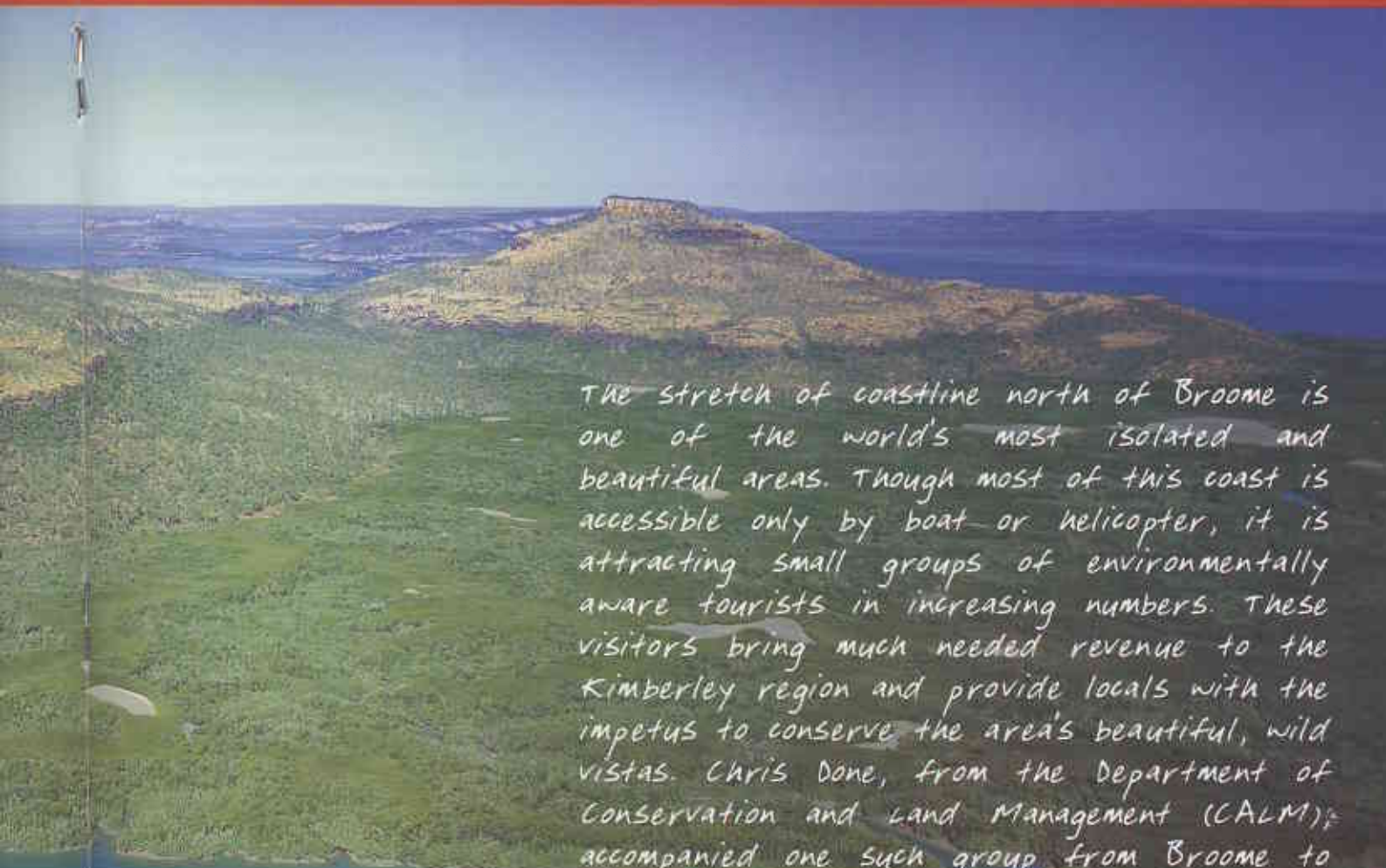




Cruising the Wandjina Coast

By Chris Done



The stretch of coastline north of Broome is one of the world's most isolated and beautiful areas. Though most of this coast is accessible only by boat or helicopter, it is attracting small groups of environmentally aware tourists in increasing numbers. These visitors bring much needed revenue to the Kimberley region and provide locals with the impetus to conserve the area's beautiful, wild vistas. Chris Done, from the Department of Conservation and Land Management (CALM), accompanied one such group from Broome to Darwin aboard the Coral Princess.



Dawn found us sailing north from Broome along the Dampier Peninsula coast, one morning in May 1999. We passed the Lacepede Islands Nature Reserve, but strong easterly winds prevented us from landing there to see green turtle nesting areas and the huge colonies of brown boobies and least frigatebirds (the islands are breeding areas of world-scale significance for both species).

Arriving at Crocodile Creek, at the northern tip of Yampi Peninsula, we saw a whistling kite, white-bellied sea-eagles and both grey and white colour phases of the eastern reef egret. A pheasant coucal loudly protested the invasion of its territory as the more adventurous passengers climbed to the top of the waterfall, which tumbles year round into the tidal pool. Crocodile Creek was used as a 'weekend getaway' by miners from nearby Cockatoo Island. Along with Koolan Island, in the Buccaneer Archipelago, it was mined by BHP for high-grade iron-ore until the early 1990s. Small-scale mining still takes place on Cockatoo Island, while a resort has been developed using some of the



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Mt Trafalgar and Mt Waterloo dominate the coastline of Prince Regent Nature Reserve. Photo – Col Roberts/Lochman Transparencies

Inset paintings (from left): Mitchell Falls; Beach Night, Kimberley Coast; Crocodile at Kings Cascades. Paintings (all 36 x 51 cm in oil crayon and gouache on paper) – Ken Done

accommodation and other facilities no longer required by the company.

Striking landforms of ancient folded and eroded sedimentary rock lined the route of the *Coral Princess* to its overnight anchorage at Talbot Bay, in the lee of Slug Island.

'HORIZONTAL' FALLS

Massive tides in this part of the coast have created the unusual spectacle of horizontal waterfalls in

the Buccaneer Archipelago. The sea has breached sandstone escarpments through narrow gaps, and hollowed out large inlets in the softer siltstone rocks behind. At high tide, the inlets are filled by the sea, but when the tide turns the water has to drain out through the narrow gaps. The tide falls faster than the water can escape, producing 'horizontal' falls. By low tide the inlets have emptied, only to fill again with the turn of the tide, resulting in waterfalls in the reverse direction.

This dramatic natural phenomenon was in full outflow during our visit. An inflatable dinghy struggled to take groups of six through the narrow gap to look at the middle basin and the inner

Above: The *Coral Princess* off Raft Point. Photo – Chris Done/CALM

Below: Secluded Crocodile Creek on Yampi Peninsula. Photo – Bill Bachman



fall before it shot the rapid out to meet the *Explorer*—the *Coral Princess*' tender vessel.

The upper reaches of Talbot Creek were hemmed in by huge ramparts of folded rock strata. Despite the extreme slopes, they were well vegetated with cypress pine (*Callitris intratropica*), rock gum (*Eucalyptus rupestris*), spinifex and acacias.

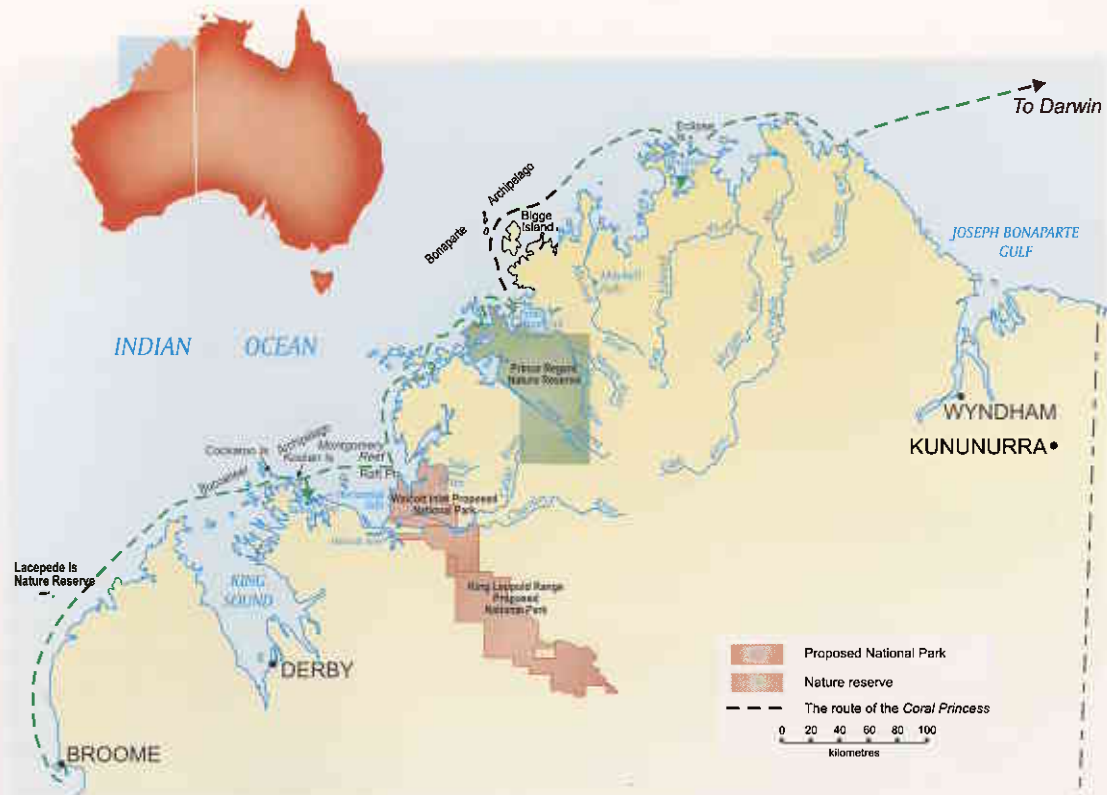
At Raft Point, in the proposed Walcott Inlet National Park, we landed on a small rubble beach at the base of two huge bluffs, part of the 1,800-million-year-old Warton Sandstone. We could see a thick layer of darker volcanic rock intruded into the sandstone. The soil derived from the latter was much more fertile and supported lush woodland, through which we struggled up a steep slope to the top of the saddle between the two bluffs. As we regained our breath, our hearts started to race at the sight of a huge gallery of rock art above us. Staying well back from the gallery so that no impact of our visit was possible, we heard the story of the Wandjina figures, depicted here, and of their fish chase. In quiet reflection, we descended to the *Explorer* and returned to the *Coral Princess*.

The proposal to create a national park in this area also includes the waters of nearby Walcott Inlet and the surrounding lands. It would link to the proposed King Leopold Range National Park (currently a pastoral lease managed by CALM as if it already was a national park), creating a conservation area of unsurpassed grandeur, stretching from the tidal mud flats of the inlet to some of the highest mountains in the Kimberley.

IN THE WAKE OF KING

During Lieutenant Philip Parker King's epic voyages of hydrological

Right: A colourful fiddler crab forages in the mangroves.
Photo – Pamela Butt



survey and scientific discovery in 1818–21, he produced a body of knowledge so accurate that it formed the basis of modern navigation charts. He named many features along this coast. For example, 'Doctor' Montgomery on board the *Mermaid* had his name perpetuated at the small islands and the massive Montgomery Reef surrounding them.

It was, however, the spectacle of torrents of water cascading down the sides of the reef, exposed up to four metres at low water, that gripped our imagination. This massive reef system covers some 400 square kilometres. Sandy islands supporting mangroves, birds and crocodiles make up about 25 square kilometres; an internal lagoon

that disappears at high tide covers more than 200 square kilometres; and the remainder is reef.

Turtles, fish and sharks fed in the white water below the cascades as we motored up a 'river' to the reef's interior. On the reef, eastern reef egrets, waders, Caspian terns, a white-bellied sea-eagle, an osprey, occasional beach stone-curlews and numerous other birds were feasting on the exposed bounty. Epaulette sharks, small octopuses and fish, giant clams, shellfish and crabs inhabit innumerable pools on the exposed reef. None of the delicate and fragile corals occurs here. The whole reef seemed to be made up of seaweeds, massive corals (*Porites* species) and rubble derived from these organisms.





The reef and its surrounding waters have been proposed as a marine reserve. The islands are part of an Aboriginal reserve, as the area was used by intrepid Aboriginal groups who used rafts to transport themselves to and from the mainland.

We steamed back past Raft Point into Doubtful Bay, largely surrounded by the proposed Walcott Inlet National Park, and across to Red Cone Creek. A nine-foot crocodile escorted us for part of the way. Chestnut rails have been seen here before, but during our visit, the tide was high and these elusive birds were probably well back in the mangroves. However, we did see some of the crabs, small fish and

mudskippers that inhabit the biologically important mangrove communities.

A difficult climb to the top of the waterfall opened up a whole new vista, with a small freshwater billabong that contained delicate, tiny waterlilies (*Nymphoides indica*). We joined several varieties of fish and the Kimberley freshwater crustacean, the cherrubin, for a swim in the pool. What looked like a bunch of flood debris on a paperbark sapling turned out to be the intricate nest of a pair of bar-breasted honeyeaters. The parents were busy feeding small grubs to the hungry brood.

The entry into St George Basin (another proposed marine park) was

narrow, with whirlpools created by swiftly flowing tidal currents. Approaching St Andrew and St Patrick islands we could see the dramatic peaks of Mount Waterloo and Mount Trafalgar, named by a patriotic Philip Parker King.

RIVER FIT FOR A REGENT

After transferring to the *Explorer* again, we passed Wood Island and entered the mouth of Prince Regent River. King named it after the English ruler of the day, the hedonistic Prince Regent, who ruled for many years during his father's (King George III) incapacity. The river runs from south-east to north-west, following a line of weakness caused by the block jointing of the ancient King Leopold Sandstones. Several tributaries entered at right angles to the main stream. About 40 kilometres upstream, we entered one of the tributaries to be confronted by the beautiful King Cascade, which appeared just as King sketched it 180 years ago.

Camp Creek (another major tributary) provided a welcome opportunity to cool down in the shallow, fast-flowing, fresh water and to observe signs of animals such as the northern quoll, bungarra, dingo, euro and rock-wallaby. Black-faced cuckoo-shrike, little corella, white-quilled rock-pigeon, numerous rainbow bee-eaters, a whistling kite, great bowerbirds and an intermediate egret were observed. A shy fairy-wren called from the thick grass, but its identity remained a mystery.

The 630,000-hectare Prince Regent Nature Reserve was created to protect this area. Unlike most of the rest of mainland Australia, the reserve and much of the north-west Kimberley has an almost intact flora and fauna.

During the night we steamed past Careening Bay (also in the Prince Regent Nature Reserve), where King's cutter was repaired. A plaque on copper was attached to a kurralong tree as a memento of their stay here.

Top left: Montgomery Reef, 1999. Painting (17 x 51 cm in oil crayon and gouache on paper) – Ken Done

Above left: Montgomery Reef as seen through the photographer's lens. Photo – Alex Steffe/Lochman Transparencies

Left: Talbot Bay, on Yampi Peninsula. Photo – Gerald Allen





Fortunately, the carpenter also carved the words 'HMC MERMAID 1820' deeply into a boab tree. The inscription is still clearly visible today, but the metal plate was gone when King returned only 12 months later in the *Bathurst*.

POWER OF NATURE

Prince Frederick Harbour, fringed by the Prince Regent Nature Reserve to the south (and itself a proposed marine park), is reputedly the most scenic part of the Kimberley coast. We could make our own assessment of this as we flew by helicopter to the nearby Mitchell Falls and in *Explorer* trips up Porosus Creek and the Hunter River. Few disputed the reputation.

An impressive example of nature's power was obvious from the flight to the Mitchell Falls. During the 1998–99 wet season the north Kimberley was battered by two category-five cyclones. Thousands of large trees, including many woollybutt (*Eucalyptus miniata*), had been knocked over and lay towards the west-south-west. At the falls, acacias had been killed, apparently by the sheer strength of the wind separating the bark from the

underlying cambium, even though most of these small trees had not been broken or blown over. Regeneration should replace both species quickly.

The falls were awe-inspiring, with their four separate cascades, and we had ample time to explore and swim in the calm waters above the falls. Other visitors had driven their four-wheel-drives to the terminus of the road and then walked another five kilometres to see the mighty falls in strong flow. Later in the year the falls slow to a trickle or cease.

Back in Prince Frederick Harbour the group sailed up Porosus Creek below the looming bulk of Mount Anderdon, with its massive terraces

falling down to the sea. We were rewarded with a close-up view of a 'saltie' (*Crocodylus porosus*), after which the creek was named. A great-billed heron, an osprey, white-bellied sea-eagles, and sacred and azure kingfishers were a bonus. A barbecue on Naturalist Beach topped off the day. Cool air streaming from the rainforest pocket behind the beach cooled us down and made up for us not being able to swim in this 'crocodile country'.

TRACKS AND TRACES

A monjon (*Petrogale burbidgei*), the smallest species of rock-wallaby, welcomed us to rock-strewn Bigge Island

Above: St George Basin viewed from St Patrick Island.

Right: The aptly-named Steep Island in Doubtful Bay.
Photos – Steve Sadler





and several more were seen during our stay. Their tracks covered the beach and it was also exciting to see fresh tracks made by a couple of turtles that had come ashore to lay eggs overnight.

The Wandjina paintings here were of figures known as Kaiara. They were most impressive, and we treated the site with the greatest of respect. The

representation of implements, sailing boats, rowboats, figures smoking pipes and so on gave rise to much lively discussion and speculation about their origin.

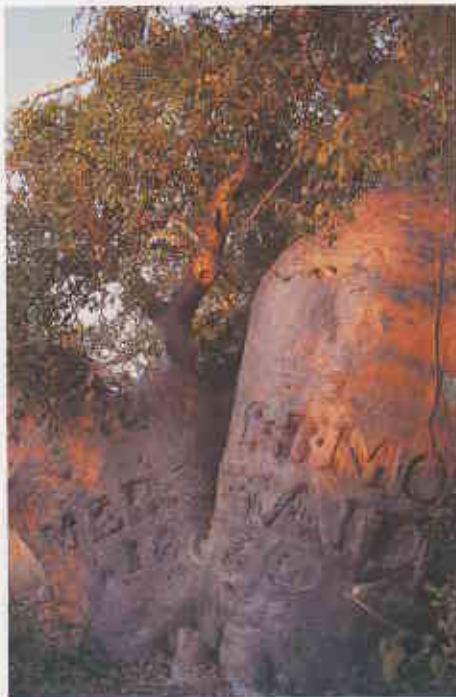
Jar Island, at the southern end of Vansittart Bay, was also named by King. Here, King and his men discovered shards of pottery, which they assumed had been left behind by Malay fishermen. However, the pottery was probably derived from the Maccassans, who visited the northern Australian coast to exploit the *bêche de mer* or sea cucumber. This animal was boiled and dried for sale as a delicacy back in Indonesia. The Maccassans left many artefacts, including rock hearths, in which they boiled their catch.

Both King and the Macassans were preceded to Jar Island by Aboriginal people, who left some delicate artwork, known as Bradshaw figures, on the rough sandstone. Other styles of art such as stencils of hands, also of great antiquity, adorned the walls. This site was difficult to approach through the prolific growth of spiny hibiscus-like *Gossypium* in full flower (a result of a previous dry season bushfire), but the effort was well worthwhile. Intriguing tracks in the sand could have been made by possums and further study to confirm this observation would be useful. A red-kneed dotterel was seen and an eagle ray repeatedly jumped clear of the water as we left the beach.

SWEEPING GRANDEUR

The sheer ruggedness of the terrain was evident as we motored up the King George River in the *Explorer*. Huge perpendicular cliffs of blocky sandstone formed a massive gorge, which had been eroded by the river over millions of years. Rising sea levels flooded the gorge, allowing small coastal vessels to enter and replenish water supplies while enjoying the scenic grandeur of the 100-metre-high King George Falls.

The 24-hour beat across the heavy



Above left: A pair of white-bellied sea-eagles.
Photo – Raoul Slater/Lochman Transparencies

Above right: At sunset, the moon glows over screw pine (*Pandanus spiralis*).
Photo – Pamela Bull

Left: The historic Mermaid boab tree at Careening Bay, Prince Regent Nature Reserve.
Photo – Alex Steffe/Lochman Transparencies



seas of the Joseph Bonaparte Gulf severely tested our sea legs. The sight of Darwin left us with mixed feelings as our trip along the Kimberley's spectacular 'Wandjina Coast' drew to a close, but we were pleased that we would soon be back on terra firma.

COASTAL MANAGEMENT

A relatively small proportion of the Kimberley coastline is protected as part of the conservation estate. Several island nature reserves including the Lacepedes, Swan, Low Rocks and Pelican islands, and the Prince Regent Nature Reserve, while extremely important in their own right, are not sufficient to adequately conserve the area's most important features in perpetuity.

Several areas along the Kimberley coast were proposed as marine reserves in the 1994 'Wilson Report', a pioneering report on marine conservation for Western Australia. The report recommended that about 70 marine regions around the State be considered for declaration as marine reserves, so as to create a comprehensive system that would cater for conservation and other needs. Currently, the only Kimberley marine reserve is the Rowley Shoals Marine Park. A number of terrestrial reserves have also been proposed (see *Nature Conservation Reserves in the Kimberley*, published 1991).

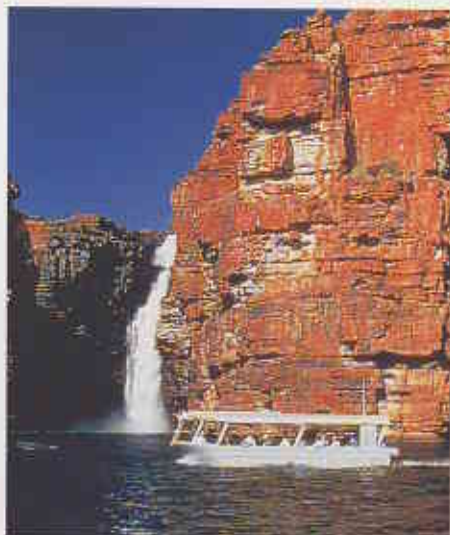
Remoteness and difficulty of access have resulted in limited human pressure on the Kimberley coast to date. However, the coast is

Above: An aerial view of Prince Frederick Harbour.
Photo – Alex Steffe/Lochman Transparencies

Right: *Singing for the Spirit*, 1999.
Painting (51 x 36 cm in oil crayon and gouache on paper) – Ken Done

Below: *The Explorer* at King George Falls.
Photo – Tim Willing

increasingly important to traditional Aboriginal custodians, recreational and professional fishers and pearl farmers, and for recreational tourism, petroleum and other exploration and so on. CALM has been actively promoting a study of the area so that orderly planning and development can take place while preserving the natural attractions that make the Kimberley so special.



Chris Done is Kimberley Regional Manager for the Department of Conservation and Land Management. He has been involved in managing the region's conservation estate for 20 years. He has travelled the coast on many occasions and acted as a CALM volunteer on several cruise trips during his recreational leave. He can be contacted on (08) 9168 4200 or by email (chrisd@calm.wa.gov.au).

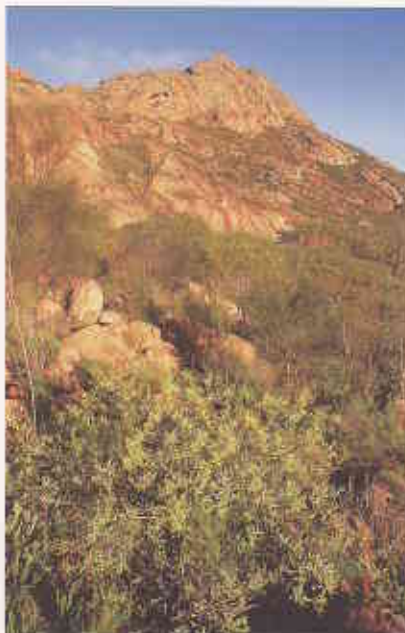
The author gratefully acknowledges the assistance of Tim Willing and Jenny Wilksch in writing the article and Ken Done for the use of his paintings, which add another dimension to the story.



Winner of the 1998 Alex Harris Medal for excellence in science and environment reporting.

LANDSCOPE

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Peak Charles and Peak Eleanora, protected within Peak Charles National Park, form granite islands in a sea of bush. See page 10.



Butterflies have a short life span, but they bring pleasure to many people who visit Rottnest Island. See page 23.



The Swan River is a recreation area for humans and a home for migratory birds. See page 16.



A partnership between State and Commonwealth governments, and a group of pastoralists is helping to fill the gaps in the conservation estate. See page 43.



Many marine creatures have evolved ingenious survival methods. See page 49.

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COVER

Well-known Australian artist Ken Done captures the colour and turbulence of the horizontal waterfalls on the Kimberley's Wandjina Coast.

Painting by Ken Done
Racing Tide, Kimberley Coast, May 1999
(51 x 36 cm) oil crayon and gouache
on paper.



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