



John Lauderbach



Shelley Hughes

A moss microcommunity on limestone rock at Rottnest (above).

*Ganoderma resinaceum* growing on wood (top).

*Marchanta* sp., a liverwort, from West Cape Howe. Liverworts are usually found in moist, shady locations on rocks or soil (full page).

# Gather No Moss

*Mosses, liverworts, fungi, lichens and algae have now been elevated to the status of 'protected flora'. CALM botanist David Coates gives the details.*



Protection of species diversity is an important part of CALM's work, and this applies especially to the State's flora, which is exceptionally rich in localised and rare endemic species.

Up until now only vascular plants (that is the ferns and flowering plants) have been classified protected. Following a recommendation from the National Parks and Nature Conservation Authority and approval by the Minister for Conservation and Land Management, Barry Hodge MLA, non-vascular plants have also been declared as protected flora under the Wildlife Conservation Act. Being protected flora means they cannot be taken from any Crown land without a licence from CALM.

The non-vascular plants consist of the Bryophytes (mosses and liverworts) and the Thallophytes (algae, fungi and lichens). Many of the species in these groups are relatively inconspicuous, although they constitute a very important and valuable component of this State's flora. Approximately 200 species of Bryophytes, 194 species of lichens and 300 species of macrofungi are now classified as protected flora. While most Bryophyte and Thallophyte species are thought to be widespread, their conservation status is yet to be documented in detail. Some species are poorly collected and may be rare.

Mosses, liverworts and lichens frequently form diverse communities on granite rocks through the south-west of W.A. The mosses and liverworts have a simple form, small size, and are considered to be quite unrelated to our generally more conspicuous vascular plants. Lichens are of particular interest because they are composed of an alga (green or blue green) and a fungus, and are classified according to their fungus component. The macro-fungi show



Steve Hopper

*Cladia* sp. - a lichen on granite near Jackson Rock east of Hyden.

a spectacular array of fruiting bodies of all shapes and sizes. The fruits appear after the first winter rains.

This declaration of the non-vascular plants may mean the licensing of contractors, or individuals, for the removal of moss and lichen covered rock from vacant Crown land, and licensing the farming of salt lake algae for carotenes. Picking the common field mushroom, *Agaricus campestris* (a macro-fungus), is still legal because it is regarded as an introduced species. Although it is unlikely that the wildflower industry will harvest endemic Bryophytes or Thallophytes, commercial pickers will now be required to hold a Commercial Purposes Licence, or, in the case of

private landowners, a Commercial Producers Licence should they wish to do so.

The status of 'Protected Flora', which now covers virtually every native plant species in the State, should not be confused with the category of 'Declared Rare Flora'. Plants in this latter category are those which are rare, endangered, or in need of special protection. Nobody, not even research scientists, can take or damage any part of the plant without permission from the Minister. The Declared Rare Flora list currently contains 226 species. A special colour publication with photographs of all our Declared Rare species will be produced early next year.



# LANDSCOPE

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In W.A. the concept of marine conservation reserves was firmly established in 1984 when the CALM Act was passed, with provision for Marine Parks and Marine Nature Reserves, vested in the National Parks and Nature Conservation Authority.

Since 1984 two major Marine Parks have been declared in W.A.: Marmion and Ningaloo.

This is a new field in W.A., and there are no local precedents to guide us in resolving the many management issues which have emerged.

A first consideration has been that fishing is already controlled under the Fisheries Act. It would be foolish for CALM to attempt to establish itself as a fisheries management agency. A policy decision has been made that any fisheries in Marine Parks will be regulated under the Fisheries Act.

A more philosophical problem has been that many citizens, although generally sympathetic to the conservation cause, are unaccustomed to the idea of having parks and reserves in the sea. The idea that the sea is a public common where anything and everything goes is still well entrenched in public attitudes. Yet there are many terrible examples around the world where coastal environments and their resources have been devastated by excessive and improper use. In W.A. we have not reached that point.

W.A. can be proud of its fisheries management record, based on the principle of sustainable use for posterity. Development of a marine parks and reserves system along our coast is another essential part of the overall objective. It is to be hoped, then, that our first initiatives in this direction will receive public support.

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## PINES

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*How can less than four per cent of the State's area supply us with all our timber needs, and save the hardwood forests at the same time?  
Details on page 28.*

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## WALL OF MOUTHS

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*It's a fish-eat-coral world, but what do the coral eat? Find out on page 32.*



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## BORERS

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*Now you can be sure there are no borers in the door. Well, if they are there, at least you'll know what to call them after reading the article on page 42.*

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## TROUBLED WATERS

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*Does the very word pollution make you feel powerless? Discover what you can do to help the wildlife victims on page 20.*

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## FOREST RENEWAL

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*What is the connection between the poets' of the First World War and W.A.'s forests? Find out on page 56.*





## JEWEL OF THE KIMBERLEY

What do you mean frog? In my home I am a prince. After all, Prince Regent is the only mainland reserve where all of the original animal species remain. Meet the rest of them on **page 47**.

## HILLS' BELLES



When Perth looks out its backdoor in spring the Hills are ablaze with colour. Your field guide to some of our glorious wildflowers starts on **page 4**.

### ATTENTION ADULTS!

Sick of taking the anklebiters to the same old national parks and camping spots? Put them to work for you. If they enter the kids' competition on **page 63** they could win two beautiful books on all the best picnic and camping spots between Perth and Eucla.

## GATHER NO MOSS



The trouble with lichen is that up until recently it wasn't protected flora. Now lichen and their relatives - mosses, liverworts and algae - have joined the rest of the State's flora. See **page 54**.

## RIGHT ON TRACK



Is a high-tech wilderness trek a contradiction in terms? Find out how 4WDs and conservation can co-exist peacefully on **page 12**.

### Cover Photo



Magpie Geese take off from the Ord River.

Photo: Richard Woldendorp.

## CONTENTS

	Page
Hills' Belles <i>by John Marshall and Brian Tullis</i> . . . . .	4
Right on Track <i>by Kylie Byfield</i> . . . . .	12
Bush Telegraph . . . . .	19
Troubled Waters <i>by Liana Christensen</i> . . . . .	20
Urban Antics: Marron Glace <i>by Andrew Cribb</i> . . . . .	27
Pines - The Soft Option <i>by Don Spriggins</i> . . . . .	28
Wall of Mouths <i>by Barry Wilson</i> . . . . .	32
Book Review: <i>Wild Places, Quiet Places</i> . . . . .	40
More Boring Insects <i>by Ian Abbott</i> . . . . .	42
Prince Regent: Jewel of the Kimberley <i>by Andrew Burbidge, Chris Done and Barry Wilson</i> . . . . .	47
Gather No Moss <i>by David Coates</i> . . . . .	54
Rebuilding the Cathedral <i>by Roger Underwood</i> . . . . .	56
Endangered: Golden Bandicoot <i>by Andrew Burbidge</i> . . . . .	61
Letters . . . . .	62

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