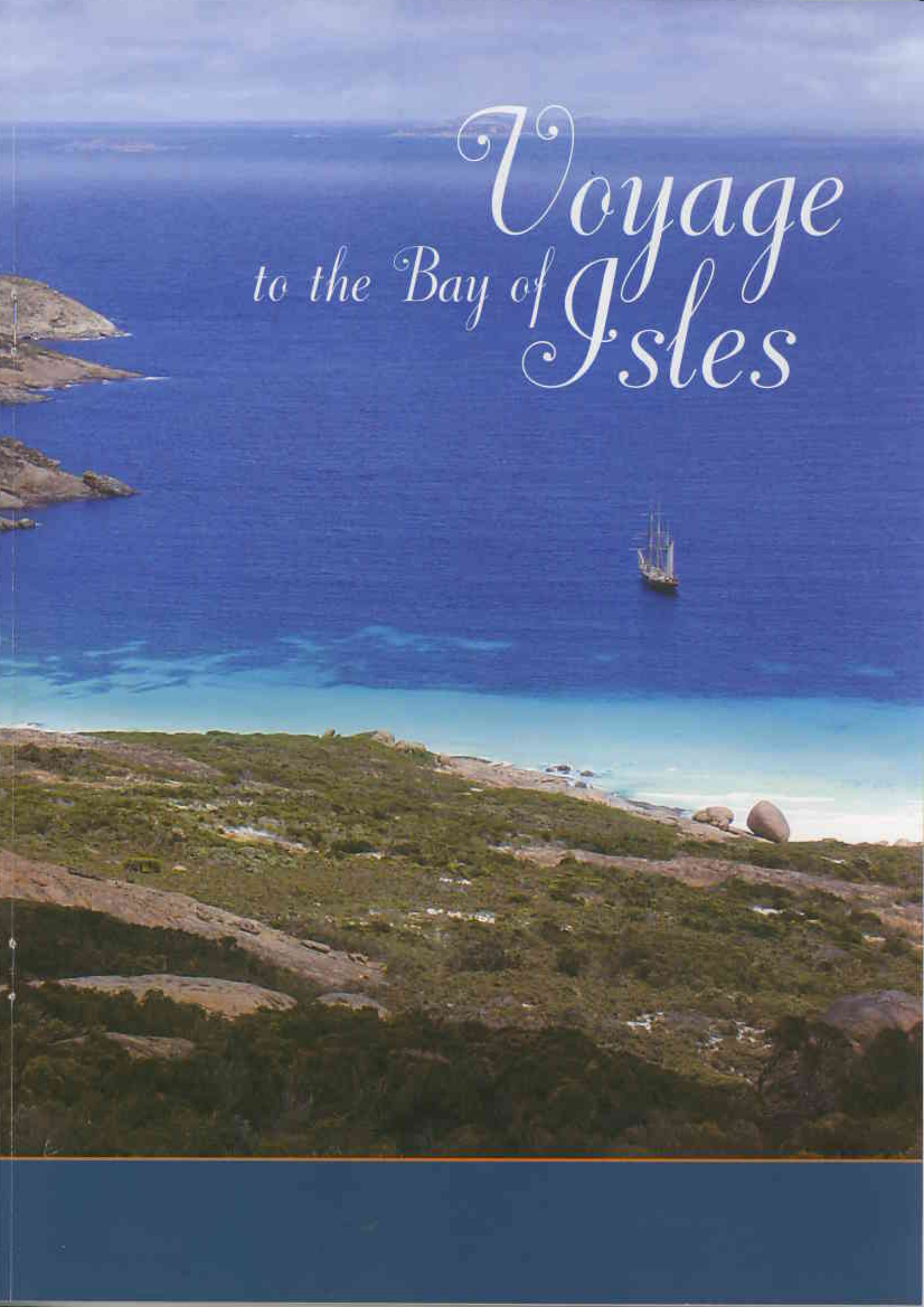




Land-based ecologists Anne Cochrane and Brent Barrett represented the Department of Conservation and Land Management (CALM) on a 10-day marine eco-voyage, aboard the *Leeuwin II*, along the south coast of Western Australia. Anne did the leg from Albany to Doubtful Islands Nature Reserve, then Brent came aboard and sailed to the Recherche Archipelago Nature Reserve, disembarking at the 'Bay of Isles', Esperance. They sailed through some of the most pristine marine areas in the State, a large proportion of which has been proposed for further consideration as possible marine conservation reserves.

*by Anne Cochrane and Brent Barrett*



*Voyage  
to the Bay of Isles*

**Anne:** Three decades ago, when I crewed on a 50-foot New Zealand yacht across the Tasman Sea, gale force winds and giant waves knocked our small boat down, leaving us without power essential for motoring to safety or radioing for help. With a broken mast and no motor, our small jury-rigged sail pulled us slowly back to New Zealand—finally arriving two weeks later. I vowed never to set foot on a boat again, no matter what size! As a consequence I was somewhat terrified of what might confront me over the ensuing days on the *Leeuwin II*.

My trepidation soon vanished as we left Albany on the first night with a stiff breeze behind us. We passed close by the important seagrass beds on either side of

Vancouver Peninsula, including part of Princess Royal Harbour and in the sheltered deep basin of Frenchman Bay. We motored from Princess Royal Harbour to a protected anchorage at Ledge Bay, some six nautical miles east. As luck would have it, I missed out on 'anchor watch' that first night, and every night for that matter, except for an early evening watch from Cheyne Bay. I'm told the midnight to 4 am watch is the hard one, a time when nocturnal creatures feel at home, not people.

On the first evening I introduced myself to a tired throng, most of whom had travelled by bus from Perth that day, and some of whom were already feeling

queasy from the ship's motion. They included 25 students from the Fremantle-based Notre Dame University, the majority from North America. The remaining 15 or so passengers ranged in age from young adults to septuagenarians. Some had sailed on the *Leeuwin II* before. A few had seen the Kimberley coast on an eco-voyage and later commented on the lack of wind and high seas in the State's north. Few of the American students had done any environmental studies. They came from all walks of life and were enrolled in all manner of degree courses, including Law, Health, and Community and Social Welfare. The challenge was to

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**Main** The *Leeuwin II* anchored safely within Lucky Bay, viewed from the summit of Mt Mississippi, in Cape Le Grand National Park.

**Inset** Stern of the *Leeuwin II* anchored at Investigator Island.

Photos – Brent Barrett

**Right** Looking down the deck of the *Leeuwin II* on a calm Southern Ocean.

Photo – Anne Cochrane



make them aware of the importance of conserving our unique natural heritage, be it terrestrial or marine.

### Manypeaks burning

On day two, as we sailed within sight of the blackened southern side of Mount Manypeaks, we discussed the recent wildfire that had engulfed this important south coast landmark. Before the wildfire, Mount Manypeaks was the stronghold of the noisy scrub-bird, a small unassuming bird with a big voice that had been brought back from the brink of extinction. Unfortunately, the devastating wildfire caused by a lightning strike prior to New Years Eve may have destroyed up to 1000 birds (about half of the known population) and about a third of their known habitat in this single event. This rugged coastal reserve was difficult to defend from wildfire, but aerial water bombing slowed the fire's relentless progress and considerably reduced the impact of the fire on the northern side of the peak. From the ocean, the devastation on the southern side, however, was all too plain. From this angle, the mountain had been rendered black. As we looked, puffs of smoke continued to rise, as burnt logs on the ground smouldered and self-ignited in the wind.

The waters offshore from Mount Manypeaks Nature Reserve are relatively remote and inaccessible and exposed to heavy wave action. As a result, the fish life around Cape Vancouver and Bald Island is outstanding, with the large and vulnerable species like blue groper and queen snapper still very much in evidence. Local dive tour operators claim that locations like Coffin Island off Cape Vancouver and Bald Island,



**Above** The remote and inaccessible southern slopes of Mount Manypeaks seen from the ocean.  
*Photo – Anne Cochrane*

**Right** Noisy scrub-bird.  
*Photo – Jiri Lochman*

**Below left** Cheyne Island Nature Reserve.

**Below** Preparing to board the dory for a shore visit.  
*Photos – Anne Cochrane*



with their deep drop-offs (to 50) metres in some places), spectacular rock walls and exceptionally clear water, are among the best dive sites on the south coast. The waters between the western boundary of Two Peoples Bay Nature Reserve and Lookout Point, encompassing Bald Island, could become a future marine reserve for conservation of marine plant and animal life, and for recreation (along with other possible marine reserves, they will be considered in the future, under a community-driven regional

marine planning process, that will take a range of competing uses of the marine environment into account).

The next day, anchored in the lee of Cheyne Island, we glimpsed our first fairy penguins. These delightful little creatures nest on the island along with fleshy-footed shearwaters. We erected a sign to show the island is a nature reserve, stretched our legs and discussed island vegetation. Members of the Wellstead community met us on the nearby mainland, describing the area's natural heritage as we walked to the top





of Mount Melville. The opportunity to make passengers aware of the insidious dieback threat to native flora presented itself at the boot cleaning station at the start of the walk. It was an enjoyable and informative day ashore.

As the winds picked up after dinner, we sailed out to sea, reaching over eight knots in a three to four-metre swell. The ship heeled to starboard and those unfortunate souls with port bunks had a sleepless night as they were continually thrown from their beds. The rumour the next morning was that we had missed our turning and sailed way past our destination! With all hands on deck after breakfast, we trimmed the sails, heaved on ropes and the helmsperson turned the ship towards the coast once again, on the way passing a solitary sunbathing sea lion.

### Learning beneath the stars

By late afternoon, we were anchored in Doubtful Island Bay, within another area that could become a future marine conservation reserve. That evening, CALM fauna conservation officer Peter Collins and CALM's Albany District ecologist Sarah Comer joined us on board. After sunset, the crew and passengers sat on the rear deck under the stars, and listened to Peter describe the south coast and its marine mammals and birds. As the projector cast photographs on to the rear mizzen sail, I outlined the details of WA's partnership in a worldwide seed conservation project (see 'Seed bank pays dividends', *LANDSCOPE*, Summer 2004-05) and Sarah described our recent research visit to Mondrain Island (see 'Fire in the arc', *LANDSCOPE*, Spring 2004, and 'Return to Mondrain', page 40). This aesthetic outdoor lecture theatre was an appropriate venue to emphasise the



**Top left** A team effort ensures the dory is launched.

**Centre left** Karen Nicholson (*Leeuwin II* crew), Peta Sanderson (Notre Dame University lecturer) and Peter Collins (CALM Albany) on Middle Doubtful Island.

**Left** Inquisitive sea lions come visiting. Photos - Anne Cochrane

environmental importance of the south coast and its islands.

The following morning, my last on the *Leeuwin II*, was a sad occasion, as the previous five days had been exhilarating. As several students assisted with a project to trap mardo, small native marsupials that are abundant on Middle Doubtful Island, Sarah Comer, David Chemello (technical officer with the Western Ground Parrot Project), some of the *Leeuwin II* passengers and I established vegetation monitoring plots. These permanent plots will be monitored regularly to determine changes in vegetation condition on this island nature reserve.

The islands and their waters are important breeding and feeding areas for Australian sea lions, New Zealand fur seals, little penguins, shearwaters and southern right whales, and any changes in habitat conditions may have far reaching effects on the success of breeding. Over lunch, as we sat on the rocks above the small cove, we were entertained by the antics of our marine friends. As a finale to this voyage, I took the opportunity to collect seed from one of the dominant species of chenopods on the island for conservation. By day's end, Brent had taken my place in the dory to head out to the *Leeuwin II*: I took the road home to Albany.

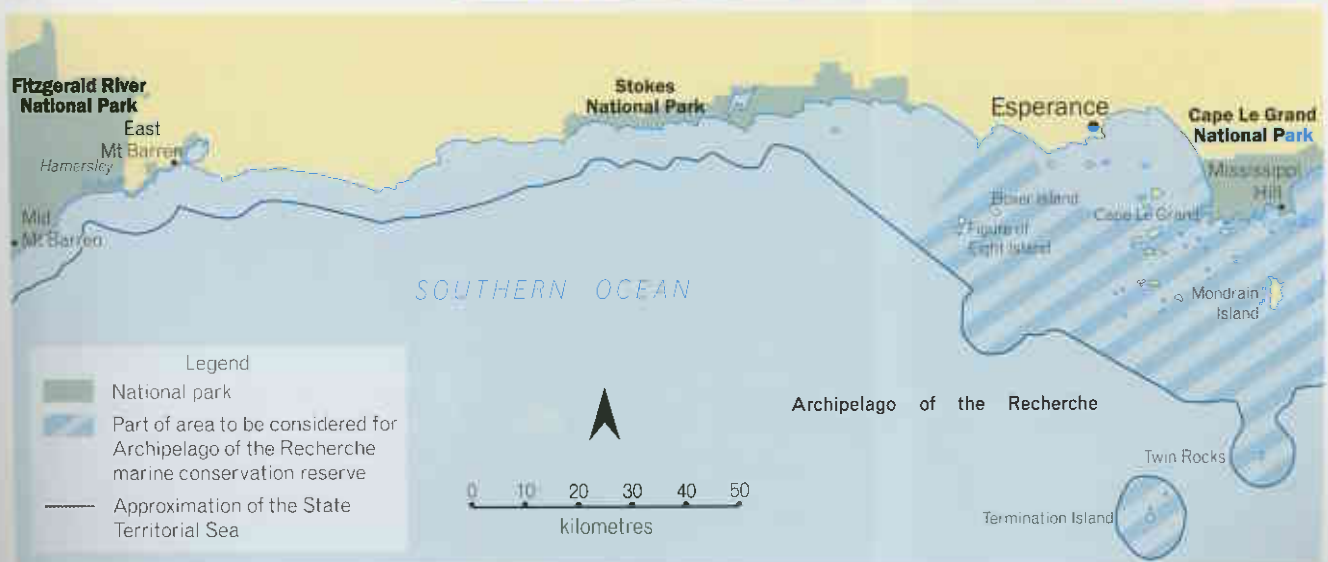
**Brent:** "Port-10" came the call from the Captain. "Port-10 on sir!" I replied. "Midships to full starboard" rang the Captain's voice and I executed the move. The wheel heaved with the effort and it took all my strength just to keep it turning, then, as if by remote control, span with accelerating ease. The 150-foot three-mast sailing ship swung to the right and left the sheltered bay of Middle Doubtful Island. Instinctively, I reached for a handrail to steady myself, and in one quick movement showed myself as a fraud. Here I was, at the wheel of a ship designed to navigate the placid waters of the Kimberley to the raging seas of the south coast. But—not only am I a stoic landlubber—I have never before set foot on a sailing ship. Much less steered one!

With rocks and islands as observable hazards, and shallow sand plotting cryptic sabotage, it felt great to steer the *Leeuwin II*. But my main objective on this voyage was to expose the crew and passengers to the wonders of the marine ecosystem. The plan was simple: provide expertise on the natural world around us, engender a desire to respect the delicate communities visited and have a thoroughly enjoyable time while doing it. The third objective proved the easiest. How could you not enjoy sailing amongst geologically significant islands and headlands loaded with unique ecosystems and abundant biodiversity? Passing on the technical knowledge was also easy; deciding which of the many wonders to describe in detail was the challenge.

My leg of the journey would take me from one end of the present range



Right CALM's Brent Barrett steers the *Leeuwin II* away from Doubtful Island. Photo – Wendy Binks



of the western ground parrot to the other, so I was determined to give a talk on my research by the conclusion of the trip. Until then, the many islands provided a perfect forum to emphasise the variation in island ecosystems, as we sailed past exposed rocks and large sheltered islands supporting forests and even hypersaline lakes.

### Seascapes

From Doubtful Bay we passed the full length of the Fitzgerald River National Park, one of the largest parks along the south coast and one of the most biodiverse regions in the world. The entire area of coastal waters adjacent to the Fitzgerald River National Park is also likely to be considered as a future marine conservation reserve and would be a logical addition to the International

Biosphere Reserve status of the adjacent mainland. West, Mid and East Mount Barren, and the unique shapes of Annes and Thumb Peak, faded slowly into the horizon as we motored into a headwind.

The first port of call, on the following day, was a horseshoe-shaped rock called Investigator Island. Here, I described seals and sea lions and their divergent requirements for haul-out and breeding sites. We also got a good overview of the low vegetation indicative of islands exposed to salt spray. Whilst we were discussing the ecology of a tern colony, a juvenile sea-eagle closely attended by an adult swooped nearby on outstretched wings. This must have been their nest site. The presence of this top avian predator completed the food chain of this island-dwelling society and helped to illustrate the delicate ecology of these islands, and we headed once more out to sea.

At this stage, I decided to climb the rigging to the top of the mast. Attached to a body harness, I swayed with the

wind aloft a huge net-shrouded mast, the large plate form of ocean laid out below me, dotted in every direction with islands and framed on one side by a vast stretching mainland and on the other by a knife-edge horizon.

### Gems of the Recherche

Onwards and eastwards we travelled to the Recherche Archipelago, which contains more than 100 islands and 1500 islets, and stretches for more than 200 kilometres along the State's southern coastline. This biologically important underwater marine wilderness area is a high priority area for the creation of a marine reserve. Detailed marine studies are underway in the archipelago (see 'Researching the Recherche', *LANDSCOPE*, Winter 2003) and are directed at obtaining some of the information needed for the planning of a marine conservation reserve in the area. The studies have already uncovered six new species of fish and five or six new species of algae, and around 40 to 50 per cent of the 300 to

**Below** View of recently-washed deck from the top of the forward mast.  
Photo - Brent Barrett



### THE LEEUWIN II by Peter Collins

The *Leeuwin II* is a 55-metre, three-masted steel barquentine built in 1986. She is the largest sail training ship in Australia and carries over 800 square metres of sail when all 16 sails are aloft. *Leeuwin II* has a permanent crew of five, a volunteer crew of eight and the voyage crew of 40 'eco-voyagers'.

In 1996, CALM's south coast region entered into a business partnership with the Leeuwin Ocean Adventure Foundation, by providing specialist interpretation and activities during the voyage.

The venture's success was internationally recognised when the South Coast Eco Adventure Voyage was Highly Commended for Environment Experience in the prestigious British Airways Tourism For Tomorrow Award for the South West Pacific region in 2001. The award hangs proudly in the foyer of CALM's Albany office.

Coordination and development of the south coast voyage program has involved close liaison between the Leeuwin Foundation and Albany-based CALM officer Peter Collins since the first voyage in 1996.



**Right** Crew and passengers walking to the top of Flinders Peak, Middle Island.

**Below right** *Leeuwin II* anchored in Lucky Bay.

**Bottom right** A plaque at Lucky Bay commemorates the landing of Captain Flinders and the crew of the *HMS Investigator*.

Photos – Brent Barrett



400 species of sponges that were collected are likely to be new to science.

We spent the better part of a day on Middle Island and another day on Mondrain Island, but it could have easily been a week based on the volume of activities. Climbing hills, observing rock-wallabies in the shadowy rocks, snorkelling in deep rock crevices and around old shipwrecks, and of course having a classic Aussie barbecue. It was a unique chance to become acquainted with large islands containing healthy ecosystems.

With a solid wind behind her, the vessel carved through sea with all 16 sails billowing. Our final stop, in the centre of Cape Le Grand National Park, was the aptly named Lucky Bay. Whilst ashore, we trekked to the summit of Mississippi Hill. From this vantage point, with the entire vista before us, I concluded that throughout the journey I had had experiences I had never dreamed of, while my initial fears proved to be unfounded. I didn't get seasick, not once. Well, not until I got to the mainland and found that the whole world was still swaying.

The voyage had provided a great deal of fun, excitement and adventure. Dedicated teamwork helped to overcome challenges that faced us on a daily basis. The numerous shore expeditions to remote islands provided a diversity of environmental experiences that permitted us to guide and educate through formal talks and informal discussions. We left the *Leeuwin II* hoping we had inspired a diverse group of people to better appreciate the wonder and fragility of the south coast's marine and terrestrial ecosystems.



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Peter Collins is a fauna conservation officer based in CALM's Albany office. He can be contacted on (08) 9842 4500 or by email ([peterc@calm.wa.gov.au](mailto:peterc@calm.wa.gov.au)).



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