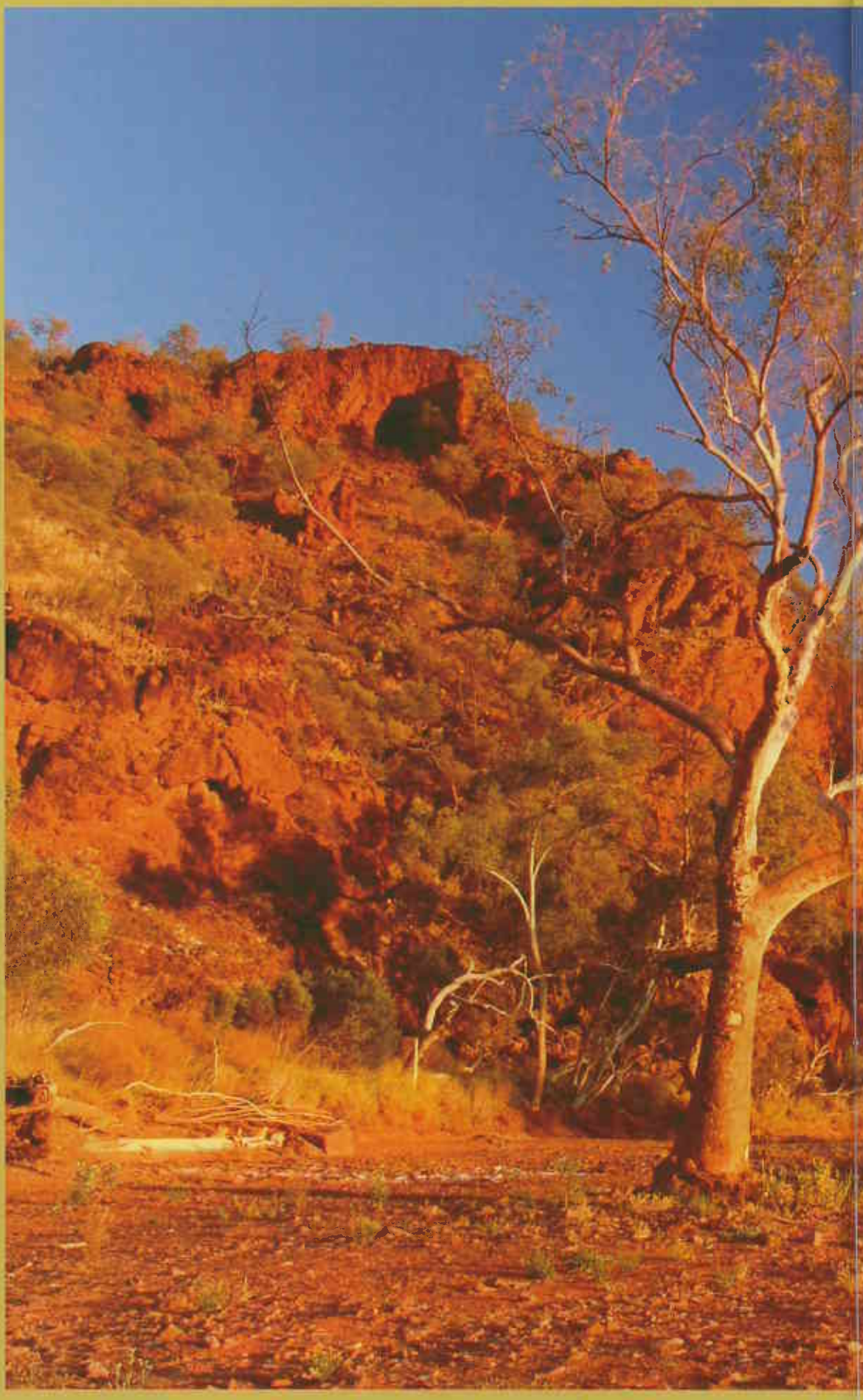
A major long-term program to acquire conservation lands in important wildflower and wildlife habitats, formerly within pastoral stations in the **Gascoyne and Murchison** regions, is breathing new life to the land. Areas once used exclusively for pastoralism will instead be managed primarily for conservation, and attract more visitors to the region.



# Stationed for conservation



by Samille Mitchell, Brett Fitzgerald and Tony Brandis

Driving south of Mount Augustus National Park, in country once part of Waldburg Station that has been managed for pastoral production since about 1932, it's hard to imagine the land as it once was. Where native wildflowers and wildlife once thrived in their natural habitats, years of feral animal and human impacts have taken their toll. The country has been changed, in some places quite dramatically.

Mounds of earth bear testimony to some of the wildlife that once inhabited the land. Some of the bigger mounds once housed whole communities of burrowing bettongs. Scatters of smaller rocks were once home to pebble mound mice, which would carry rocks up to half their own weight in their mouth and arrange these in piles around the entrance to their burrows. Today the mounds are deserted—remnants of a time when the full suite of native mammals occurred in the area. However, it is hoped that the bettongs and native rodents will one day be back, as the Department of Conservation and Land Management (CALM) now manages considerable areas of land purchased across the Gascoyne and Murchison regions, through a project known as the Rangelands Pastoral Land Acquisition Program, in a bid to conserve their habitats.

## The beginnings

Parts of the pastoral rangelands have always been poorly represented in conservation reserves due to early development of pastoral leases. An opportunity to expand the area within reserves came with the beginning of the Gascoyne Murchison Strategy (GMS). The strategy recognised problems besetting the pastoral industry, such as declining vegetation, soil loss, increasing terms of trade and declining economic returns. It also recognised the need to improve the natural resource on which the industry is based, and to address biodiversity conservation.

Four core programs—business and industry development; industry research and development; voluntary lease adjustment; and improved regional environmental management—were established within the GMS. The Pastoral Rangelands Acquisition Program was a component of the regional environmental management program that provided funding for CALM to purchase selected land systems within pastoral leases to add to the conservation reserve system. The GMS funding was strengthened by significant contributions from the Commonwealth Government's National Reserve System Program of the Natural Heritage Trust.

Some pastoralists accepted the opportunity to leave the industry and have their leases included in the conservation reserve system. Many were offered the chance to remain on the land as caretakers for CALM, while pursuing other economic endeavours. Eighteen pastoralists sold their entire properties, and another 19 sold part of their properties (see 'Wanna know a secret?', *LANDSCOPE*, Autumn 2005). Each property has its own unique history, individual collection of land systems and conservation values.

## Selecting land

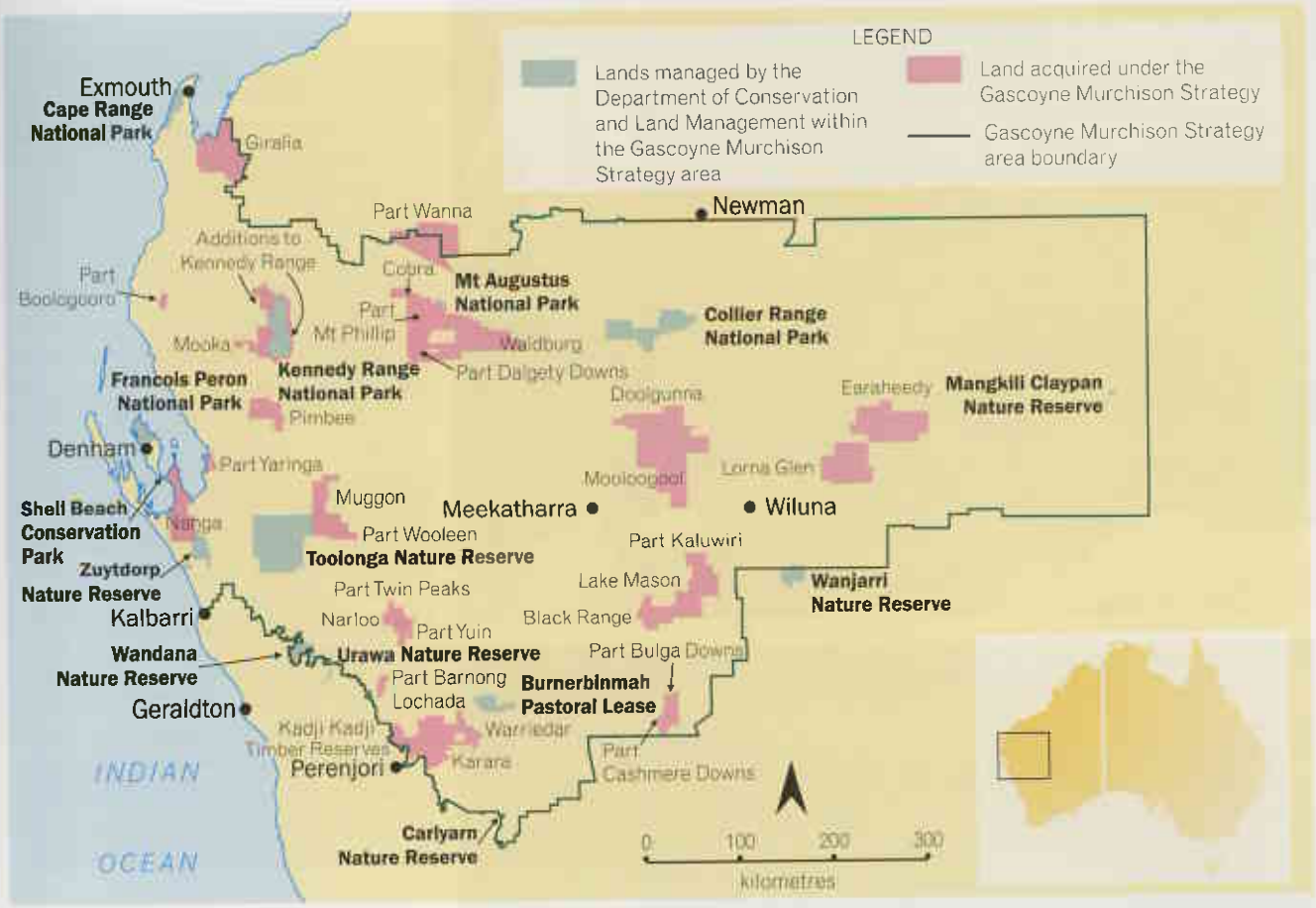
A systematic approach was used to identify stations which, when added to the current reserve system, would improve representation of the range of biodiversity within protected areas (see 'Filling the gaps', *LANDSCOPE*, Winter 2000).

The selection process involves evaluating available land using a range

*Previous page*
**Main** Part of the Irregully Creek system now within the new reserve system in the Gascoyne.
**Inset** A dunnart, one of the marsupial species discovered on an inaugural biological survey at Waldburg Station in the Gascoyne.

**Above** Entering the section of Wanna Station purchased by CALM through Coodardo's Gap.

**Left** Giant gums provide important habitats for an incredible profusion of bird life in an area formerly on Wanna Station. Preservation of such places of biological significance is what the rangelands acquisition program is all about.
*Photos – Samille Mitchell*




of measures including vegetation associations, land systems, biological survey results, special features such as river systems, wilderness value, and the presence of significant flora, fauna or ecosystems. This information is then compared with the values protected in existing reserves, to determine how purchasing particular areas would improve the qualities of the reserve system. Ecosystems with less than 10 per cent of their original extent within the reserve system are targeted. Pastoral land with high biological diversity, in good condition, with relatively low levels of feral animals and weeds, and of adequate size is also prioritised for acquisition.

Prior to the GMS land acquisition project, just 1.4 million hectares representing about 2.4 per cent of the region were protected in conservation reserves. Following the purchase of 3,914,691 hectares of land under the project, that figure has leapt to 5.4 million hectares, representing nine per cent of the Gascoyne and Murchison regions.

While the purchase of an area more than half the size of Tasmania can be seen as a significant achievement, the increased land area in conservation reserves is not the project's most important outcome. Rather, the individual qualities of the areas purchased, and their contribution to the comprehensiveness, adequacy and representativeness (CAR) of the reserve system, is the most appropriate measure of its success. Through careful selection of land, all three CAR criteria have improved as a result of the acquisition program.

## Restoring nature's balance

Once CALM assumes management of the land, stock is removed from the property and feral animal and weed control begins. Boundary fence maintenance, a task undertaken with neighbours, is an ongoing challenge, as domestic stock must be excluded from land managed for conservation of biodiversity. Man-made water sources are closed to discourage domestic and feral animals, and to counter unnaturally high numbers of some native species that have arisen from the provision of water. Water closures are carefully timed, to minimise impacts on native animals.

Plant and animal surveys are conducted, to provide benchmark information from which to monitor changes and improvements to populations. Biological surveys on former stations such as Muggon, Lorna Glen, Lake Mason, Black Range and Waldburg have revealed that a large variety of reptile, bird and mammal species remain, even in sometimes greatly altered habitats. In other places, there is evidence that animals, such as the malleefowl, have disappeared.

By removing one of the key threatening processes—the unsustainable total grazing pressure—the land will be able to return to somewhere near its natural state. Since Europeans arrived, the landscape has been altered dramatically as a result of pastoral management practices. Some parts of the landscape may take a long time to recover to something like their former composition and structure—and some highly impacted ecosystems may never recover to their former state.

Areas in which feral animals can be controlled may be earmarked for the reintroduction of native animals that are locally extinct, rare or patchily distributed, such as the malleefowl (*Leipoa ocellata*), boodie (*Bettongia*

*lesueur*), dalgyte or bilby (*Macrotis lagotis*), greater stick-nest rat (*Leporillus conditor*) and rufous hare-wallaby (*Lagorchestes hirsutus*).

CALM commences management planning by preparing interim management guidelines, which will eventually be developed into formal management plans. Interim management guidelines allow immediate action in the key areas of feral animal control, fire control, boundary fence maintenance or replacement, destocking, public safety, and management of activities such as tourism and recreation.

## Wildlife and wildflowers

Flora and fauna surveys on the former stations have already turned up some interesting species. Threatened mulgaras (*Dasycercus cristicauda*) have been collected from Lake Mason. Long-tailed dunnarts (*Sminthopsis longicaudata*) have been found on Lorna Glen, Lake Mason, Muggon and Waldburg, showing this species to be more common than was previously thought. The Pilbara olive python (*Liasis olivaceus barroni*), another threatened species and the largest snake in Western Australia, has been confirmed on Wanna and a rock-wallaby species, probably Rothschild's rock-wallaby (*Petrogale rothschildi*), has also been seen on Wanna.

A new species of gecko (*Diplodactylus* sp.) has been found on Lorna Glen. It has long been suspected that species within this genus have been poorly described, and this likely new species is a good example of how surveys on the acquired properties are producing additional information to

**Top left** CALM senior operations officer Brett Fitzgerald looks to Mount Augustus in the distance from Gregory's Gap, once part of Wanna Station.

**Centre left** This spiny-tailed gecko was one of dozens of reptile species recorded on a CALM biological survey at the former Waldburg Station in the Gascoyne.

**Left** A breakaway on the former Lorna Glen Station.
*Photos – Samille Mitchell*

## Cobra poised

Jim Millar had always longed to return to Cobra Station after first visiting 20 years ago. When CALM bought the property near Mount Augustus National Park and invited expressions of interest to develop and manage the facility, Jim finally had his chance.

Today, Jim's busy revamping the station's accommodation and retail facilities, maintaining the gardens, remodelling the swimming pool and planning for the coming tourist season. He also plans to open licensed restaurant facilities, to build a bar and pool area and to construct walktrails and a viewing platform from which guests can watch the sunset turn nearby Mount Augustus brilliant hues of red. Jim also plans to reopen a shop and provide tyres for sale.

Jim hopes that, by revamping Cobra's tourism facilities, he'll breathe new life into the region by attracting more backpackers and self-drive tourists to marvel at the nearby Mount Augustus and experience the real Australian outback bush. He hopes the property will serve as a base for scientists and students studying the region's diverse geology, wildflowers and wildlife.

"I'd like to encourage people to come out of the city and enjoy nature, to relax and come back to the reality of why we're really in the world. People living in the city lose the beauty of nature. But after leaving here their stress will be gone and they'll have different ideas of where their life is going and what's really important," Jim said.

"The restaurant will also give local people the opportunity to go out to dinner, dress up and enjoy a three-course meal. When we get the restaurant licence back and the shop operating we'll also have somewhere for people to stop in for a quiet drink—a resting place in the middle of the bush."

allow scientists to review the status of some of these species. Collections of dunnarts, from Lorna Glen in particular, have led to scientists reviewing dunnart taxonomy.

Some fascinating plants have been collected from some of the properties during a number of *LANDSCOPE* Expeditions. In the order of 460 species have been collected from Lorna Glen, and 370 species at Lake Mason. Significant plants recorded from these areas include the priority species inconspicuous grevillea (*Grevillea inconspicua*), a new species of *Acacia* and *Anacampseros*, a new generic record for the State. The discovery of *Anacampseros* is of biogeographical interest, as it is the only Australian representative of an otherwise African genus in the family Portulacaceae.

### Access

Although the primary reason for purchasing land is to increase the area managed for biodiversity conservation, compatible activities such as tourism are allowed. CALM is currently investigating the feasibility and issues involved in establishing tourism on some purchased properties. David Wood from Curtin University is identifying tourism and cultural values, from which to develop tourism opportunities, under a project funded by the Cooperative Research Centre for Sustainable Tourism. The next stage of this project will be to seek further information from key stakeholders (including local Indigenous groups, pastoralists, the local tourism industry and local naturalists) about how these opportunities can be developed further or integrated with existing tourism activities.

A tourism master plan has been completed for Kennedy Range National Park that includes all of the pastoral acquisitions surrounding the park (Mooka Station plus parts of seven other adjoining leases). CALM may undertake similar plans on other properties, where tourism is identified as a compatible use.

CALM staff have commenced discussions with traditional owners and Native Title claimant groups about their interest in the acquired land, in relation to opportunities for joint management, and is undertaking broadscale surveys of areas that are significant to Indigenous people. These areas will provide additional opportunities for traditional owners to more easily access traditional lands and contribute to their management.

### Using local resources

Management actions such as biological surveys, road maintenance and rehabilitation works undertaken on former stations are the same as those required in existing rangelands reserves. However, activities such as fencing, mustering stray or feral stock, managing infrastructure such as windmills and maintaining station homesteads are new skills to many CALM staff. Where possible, CALM has retained previous owners and managers, along with their extensive knowledge and experience, as caretakers to help manage the former stations. Retaining them on the land also helps to ensure that government services to rangelands communities—such as road and communications networks, education and health—are maintained.

As a result of the acquisition program, CALM staff have an increased presence in the region, to deal with a range of conservation reserve

**Above far left** CALM senior operations officer Brett Fitzgerald examines the slate rock formation at Pretty Pool, formerly in Wanna Station.

**Above left** CALM fauna officer Kathy Himbeck shows off one of the reptile species found at Waldburg Station during a biological survey.

**Above** Pinyuru (*Eremophila cuneifolia)* on Waldburg Station.
*Photos – Samille Mitchell*

management matters, community liaison, and contact with neighbours. Increased interest from the tourism industry is likely to result in greater numbers of visitors requiring fuel, accommodation and food. Other services required by CALM, such as boundary fence and access road maintenance, will be sought from local contractors if possible. In some cases, the caretakers themselves are also bringing more people to the regions. Jim Millar, on the former Cobra Station near Mount Augustus National Park (see box), is revamping its accommodation facilities and hopes to attract more visitors to the region.

Peter Woodhead, the former manager of Karara Station, 60 kilometres east of Perenjori, has been contracted as caretaker to continue to provide services, now aimed at conservation outcomes, similar to those he used when he ran the station as a pastoral business. CALM has encouraged many more people to stay on the land, in a bid to maintain rangelands communities.

CALM is working closely with rangelands communities, neighbours, Indigenous people and industries on a range of land management issues such as feral animal control, tourism, and the provision of contract-for-service opportunities.

## Moving forward

Thanks to the land acquisition program, the additional 3.9 million hectares of land added to the conservation reserve system in the rangelands of WA contains a far greater representation of ecosystems than ever before. At the beginning of the program, 259 vegetation types were mapped within the region, of which only 74 (28.6 per cent) were protected in existing conservation reserves. Only 19 (7.3 per cent) of these had more than 10 per cent of their area within the reserve system. Hence, 92.7 per cent of the vegetation types within the strategy region were either not represented or under-represented. Today, 144 vegetation types (about a third of which have more than 10 per cent of their area represented) are found within the region's existing and proposed conservation reserves—almost double the previous figure.

A number of smaller ecosystems considered restricted in their distribution, and hence vulnerable to the effects of climate change, overgrazing or regular burning, are now represented in the conservation reserve system. Most of these ecosystems have more than 10 per cent of their original area protected, and some very small but unique ecosystems are now totally within the protected area system.

Despite these achievements, the reserve system still does not contain all of the different ecosystems, and some are not adequately represented. More land needs to be acquired to achieve the strategy's goal of having 10 to 15 per cent of all ecosystems within reserves managed for biodiversity conservation. Continued support from industry and government will be necessary if we are to establish and manage a truly comprehensive reserve system in the Gascoyne-Murchison rangelands.

There is also more work to do on restoring former pastoral lands. With ongoing management, and consultation with all stakeholders, these areas may eventually return to their former state. One day, the bettongs and pebble mound mice may return to their underground homes, and the barren warrens of these animals may once again house healthy populations of native mammals.

Samille Mitchell is a photojournalist based in Geraldton. She can be contacted on 0407 998 721 or by email (samille@wn.com.au).

Brett Fitzgerald is a senior operations officer for CALM, based at the Carnarvon work centre. He can be contacted on (08) 9941 3754 or by email (brettf@calm.wa.gov.au).

Tony Brandis is the rangelands conservation coordinator for CALM and can be contacted on (08) 9729 2733 or by email (tonyb@calm.wa.gov.au).

Volume 20 Number 4 WINTER 2005

# contents



## Regulars




*Publishing credits*
**Executive editor** Caris Bailey.
**Editors** Carolyn Thomson-Dans, Rhianna Mooney.
**Contributing editor** David Gough.
**Scientific/technical advice** Kevin Kenneally, Paul Jones, Chris Simpson, Keith Morris, Kevin Bancroft.
**Design and production** Maria Duthie, Natalie Jolakoski, Tiffany Taylor, Gooitzen van der Meer.
**Illustration** Gooitzen van der Meer.
**Cartography** Promaco Geodraft.
**Marketing** Estelle de San Miguel
*Phone* (08) 9334 0296 *Fax* (08) 9334 0432.
**Subscription enquiries**
*Phone* (08) 9334 0481 or (08) 9334 0437.
**Prepress and printing** Lamb Print, Western Australia.
© ISSN 0815-4465




Please do not send unsolicited material, but feel free to contact the editors.

Visit NatureBase at www.naturebase.net


Published by the Department of Conservation and Land Management, 17 Dick Perry Avenue, Kensington, Western Australia.