

## CALM HAS THE GOOD OIL

An environment-friendly industrial-strength solvent may be the key to revegetation of much of WA's degraded farmland.

CALM's Vegetation and Tree Planting Advisory Service (VATPAS) has been working with Professor Allan Barton from Murdoch University and consultant scientist Greg Eaton of Mertz Australia Pty Ltd. Their project was to develop eucalyptus oil as a solvent that can replace ozone-depleting industrial chemicals.

Tests carried out by CALM and Alcoa Australia have found that "Eucasol", as the product will be called, compares more than favourably with conventional petrochemical solvents currently in use by industry. The natural product also has health and safety benefits, as well as being totally biodegradable.

Eucalyptus oil is distilled from the leaves of several species of mallee-type eucalypts which occur

naturally throughout the Wheatbelt of WA.

CALM staff, in association with Professor Barton, have been screening these species to select trees which have a higher than normal leaf oil content. This year seed orchards will be established using seed collected from the mallees to produce genetically improved seed for future commercial plantings.

CALM has also received funding this year to plant more than 120 kilometres of hedge-size plantings to examine various commercial planting layouts and compare the performance of several different species of high oil-producing eucalypts.

After an establishment period of three to four years, the mallees can be harvested every two years, yielding between 70-100 kilograms of eucalyptus oil per hectare.

Another potential eucalyptus oil product being tested is the "Mallee Boy Firefighter". Made of



eucalyptus oil, beeswax and sawdust, the firefighters will be included in bagged firewood supplied to Rottneest Island in a pilot scheme.

Good Samaritan Industries will manufacture the firefighters and bag the firewood under a 12-month contract.

Sharefarming partnerships similar to those in place for Tasmanian bluegum tree crops are planned as the basis of commercial mallee plantings

*CALM Dwellingup mechanic-in-charge Stu Hunter, left, and mechanic John Downer wash down machinery with eucalyptus oil solvent.*

*Photo - Tim Birmingham*

throughout the Wheatbelt. This would encourage the scale of planting required to build a solid eucalyptus oil industry in WA, as well as provide the necessary landcare benefits to lower groundwater tables and prevent further salination of agricultural land.

## ROSEATE TERNS AT SEAL ISLAND

In December 1990, marine park ranger Terry Goodlich photographed what he thought was a small colony of fairy terns on Seal Island in the Shoalwater Islands Marine Park. However, fairy terns do not nest on ridges of rocks and it was the wrong time of the year for nesting.

Seabird researcher Nick Dunlop examined the photos then visited the island and found the birds were, in fact, roseate terns.

"This discovery is significant because roseate terns are a predominantly tropical species and had never before been known to nest on Seal Island," said Terry.

"It is also the first time they have been recorded breeding in summer in the Perth area."

Roseate terns seem to have two distinct breeding groups - one nesting and laying between March and May and the other between October and December. At Green Islets, south of Cervantes, both groups nest on the same breeding grounds.

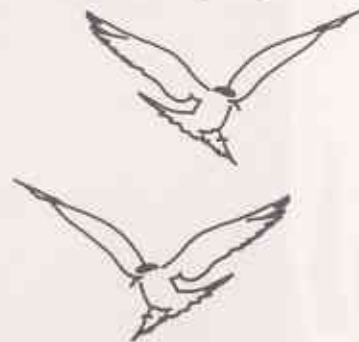
Roseate terns have only recently colonised the Perth area. A sudden influx of roseate terns was recorded in the Fremantle area in 1958, but no breeding was seen to occur at that time. Between 1979 and 1983, roseate terns in nuptial plumage were seen

around Rottneest Island, Carnac Island and the Shoalwater Islands, generally between February and June. The first breeding colony was located on Second Rock in Warnbro Sound on 28 April 1982. These colonists were, therefore, from the autumn population.

The next year, autumn-breeding took place off Rottneest; these were probably the same individuals as nesting did not occur in the Shoalwater Bay area. Since that time autumn-nesting has probably continued to occur in the district, as evidenced by the presence of breeding pairs between February and June.

Terry Goodlich's discovery

on Seal Island has demonstrated that now the spring-nesting population of roseate terns has also taken hold at the southernmost outpost of its breeding range.



# LANDSCOPE

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'Where there's fire there's smoke'. We look at one of the lesser known and misunderstood products of bushfires on page 10.



*Banksias and blackboys are normally associated with the sandplains of the coast and wheatbelt rather than the Great Victoria Desert. See page 22.*



*The mountains of the Stirling Range are a refuge harbouring many ancient species of spiders. Spider expert Barbara York Main shows us some of them on page 28.*



*The disappearance of the Zuytdorp remained a mystery for many years. The story of its rediscovery and the formation of the Zuytdorp Nature Reserve is on page 42.*



*A new book, Perth Outdoors, aims to encourage people to get outdoors and enjoy nature and to learn more about Perth's unique natural communities. See page 35.*

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*The palisade spider (Neohomogona stirlingi) is endemic to the Stirling and Porongurup Ranges. It builds a shallow burrow with an open entrance surrounded by a palisade, or collar of leaves and twigs, which may project several centimetres above the ground or litter.*

*The illustration is by Philippa Nikulinsky.*



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