



## Jurien Bay Marine Park one year on



It's a little over 12 months since Western Australia's newest marine park was declared at Jurien Bay. What has happened in that time?

by Keith Hockey and Kevin Crane

**J**urien Bay Marine Park, encompassing the waters between Green Head and Wedge Island, was the first marine park to be created in Western Australia since 1990, and is an important step in the State's plan to develop a comprehensive marine conservation reserve system.

### Under new management

Management of the park's marine environment requires specialist skills and equipment. The Department of Conservation and Land Management (CALM) vessel *Caretta* is being used for regular patrols and to rescue a number of entangled sea lions, and the Department of Environment has made its vessel *DEP1* available for water quality monitoring.

A Marine Parks Coordinator and a Marine Conservation Officer have

been on board since early 2004. Two more marine park rangers will be appointed later this year to complete the team of marine management specialists assigned to the park.

Different activities are permitted in different zones within Jurien Bay Marine Park. Although most of the park is designated for multiple use, which includes activities such as recreational and commercial fishing, some areas are set aside as sanctuary zones. Therefore, it is important for

park users to be able to identify which zone they are in and what activities can be undertaken there. Installation of 'on water' zone markers is now under way, and a signage and information plan for terrestrial areas adjacent to the park is being implemented.

### Community involvement

Despite some early misgivings by the community (see 'Vision Splendid', *LANDSCOPE*, Spring 2003), the Jurien Bay Marine Park is now acknowledged as a major achievement for marine conservation. Graham Edgar, one of Australia's foremost marine scientists, who undertook an independent assessment of the proposal to establish the Jurien Bay Marine Park, regards it as 'the best marine protected area in southern Australia—with a long gap to second place'.

Community involvement and education are essential in gaining public support for the marine park's management and conservation. Local events, such as the Jurien Blessing of the Fleet, the 40th anniversary of Cervantes and the Easter fair, have provided the chance to familiarise visitors with the park's objectives and values and to develop a register of volunteers interested in taking part in baseline monitoring of the park.

Ten regional schools have been visited as part of a school program, and so far some 900 students have been educated about marine conservation



*Previous page*

**Main** Limestone cliffs and fringing reef at Whitlock Island.

*Photo – Brett Dennis/Lochman Transparencies*

**Insets** Jurien Bay is the most significant Australian sea lion breeding area in WA. A cow watches closely over her three to four-week-old pup.

*Photo – Kevin Crane/CALM*

**Above left** Fishermans Island.  
*Photo – Alex Steffe/Lochman Transparencies*

**Left** More than 150 boats were launched from Jurien over the Easter 2004 weekend.

*Photo – Kevin Crane/CALM*



**Far left** Students from Jurien Bay Primary School learn about the new marine park.  
*Photo – Karen Wheeler/CALM*

**Left** Reducing human-related mortality is important for the long term survival of Australian sea lions.  
*Photo – Kevin Crane/CALM*

**Below left** A CALM rescue team attaches large floats to slow down an entangled humpback whale so she can be cut free.  
*Photo – Kevin Crane/CALM*



ensure the population's long-term viability. Trials are currently under way to modify craypots to stop sea lion pups from entering, while maintaining rock lobster catch rates.

The Central West Coast Marine Biodiversity Program has provided valuable resources to assist in collecting baseline information, such as water quality and human use patterns. This information is essential to determine data baselines for future monitoring of the park. The program is National Heritage Trust funded, facilitated through the Northern Agricultural Catchments Council (NACC). The program has also produced a state-of-the-art GIS-based Marine Information System that provides a repository and retrieval system for management of data collected in the park.

initiatives. This program will be developed further to include holiday activity programs and the production of activity books to provide an interactive learning medium for schoolchildren. Plans are also under way to develop a range of educational material on the marine park that can be used as part of the school curriculum.

### Monitoring and research

Monitoring and research are vital to determine the success of the management plan and the impact of human use on the park's ecological values. During the next 12 months, a range of government agencies and tertiary institutions will spend more than \$1 million on research and monitoring in the park—reflecting the general benefits marine reserves have in attracting funding.

As part of the management plan, more than 3000 hectares of the park's 81,000 hectares are included in sanctuary ('no-take') zones to protect nature conservation values. A recent survey of 80 no-take zones around the world found that the number of fish in the no-take zones increased by 192 per cent; the total weight of fish was higher

than in adjacent fished areas; and average fish size was 20 to 30 per cent bigger than in adjacent fished areas. CALM and scientists from the Tasmanian Aquaculture and Fisheries Institute of the University of Tasmania carried out three biological surveys (1999, 2000 and 2003) before the creation of the Jurien Bay Marine Park. This will be followed up in future years, to measure any ecological changes that occur in the new sanctuary zones.

CALM is also assisting research by the Department of Fisheries to reduce the incidence of sea lion pups becoming trapped and drowning in craypots. The Australian sea lion is confined to Australia and only about 10,000 remain after numbers were severely reduced by commercial hunting in the early 1800s. Sea lions are highly susceptible to human pressures because they only breed every 18 months and only in small numbers (there are normally less than 150 pups per breeding season in Western Australia). The Jurien Bay region is the only breeding area on the west coast (apart from small numbers at the Houtman Abrolhos Islands), so reducing this mortality is important to

### Future focus

Future management of the park will focus heavily on community involvement and education of park visitors. There is a plan for the formation of a community-based advisory committee, which will provide input into the overall management of the park. Members of the public who would like to become involved with these programs on a voluntary basis are encouraged to contact CALM's Jurien Bay office.

Keith Hockey is Manager of CALM's Moora District. Kevin Crane is Coordinator of Jurien Bay Marine Park.

They are both based at CALM's Jurien Bay office, Lot 124 Bashford Street, Jurien Bay, WA 6516 and can be contacted on (09) 9652 1911.

- 52 Reviving the Avon Valley  
The long road home—cooperative efforts by the Department of Conservation and Land Management and the Australian Wildlife Conservancy help return native animals to the Avon Valley.
- 59 Jurien Bay Marine Park – one year on  
What's been done in the year since the Jurien Bay Marine Park was declared?

## Regulars

- 3 Contributors and Editor's letter
- 31 Bookmarks  
Eyes in the night  
Bushwalks in the Pilbara  
Handbook of Western Australian Birds, Volume II
- 41 Endangered  
Muir's corella
- 42 Feature park  
Yalgorup National Park
- 62 Urban Antics  
Go wild

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**Managing editor** Caris Bailey  
**Editor** Carolyn Thomson-Dans  
**Contributing editors** David Gough, Rhianna Mooney.  
**Scientific/technical advice** Kevin Kenneally, Paul Jones, Chris Simpson, Keith Morris.  
**Design and production** Gooitzen van der Meer, Natalie Jolakoski, Maria Duthie, Tiffany Aberin.  
**Illustration** Gooitzen van der Meer.  
**Cartography** Promaco Geodraft  
**Marketing** Cathy Birch  
 Phone (08) 9334 0296 Fax (08) 9334 0432.  
**Subscription enquiries**  
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