



Swamped WITH BIRDS



BY JIM LANE

Waterbirds flock to the Vasse-Wonnerup wetlands in their tens of thousands, giving it one of the highest concentrations of birds in Australia.

MORE than 75 species have so far been recorded, several of them rare. Nesting birds, resting birds, nomadic birds and migrants. Pink-eared, hoary-headed, blue-billed, whiskered, straw-necked, red-kneed, long-toed and spotless. Tattlers, warblers, shovelers, turnstones, knots, rails, hardheads and stints.

The Vasse-Wonnerup wetlands lie on the outskirts of Busselton, 200 kilometres south of Perth. The coastal town is the gateway to one of WA's most popular holiday regions, where people escape the heat of summer to enjoy the rugged coast, sheltered beaches, forests, caves, farmlands and vineyards of the South-West.

The wetlands vary from broad expanses of open water to sheltered bays and inlets. Shorelines are fringed by flooded pastures or native rush and paperbark.

The surrounding pastures are lush green in spring, turning to golden hay in summer. To the south is the last substantial area of tuart forest in the world - only 2 000 hectares. Stately tuarts (*Eucalyptus gomphocephala*) grow to 30 metres or more and are home for parrots and possums, bandicoots and kangaroos. To the north lie low dunes skirted by peppermint and wattle, behind beaches of sand and shell and clear green waters.



Not far from Vasse-Wonnerup is one of the largest ibis breeding colonies in the State. As well as several thousand ibis, there are large numbers of egret, spoonbills, herons and cormorants. Many hundreds of these birds feed around the Vasse-Wonnerup wetlands and adjoining pastures.

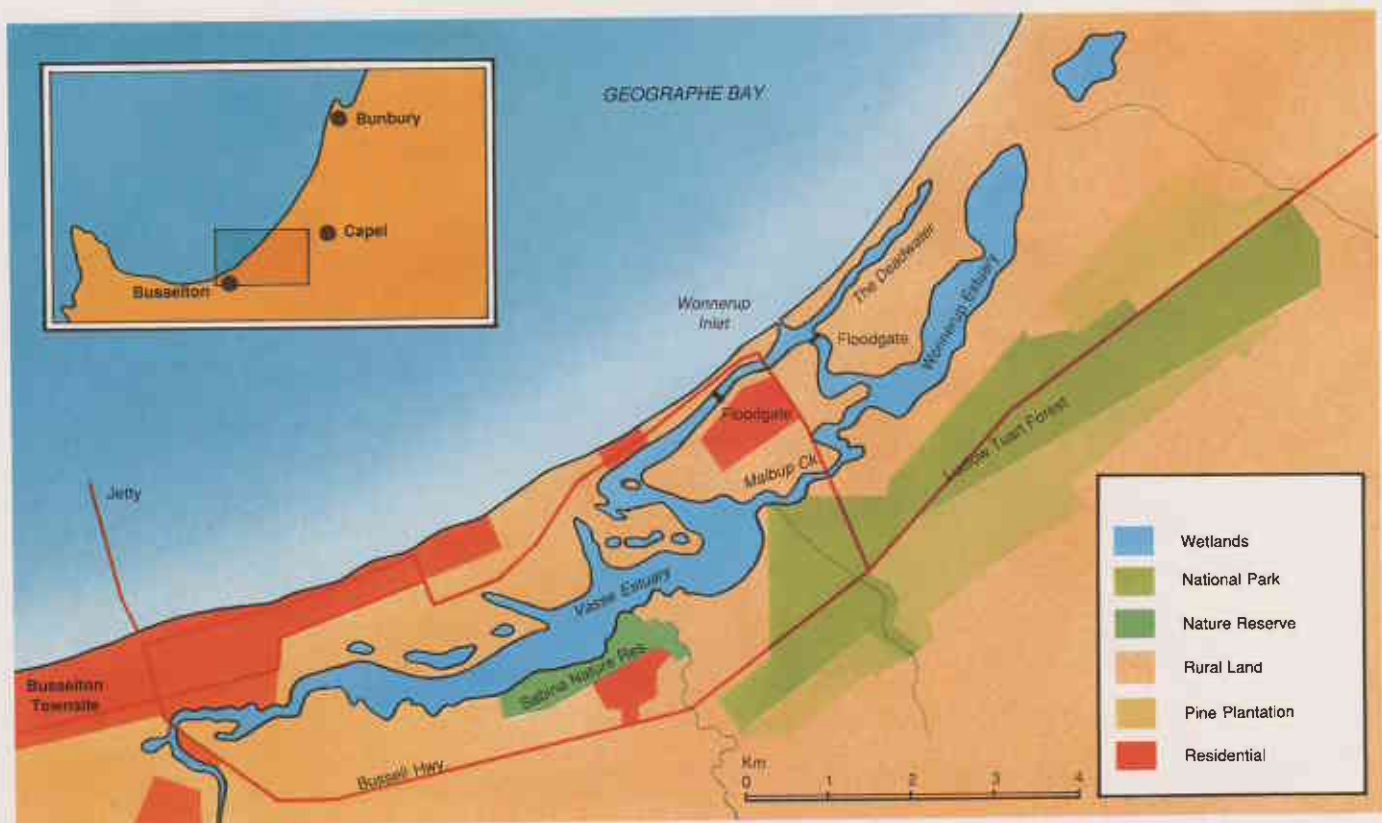
Great Egrets can be seen poised at the water's edge, ready to stab at unwary fish or frogs, or perhaps a newly-hatched tiger snake, of which there is no shortage. Spoonbills wade in shallow waters, sweeping their bills from side to side,

The Vasse-Wonnerup wetlands lie in close proximity to the Busselton townsite. ▲

Black Swans (*Cygnus atratus*) create an island nest to protect their eggs and young from terrestrial predators. ►

Great Egrets (*Egretta alba*) inhabit the shallow marshes, shallow waters and grassy fringes of Vasse-Wonnerup. Photos - Cliff Winfield ►►

Previous page. Photo - Michael Morcombe



slightly open, sifting invertebrates from the cloudy water.

Dabbling ducks are spread out across the shallows in their thousands. Diving ducks slip quietly beneath murky waters. Brooding ducks are followed by small flotillas of young. "Steaming" ducks power across the water's surface with plumes of spray behind. Coots are omnipresent; pattering feet, whirring wings, harsh shrieks from nearby rushes, bobbing black dots among distant waves.

Transequatorial migratory waders, otherwise unremarkable grey-brown birds of 30 grams or less, make twice-yearly journeys of 10 000 kilometres or more from summer breeding grounds in northern China and Siberia to wintering grounds in South-East Asia, Australia and New Zealand. Sharp-tailed Sandpipers visit in their thousands; so do lesser numbers of Greenshank and Plover. Long-toed Stints, one of the rarest waders to visit Australia, are commonly seen.

Australian waders - stilts and avocets - congregate in thousands, probing or sweeping the soft muds and shallow waters for their prey. Tightly-packed flocks are scattered around the edges of the wetlands' gently-shelving bays.

Swamp Harriers sweep low over the marshes searching for unwary prey. Whistling Kites circle higher above, on the lookout for rotting fish, or perhaps the remains of a swan or duck fallen

victim to a fox the previous night. As harrier, kite, eagle or osprey pass over the shallows and marshes, great flocks of waterbirds may rise in alarm, then settle again as danger passes, to feed, roost or simply loaf.

Secretive crakes and rails and other diminutive types venture cautiously across the mudflats in search of food, darting back to protective rushbeds at the slightest hint of danger.

But it doesn't all happen at once; the wetlands change dramatically with the seasons. The first heavy rains arrive in

May or June, at the start of winter. Rivers flow and wetlands begin to fill. The migratory waders have already departed for their arctic breeding grounds. Most of the ducks have also left to breed on nearby swamps or perhaps on inland lakes or dams. Most birds have left. Those that remain do so to breed, or perhaps to winter in the wetlands.

Black Swans are the first to nest. They need to begin quickly if the cygnets are to fly before summer. Last year's nest mounds are repaired and new mounds built as waters rise in June. Each mound





A pair of Pacific Black Ducks (*Anas superciliosa*) on one of the small freshwater ponds in the floodplain that surrounds the estuary.
Photo - Cliff Winfield ▲



Australian Shelduck (*Tadorna tadornoides*) using flooded pasture. More than 10 000 ducks use the Vasse-Wonnerup wetlands each year.
Photo - Cliff Winfield ◀

Waders from Siberia and northern China, pelicans from northern WA, and avocets from lakes in Australia's arid interior migrate to Vasse-Wonnerup each year. Other waterbirds may arrive from Lake Eyre in SA and ducks from throughout the South-West congregate on the coast during summer. ▶

aquatic growth. Profuse growth of submerged plants and algae, clouds of aquatic invertebrates and shoals of tiny fish provide food for the many birds that will soon gather.

By early spring the swans have completed their lengthy incubation and the cygnets have left their island nests. Family parties - a hundred or more - are now a common sight. As spring progresses they are joined by others from surrounding districts. By November several thousand swans have gathered to feed.

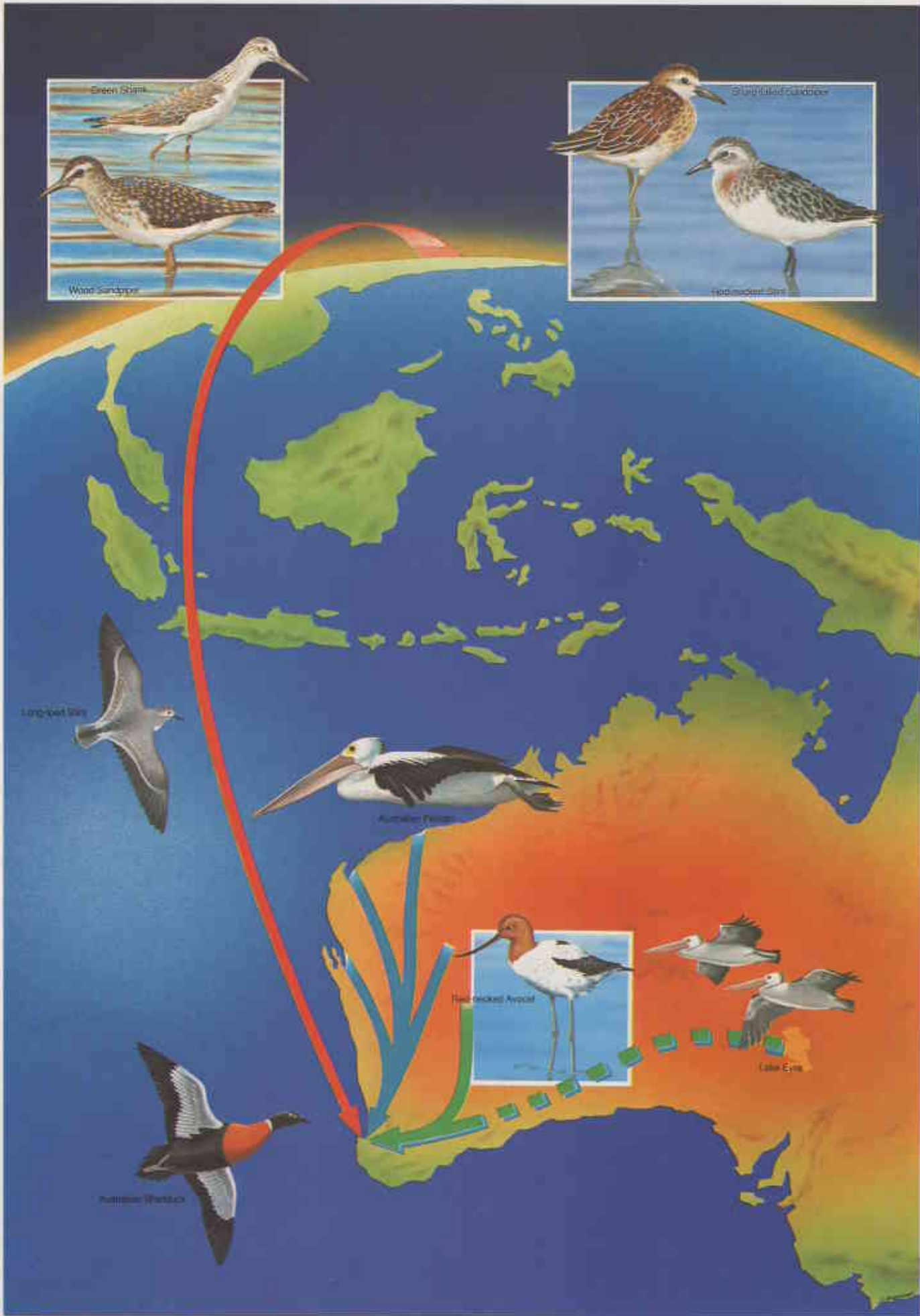
Ducklings also hatch and leave the nest in spring. The fortunate have only a few metres to travel to reach the relative safety of the water's edge. Others may have to journey half a kilometre or more

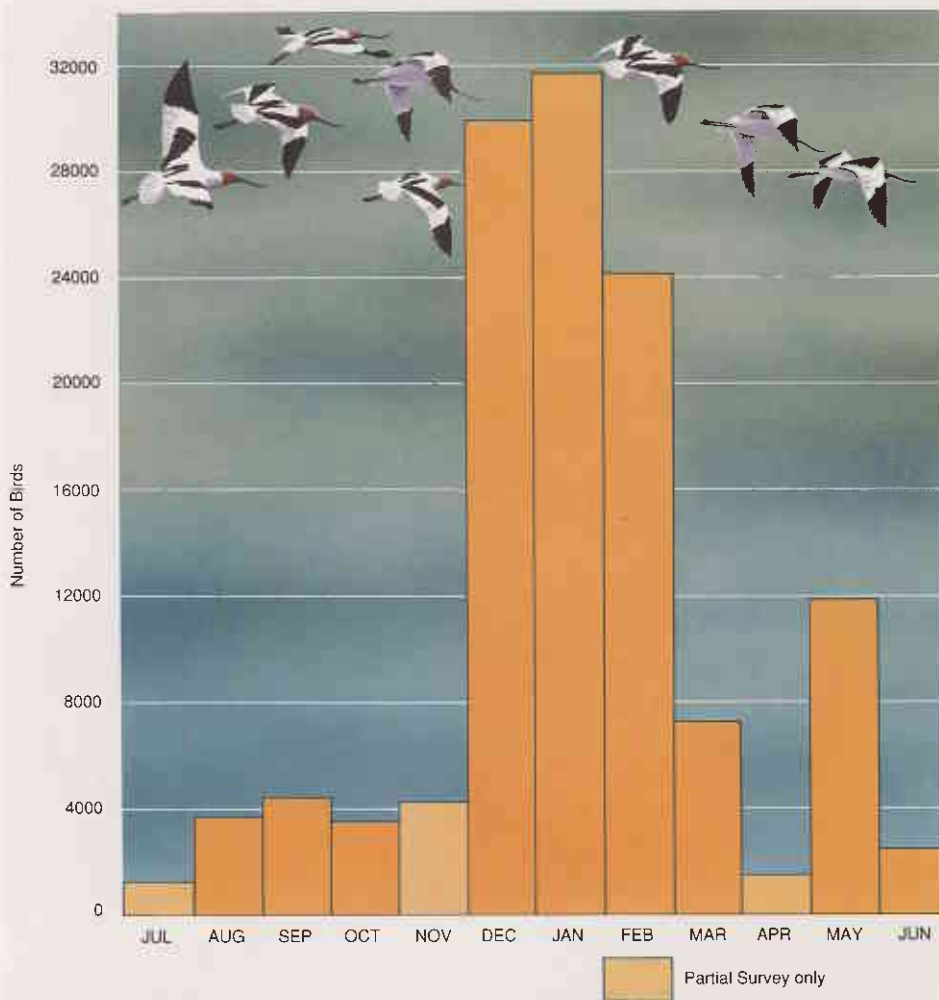
is an island surrounded by shallow waters, secure from terrestrial intruders. Eggs are laid and a 40-day incubation begins.

Swans are not the only resident breeders. Ducks also pair in winter and search for suitable nest sites, perhaps a sheltered spot among the pastures or beneath some low-branching shrub, or up a tree in hollow limb or sheltered fork.

Some non-breeding birds also remain, mainly in small numbers - a few grebes and cormorants, some heron and ibis. Coots are the exception. Large rafts of coot - hundreds or even thousands - remain to ride out the winter storms.

Winter turns to spring. The winter floodwaters of Vasse-Wonnerup reach their peak and begin to ebb. Days lengthen and sunlight, warmth and nutrients fuel





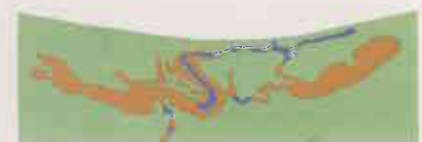
MONTHLY VARIATION IN NUMBERS OF BIRDS USING THE VASSE-WONNERUP WETLANDS



WINTER - SPRING
(June-November)



SUMMER
(December-February)



AUTUMN
(March-May)

- Surrounding Land
- Dry Land
- Water



An Australian Pelican comes in to land at Vasse-Wonnerup. It is one of seven species in the world.

Photo - Cliff Winfield ◀

more than 30 000 birds of 60 different species. Twelve thousand teal, 5 000 stilt, 4 000 black duck, coot and avocet. The vast food resources support these birds through December, January and February. Then, as the water recedes, the wetlands' carrying capacity declines and many birds must disperse to other sites.

Late summer turns to autumn and there is still no rain to speak of. The Wonnerup is dry and so is much of the Vasse. The waters are at their lowest ebb. There are fewer birds now, though by no means all have left. A flock of 300 pelicans *en route* to northern breeding grounds has stopped over to feast with heron or egret on schools of stranded fish. A thousand shelduck sift organic ooze in the shallows. Most swans have moved to more permanent waters, though perhaps a few hundred remain.

By mid-autumn the migrants have left, heading north along the coast to Exmouth or Broome, where they make a brief stop to wait for favourable winds and then move on through Asia to the USSR. For Vasse-Wonnerup the cycle is completed. The days shorten. Rain clouds gather and winter approaches.

What does the future hold? For generations agriculture has fashioned this landscape. Now, with urban expansion and coastal development, rural tranquillity can no longer be assured.

It is important to secure the future of these productive wetlands and protect them from encroachment. With sound planning and skilled management, Vasse-Wonnerup could become one of Australia's best-known and most impressive wetland conservation areas. □

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across open paddocks to reach the water; a hazardous journey with foxes and ravens about!

Spring dries to summer. The rains have been replaced by hot, dry winds from the east. The nutrient-rich waters slowly shallow and retreat, leaving hundreds of hectares of ankle-deep water and steadily emerging muds that provide a vast smorgasbord for the taking. Waterbirds come in by the thousands;

LANDSCOPE

VOLUME FIVE NO 3 AUTUMN EDITION 1990



Rock-wallabies threw down the gauntlet to scientists trying to trap them for research. Who ended up winning the catch-me-if-you-can contest? See page 35.



Scientists will use modern technology to restore two rare and endangered mammals to an area in the Gibson Desert from which they have become extinct. See page 10.



Shells, tiny crabs and sundry other creatures are sure to please the curious naturalist who invades the intertidal zone at low tide. Explore the place where the shore meets the sea on page 23.



Waterbirds flock to the Vasse-Wonnerup wetlands in their tens of thousands, some travelling over 10 000 kilometres from summer breedings grounds in northern China and Siberia. Turn to page 17.



It's the burning question! Is prescribed burning in spring or autumn better for the jarrah forest? Or is there another alternative? See page 28.

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COVER

The designs of desert artist Benny Tjapaltjarri show events associated with the Pakuru or golden bandicoot dreaming in the Gibson Desert. The three central roundels depict rockholes and the others represent hills. The background dots show the vegetation of the area.



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Designers: Louise Burch/Robyn Mundy

Production: Karen Addison

Advertising: Tim Langford-Smith ☎ (09) 389 8644 Fax: (09) 389 8296

Illustrations: 'Swamped With Birds' - Ian Dickinson

'Seasoned With Fire' - Yeon Hee Kim

Colour Separation by Prepress

Printed in Western Australia by Kaleidoscope

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Published by Dr S Shea, Executive Director
Department of Conservation and Land Management,
50 Hayman Road, Como, Western Australia 6152.