KINGS PARK RECOVERING

Despite the combination of a dry winter and this year's long hot summer there has been a steady recovery for the native flora of Kings Park following the devastating fire in 1989 (see *LANDSCOPE*, Autumn 1989).

Permanent quadrats (areas marked for comparison) placed after the fire by Kings Park and Botanic Garden staff and researchers from the University of WA have shown tree death rates to be high. However, most of those that have not died are resprouting from their bases. It is likely to be many years before the tree canopy is re-established.

One concern is *Banksia ilicifolia*, normally found in much wetter areas or on sandy soils with a higher water table. This species is under severe threat as most of the parent plants in the park were killed by the high-intensity fire and there has been no seedling growth since.

However, the understorey shrubs, bulbous, tuberous, and other small plants are growing exceptionally well - particularly the kangaroo paws, of which there was a stunning display last spring.

The Ground Fauna Project, in collaboration with the Perth Wildlife Watch, WA Museum staff and many willing volunteers, is monitoring the movement of animals from unburnt areas in the park into the burnt areas. But because of a lack of funds this project is winding down, so the long-term effects of the fire on King Park's fauna will not be recorded.

Kings Park horticultural advisory officer Bob Dixon said that veldt grass control was in hand after large-scale spraying with Fusillade, a selective herbicide for the control of certain grasses, and the testing of a new, similar herbicide, Assure. The enormous weed invasion after the fire, especially in highly disturbed areas (e.g., at the sides of tracks) is moderating as perennial native plants, especially shrubs and groundcovers, filled in the bare areas.

Tree death rates have been high in the burnt areas of Kings Park. Photo - Bob Dixon

Despite the high fire risk, the 1990-91 summer was kind to Kings Park. There were no wildfires, accidental or deliberate. Mr Dixon said it was hoped this situation would continue for several years so that the bush could naturally repair previous wildfire damage.

DIEBACK THREAT TO FAUNA

Wildlife that depends on flowering plants for its food source may become the second line of victims of the killer plant disease *Phytophthora*, commonly known as dieback disease.

Dieback disease is probably the greatest crisis facing Western Australian natural ecosystems, and the need to stop the disease's spread is the reason for a public awareness campaign by the Department of Conservation and Land Management (CALM).

The disease is now known to be widespread in tropical and subtropical regions throughout the world. As well as in Western Australia, it is common in NSW, Victoria and Tasmania. In the South West it occurs in many natural areas once considered dieback-free, including several national parks. The known number of dieback sites in the northern sandplains area has increased in recent years - spelling trouble for the insects, birds and mammals that thrive on wildflowers.

The honey possum is one mammal that relies on a cycle of flowers of different native species throughout the year. This animal depends entirely on a diet of nectar and pollen, and banksias are one of the main groups it frequents.

The Proteaceae family, which includes the *Banksia* genus, has been badly affected by dieback (*Banksia grandis*, *Banksia brownii*, *Banksia littoralis* and *Banksia coccinea* are a few examples). If an area has had these species wiped out by the disease, local extinctions of dependent wildlife, such as the honey possum, can occur.

Other animals that could lose their food source include nectar-feeding birds such as the red wattle bird, new holland honeyeater and the western spinebill. Birds that feed on insects may also suffer, as may the boobook owl and bats that feed on moths attracted to wildflower nectar.

Another example of wildflower-fauna dependencies is found in the northern sandplains. Carnaby's black cockatoo feeds on moth larvae that live on *Banksia tricuspis*. If dieback kills these banksias, the black cockatoo could be lost from this area.

CALM's dieback public awareness campaign, *Fight Dieback - Give Our Plants A Chance*, is designed to educate people how they can avoid spreading the disease.

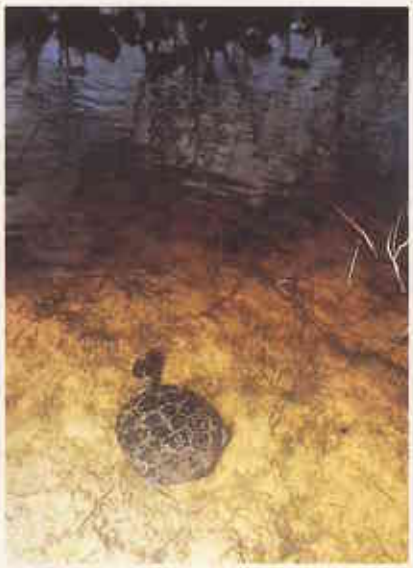
LANDSCOPE

VOLUME SIX NO. 4 - WINTER EDITION 1991

Cloud-capped Bluff Knoll, majestically brooding sentinel of the Stirling Range. Does it hold a secret in its stony heart - perhaps the answer to the missing mammal mystery? See story on page 9.

Mulga and fire - at best an uneasy relationship - sometimes symbiotic, sometimes disastrous. Find out when and where on page 20.

The Kimberley's rugged grandeur is deceptively fragile. Additional reserves managed by CALM help protect the region's delicate, complex and diverse ecosystems. See page 35.



A western swamp tortoise (Pseudemydura umbrina). *Could this be one of the last to be photographed? Not if CALM's ten-year recovery plan succeeds. See page 28 for details.*

An uncommon dragon, Caimaniops amphiboluriodes *inhabits mulga shrubs. Many other dragon lizards prefer harsher habitats such as rock-piles and salt lake beds. See page 51.*

FEATURES

REGULARS

COVER

Central netted dragon (Ctenophorus inermis), *one of the more than 60 species of dragon lizard that inhabit the arid and semi-arid parts of Australia. The acute eyesight and swiftness of dragon lizards are essential in order to avoid predators and to capture food. See page 51.*

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Illustration: Sandra Mitchell
Colour Separation by Prepress Services
Printed in Western Australia by Lamb Print

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