey.

Photo – Jiri Lochman

Abutilon and Parakeelya, are particularly important for many species of seabirds. Wedge-tailed shearwaters, terns, gulls and ospreys breed here. Green, flatback and hawksbill turtles nest on the beaches. Varanus Island also supports a population of the goanna *Varanus acanthurus*.

## BARROW ISLAND

Barrow Island is Western Australia's second largest island and one of the State's most important conservation reserves. It is home to 13 species of native mammals, five of which are listed as threatened under the WA Wildlife Conservation Act: the boodie or burrowing bettong (*Bettongia lesueur*), Barrow Island euro (*Macropus robustus isabellinus*), black-flanked rock-wallaby (*Petrogale lateralis lateralis*), spectacled hare-wallaby (*Lagorchestes conspicillatus conspicillatus*) and golden bandicoot (*Isodon auratus barrowensis*). The Barrow Island mouse (*Pseudomys nanus ferculinus*) is known only from this island.

One-hundred-and-ten bird species, including the endemic black-and-white fairy-wren (*Malurus leucopterus edouardi*), 54 species of reptiles, including one endemic lizard, *Ctenotus pantherinus acripes*, and one species of frog live on the island. Four marine turtle species nest on the beaches, with significant rookeries of green turtles on the western side and flatback turtles on the eastern side.

A diverse subterranean fauna, of both terrestrial and aquatic species, inhabits the caves and shallow groundwaters of Barrow Island. This fauna is not well known, but is extremely diverse by national and international standards and contains species listed as threatened at both State and Commonwealth levels.

The island's flora is dominated by spinifex (*Triodia* spp.) grasslands. There is also a variety of mixed herb and grass



communities. More than 250 plant species have so far been recorded on Barrow Island, including four introduced species. Two species of *Corchorus* are listed on CALM's Priority Flora list. Twenty-seven species have been identified as geographically or habitat restricted and/or requiring further research to determine their status.

## GREAT SANDY ISLAND NATURE RESERVE

This reserve protects 26 sandy islands with limestone outcrops. The western chestnut mouse (*Pseudomys nanus*), pale field-rat (*Rattus turneyi*) and little red kaluta (*Dasykaluta rosamondae*), together with 15 species of terrestrial reptiles, live on the islands. Marine turtles, dolphins, dugongs and

whale sharks inhabit the surrounding waters. Of the birds, 39 species have been sighted and 11 species are known to breed on the islands.

## THEVENARD AND SERRURIER ISLANDS

Thevenard and Serrurier islands are the largest sand islands along the Pilbara coast. The rare kerakenga or Lakeland Downs mouse (*Leggadina lakedownensis*) lives on Thevenard Island (see 'Endangered: Thevenard Island Mouse', *LANDSCOPE*, Spring 1995).

Serrurier Island offers important breeding grounds for ospreys, white-bellied sea-eagles and several species of tern, which may number in their hundreds. Wedge-tailed shearwaters





**Above left:** Wedge-tailed shearwaters nest on many islands of the Pilbara.

**Above:** The second largest lizard in the world, the perentie (*Varanus giganteus*), grows to more than two metres long.

**Left:** Thevenard Island had the only island population of the rare kerakenga; it has now been established on Serrurier Island.  
Photos – Jiri Lochman



(*Puffinus pacificus*) nest on more than 40 per cent of Serrurier Island. Some 50,000 shearwater burrows are used by between 8,000 and 20,000 nesting pairs. Fortunately, a feral cat that threatened many of the bird and reptile breeding colonies was recently removed from Serrurier Island. A population of the kerakenga was recently established on Serrurier Island as security for the Thevenard Island population, which now has to compete with the introduced house mouse. Serrurier Island is also one of the region's most important green turtle nesting sites.

### MUIRON ISLANDS

The Muiron Islands comprise two islands that lie about 16 kilometres from North West Cape. The flora is similar to that on the Cape, although several plant species have not been

reported from the mainland. The Muiron Islands support one of the major loggerhead turtle (*Caretta caretta*) rookeries in the region. Both islands support rich seabird colonies, with up to 500,000 birds estimated to take up occupancy each year.

Nature-based tourism around the islands of the Pilbara and their surrounding waters will depend upon

the conservation of their natural and cultural resources. Sit on a sand dune on one of these islands and watch the sun sparkle over a vast blue ocean, or dive on their spectacular coral reefs to witness the incredible fish and invertebrate life. Either way, you can easily appreciate that few places in the world offer the tranquillity, isolation and wildlife of these pearls of the Pilbara.

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Western Australian botanists are taking part in a global plan to store seed from 10 per cent of the world's flora by 2010. See page 23.



Discover the rich bird life and tranquility of the Canning River Regional Park on page 17.



Mushrooms the size of a dinner plate can appear within 48 hours of a fire in the karri forest. Read about forest fungi on page 48.



The Pilbara's numerous islands are rich in history, wildflowers and wildlife, with prolific marine life in the surrounding waters. See page 34.



Many of WA's threatened marsupials can be seen in the south-west for the first time in decades. Read about their return to Dryandra Forest on page 10.

## FEATURES

**RETURN TO DRYANDRA**  
TONY FRIEND, CLARE ANTHONY & NEIL THOMAS .....10

**CAPTIVATING CANNING**  
CHRISTINE SILBERT.....17

**OUR FROZEN FUTURE**  
ANNE COCHRANE.....23

**SEA ANEMONES**  
ANN STORRIE.....28

**PEARLS OF THE PILBARA**  
DORIAN MORO & FRAN STANLEY.....34

**LINKING THE LANDSCAPE**  
PETER WILKINS.....41

**FRUITS OF FIRE**  
RICHARD ROBINSON.....48

## REGULARS

**BUSH TELEGRAPH**.....4

**ENDANGERED**  
VINE THICKETS ON DAMPIER PENINSULA.....47

**URBAN ANTICS**  
WHICH BANKSIA? .....54

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## COVER

Paradoxically, the stinging tentacles of sea anemones—a group of carnivorous invertebrates that sometimes resemble colourful flowers—can also provide a safe haven for many underwater creatures. Anemonefish gain immunity to the stinging cells and live primarily in sea anemone tentacles. Other animals, such as crabs, carry a protective anemone on their backs. Turn to page 28.



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