IN SEARCH OF ...

Peter Valentine

Babs & Bert Wells

FEW WILDLIFE ENTHUSIASTS CAN RESIST THE CHALLENGE OF TRACKING DOWN A RARE SPECIES OR CAPTURING FIRST-TIME PHOTOGRAPHS. HERE BABS & BERT WELLS DESCRIBE THEIR ATTEMPTS TO TAKE FIRST-TIME PICTURES OF HONEYEATERS POLLINATING A RARE PLANT, WHILE BOB HAY GOES IN SEARCH OF A RARE BUTTERFLY LAST RECORDED MORE THAN SEVENTY YEARS AGO.

HONEYEATER AEROBATICS

A yellow-throated miner suspends itself by clinging to the stamens of this rose mallee.

TRICK flying by honeyeaters may be the last hope for the survival, in the wild, of rose mallee (*Eucalyptus rhodantha*), a rare Australian eucalypt.

A remnant population of about 500 is isolated in the midst of recently cleared farmland, in the Wheatbelt region north of Perth.

ROSE mallee's spectacular large red flowers are framed by an attractive backdrop of silver-grey leaves. Fortunately, in the face of threatened extinction, it is widely and successfully cultivated. The flowers develop in winter, when insect activity is at its lowest.

HOWEVER, a bud weevel, *Haplonyx maximus*, active during winter, can be very destructive. It chews a hole in many buds, and deposits an egg in each. It seals the hole and chews through the branchlet, which falls to the ground. As a result of this pruning only a few buds develop into flowers.

WITH this and other problems, including genetic factors, the small population is losing its reproductive vigour.

A few honeyeater species are the predominant pollinators of rose mallee. They not only visit the few flowers infrequently, but, perversely, the plant seems to have made their task difficult.

THE large flower is suspended by a stem, placing the central supply of nectar face down. Thus, the honeyeater must either suspend itself under the inverted flower by wing power (`hummingbird approach'-see previous page) or loop upside-down and cling to the stamens (`clinging mode').

DR. Stephen Hopper, Senior Research Scientist at CALM's Woodvale Research Centre, says that these aerial feats were unique to, and vital for, the pollination of several species of large-flowered eucalypts found only in Western Australia.

AS wildlife photographers, this unfilmed phenomenon had challenged us for many years. In late winter 1987, we spent eight days with several cameras set up on different flowers, trying to capture the honeyeaters' aerial antics.

TO our dismay, the upside-down honeyeater pictured on the one poor photograph which resulted was wearing coloured leg bands belonging to a research scientist working in the area.

IN 1988, we finally managed to take five promising exposures using a custom built high-speed electronic flash and a system of crossed infra-red beam triggering devices; five only, from seven days work!

TWO of these photographs showed a Singing Honeyeater (*Meliphaga virescens*) performing each of the two pollinating manoeuvres.

BABS & BERT WELLS

BUTTERFLY

Peter Valentine

Ogyris otames larva.

AN intriguing entry in the Australian Museum Register, "1 male 2 females, Stirling Range, W.A. Oct. 1911, F.I. Whitlock" presented an exciting challenge.

IT referred to a butterfly species which had not been recorded for 77 years, a task which I and fellow butterfly enthusiasts, Hugh Bollam and Peter Valentine were keen to undertake.

THE original specimens were classified as the small brown azure (*Ogyris otames*), a rare species known in South Australia whose larval food source is sour bush (*Choretrum glomeratum*).

THE first step in our mission was to find areas where the semi-parasitic sour bush grew. We combed all the roads in the Stirling Ranges and noticed that the shrub invariably grew alongside wandoo in the bottom of valleys. This clue narrowed our search and gave us more time to examine the shrubs on foot when we came across isolated patches.

THE tell-tale signs of a colony of larvae were the `scorched' appearance of parts of a bush, feeding marks along the stems and, most importantly, the presence of the sugar ant species *Camponotus* at the base of a bush.

OUR search was eventually rewarded. Two locations, placed well apart, bore the necessary clues. But proof would not come until after dark when we could examine the shrubs by torchlight.

MANY butterflies of the blues and coppers family enjoy an interdependent relationship with various ants. The larvae

Peter Valentine

This adult male *Ogyris otames* poses on sour bush *(Choretum glomeratum)* (above).

secrete a sugary fluid, used by the ants. In turn, the ants safeguard the larvae.

DURING the day, the larvae are tended in the underground tunnels of the ants' nests. During darkness, the ants conduct them up to feed on the plants, one by one.

THEY care for the larvae until the mature butterflies emerge from the nests and fly away.

AS darkness fell, we drove to the first location. It was difficult to suppress our excitement, as all the signs were promising. Within minutes, torchlight focused on the evidence we sought. We could barely contain ourselves! Larvae, escorted by ants, were clearly visible, a few to a bush. Some were feeding, some advancing up stems and the odd one was being conducted back to the nest.

THE pattern indicated that when darkness fell the first batch of larvae was led up to feed and then returned. Others were then escorted up in relays. This system would safeguard a population from total destruction, for example in a fire, by not exposing the whole colony to danger at once.

THE ants quickly responded to any threat, becoming agitated and forcing, or even dragging, larvae down to the safety of the nest, as we approached.

RANGER Tony Smith came with us one night and was surprised and enthusiastic. Both he and forester Greg Broomhall agreed to consider ways of preserving the larvae's special habitat.

ANOTHER lively colony was found in the second location. Although the specialised conditions which promote survival of the species are isolated, it is likely that one or two more colonies exist in remoter areas.

SEVERAL larvae and attendant worker and soldier ants, along with an adequate supply of food plant, were taken back to Perth and successfully reared.

CLASSIFICATION of the species is being researched and all indications point to a distinct new W.A. species. Another colony found at Leeman is currently being researched at the Australian National Insect Collection in Canberra.

THE genus *Ogyris* includes predominantly Australian butterflies. Twelve of the 15 known species exist in Australia, and the remaining three in New Guinea. Our find was therefore quite significant.

B O B H A Y

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EDITORIAL

A prerequisite for the successful management of land and wildlife is an understanding of the processes that drive ecosystems, and managers who can manipulate these processes.

In Western Australia, we are fortunate that we have a wealth of talent in different government agencies, tertiary institutions and private companies who can provide these research and management skills.

Of course, obtaining a perfect understanding of ecosystems and ways to manage them brings to mind the frog who wants to reach a creek, but can only jump half the distance every time.

But it is not the complexities of understanding or managing ecosystems which provide the greatest difficulty.

Social and political factors are far more difficult to accommodate.

All the scientific and managerial skills in the world are worth nothing if the community and, often more importantly, selected constituencies within the community do not support the management strategies.

Unfortunately, there is often an inverse relationship between a scientist's or manager's skills in his profession and his capacity to handle social and political factors in the community. This is not surprising, since most scientists and managers have received little training in basic communication skills, let alone community politics.

CALM is attempting to address this problem in a variety of ways. But the people who should know the most about how to obtain community support for public land management strategies are the public. *Landscope* readers are an important and influential constituency. If you have thoughts on this issue we would like to hear from you.

What a sterling idea! A new management plan for CALM's South Coast Region - page 28.

Are insects gradually eating away our jarrah forests? Turn to page 18.

What lies beneath the waters of Marmion Marine Park? See page 25.

COVER

A rose by any other name... Does its name detract from the beauty of the common eggfly (Hypolimnas bolina)? *Photograph - Jiri Lochman*

FEATURES

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