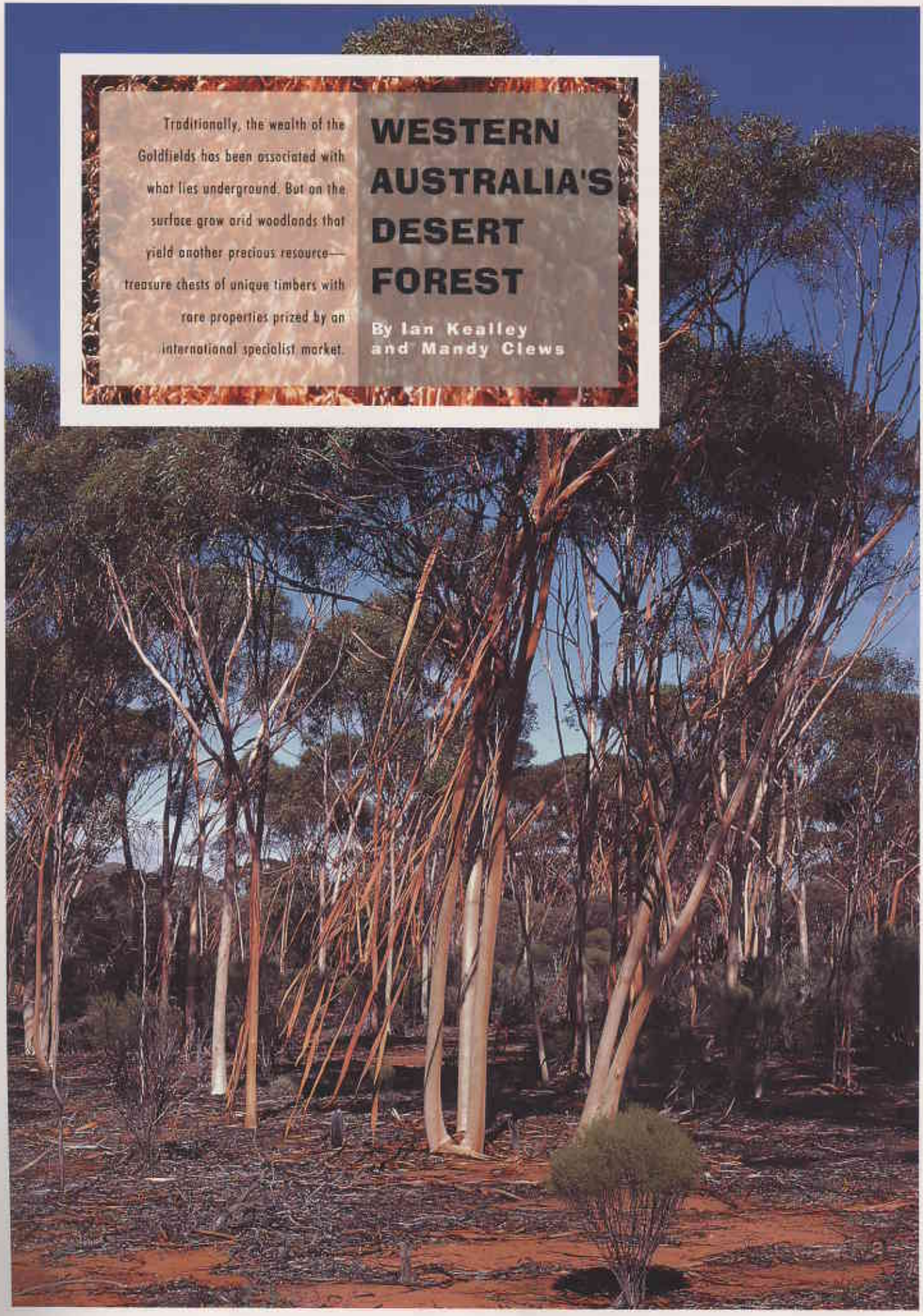


WESTERN AUSTRALIA'S DESERT FOREST

Traditionally, the wealth of the Goldfields has been associated with what lies underground. But on the surface grow arid woodlands that yield another precious resource—treasure chests of unique timbers with rare properties prized by an international specialist market.

By Ian Kealley and Mandy Clews

As the name testifies, the Goldfields region has a glamorous history of boom-and-bust goldrushes, of cities springing up overnight and disappearing just as quickly. Swag-bearing prospectors combed the countryside, leaving behind fascinating middens of old artefacts. Pastoralists fenced the land, introduced livestock and pushed back the boundaries of the red centre. This is the story we all know; it is the lore of the frontier country.

But accompanying the sometimes frenzied activity that gave the Goldfields its name, was a less publicised industry, one that was equally important to the development of the region: forestry. For contrary to the popular image, the region is not merely a vast inland sea of low scrub as far as the eye can see. Rather, there are tough stands of extraordinarily adapted eucalypts and acacias that rise from the dusty plains, defying the parched environment. This is a land rich in timber, timber of exceptional character.

Previous page
Main: 1920 regrowth capped mallee (*Eucalyptus pileata*), near Bullabulling. Notice the ribbon bark, which is shed annually.
Inset: Minirichie bark.
Photos – Steve Hopper

Above right: Victoria Desert mallee (*E. concinna*) produces fine brown timber with woodwind instrument potential.
Photo – Steve Hopper

Below: Logging 1920 regrowth red morrel (*E. longicornis*) at Jaurdi Station.
Photo – Steve Sadler

Below right: Phil Panton of Timbers of the Goldfields sawing Goldfields blackbutt (*E. lesouefii*).
Photo – Steve Sadler

TREES AMID THE GOLD DUST

As early as the first gold rushes of the 1890s, timber that was needed for mining infrastructure, fuel and construction was extracted fromwoodlands surrounding the present site of Kalgoorlie-Boulder. As demand increased, an elaborate network of narrow-gauge railways, called the Woodlines, was developed by opportunistic timber and firewood companies. The wide swathes through the bush that marked the routes of the Woodlines can still be followed today.

At their peak, the Woodlines were supplying more than half-a-million tonnes of timber a year. Between 1900 and 1965, three-and-a-half million hectares of eucalypt and acacia woodland were clearfelled or cut over, yielding an estimated 30 million tonnes of timber, which fed the ever-burgeoning mining industry and towns. The wood also satisfied a wider demand for sawn timber, railway sleepers and domestic fuel.

Nature was tolerant of those early harvesters, who had a pressing, high-volume need for an available resource, the character of which they didn't fully appreciate. The three million hectares that were virtually stripped bare are now covered with a vigorous new layer of 40 to 100-year-old regrowth woodland, whose remarkable timber properties are only now coming to be understood. In the region extending from the edge of the Wheatbelt to the Nullarbor Plain and inwards through

Left: Kalgoorlie wood-turner Peter Grainger turning native willow after completing a redwood (*E. transcontinentalis*) vase.
Photo – Steve Sadler

Below left: Sawn boards and Goldfields craft timber species stored ready for drying at Timbers of the Goldfields.
Photo – Steve Sadler

Below right: The solar kiln installed at Timbers of the Goldfields for seasoning sawn timber and for research purposes.
Photo – Steve Sadler

pastoral and desert country, a further five million hectares of uncut eucalypt woodland and 15 million hectares of acacia woodland offer up hundreds of species to be explored by a small but intensive specialist market.

WOOD THAT SINKS

The woodlands of the Goldfields are a marvel of nature. Nowhere else in the world does such an arid environment support vegetation of such density and size. An average annual rainfall of 250 millimetres puts the region on a par with arid areas of Arizona, Southern Africa, and the Mediterranean. But woodlands are not normally a feature of such landscapes.

Adapted to harsh, dry conditions, these species have to be tough. As a result, they are extremely slow-growing. This is one feature that gives them their quirky edge as speciality timbers: they are extraordinarily dense.

Density is measured as a ratio of weight to volume. Jarrah, the well-known and widely-used South West timber, is described as a 'dense hardwood'. It has a dry density measurement of 850 kilograms per cubic metre (kg/m^3). Anything higher than 1000 kg/m^3 sinks in water. Most Goldfields eucalypts have a dry density measurement greater than 1 100 kg/m^3, ranking them among the densest timbers in the world.

JEWELS IN THE MARKET PLACE

While not a friendly attribute to many mass-market wooden products, high timber density is a valuable feature in the manufacture of certain speciality items, particularly those that are subjected to sustained high-impact use, such as percussion musical instruments, parquetry flooring, specialist furniture and joinery.

Another unique feature of the Goldfields woodland species is their very low green moisture content. While green moisture proportions of as little as 30 per cent cause some unusual problems for seasoning sawn timber, they are a dream for wood-turners. With such low moisture, Goldfields species yield unusually stable unseasoned timber. Because the green wood is much easier to handle, these timbers make much more efficient material for wood-turners, who can bring their product a lot closer to completion before seasoning.

Added to these unusual features is the attractive appearance of Goldfields timbers: the creamy-coloured native willow (*Pittosporum phylliraeoides*) with its lace-like 'fish scale' patterning; the subtle red–pink hues of the red eucalypts, including the almost blood-red Dundas mahogany (*Eucalyptus brockwayii*). The list goes on: the superbly patterned gimlet (*E. salubris*) is distinctive for its deeply

figured, fine grained timber, the result of natural fluting of the trunk, and its walnut-like streaks of brown. The extremely dense (1 300 kg/m³) and hard western myall (*Acacia papyrocarpa*) varies in colour, depending on the growing area, from rich chocolate brown near the Nullarbor to golden brown in the heart of the Goldfields, and bears a gold fleck and striking ripple grain, which gives it a three-dimensional appearance. And the white cypress pine (*Callitris glaucophylla*), which is yellow, brown and tan with streaks of varied colour, has the added bonus of an unusual and appealing aroma. These are features that delight the senses. They are the raw materials for fine artistry, and they represent only a handful out of more than a hundred species that have so far been sampled and described. There are many more yet to be explored among the diverse vegetation and species of the region.

Given this rich resource, sawmillers, joiners, wood turners and crafters are limited only by their imagination to find niches in the speciality market. This is a 'top-shelf' enterprise, where only small amounts of timber are required to produce one-of-a-kind luxury products. A brown, deeply figured section of gimlet, for example, swept with a swirling grain, might compete well with prize jarrah for the attention of someone wanting an attractive coffee table. A high-quality, intricate inlay of luscious, ruby-red Dundas mahogany might be the only suitable finishing touch to the front door of your dream home. Attractive gift items and novelties such as wind spirals, vases, bowls, coasters, pens, trophies, jewellery—the list is endless—all have a place in a high-premium market.

Above: Western myall woodland fringing the Nullarbor Plain.
Photo – Steve Hopper

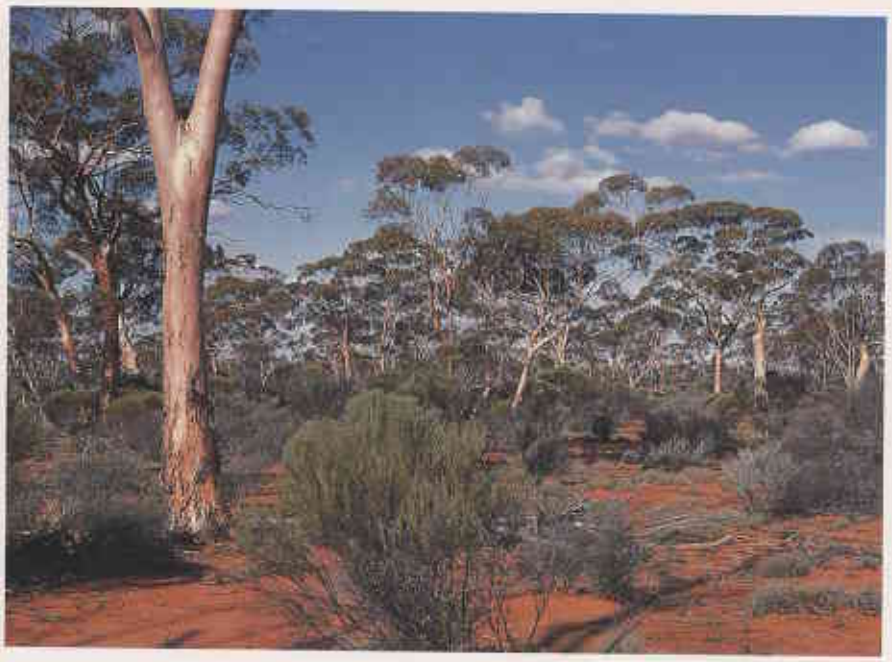
Below left: Creekline minirichie (*Acacia cyperophylla*) east of Wiluna.
Photo – Ian Kealley

Below right: Mature Goldfields eucalypt woodland dominated by salmon gum (*E. salmonophloia*).
Photo – Steve Hopper

SUSTAINING THE RESOURCE

With renewed interest and increasing demand for the Goldfields timbers, careful planning is necessary for their management. Long gone are the days of the Woodlines, when mass quantities of timber were there for the taking. Goldfields logging is now conducted under strictly regulated harvesting contracts and forest produce licences issued by CALM. Trained specialist contractors carry out a highly selective thinning of the regrowth woodland, extracting specific sawlog or speciality timber products. Sawlog yield will be less than one tonne per hectare. Timber is also salvaged ahead of minesite clearing.

Speciality timbers from the wide range of other non-sawlog Goldfields



species are also opportunistically collected by contractors for research purposes and under Forest Produce Licences. Conditions for this collection are strict and cutting is rigorously controlled. Planning is also under way to determine the future use of the large resource available from the millions of untapped hectares of Goldfields woodlands.

BEYOND THE GOLD HORIZON

Forestry has a long association with sustainable and renewable resource management, carried out in one way or another over centuries of varied land use. The Goldfields are no exception. But the industry that was once a secondary support to the extraction of gold from the ground has become, this time around, a pursuit in its own right.

The revival of the timber industry in the Goldfields has brought land use full circle, and the different culture that now prevails is a mark of progress. It provides a welcome diversification of land use in an area where mining and pastoralism have dominated. But perhaps more significantly, where trees were once clearfelled to feed the most basic needs of a greedily growing gold industry, they are now gently, almost lovingly, hand-picked and handled, to add the most elegant and subtle aesthetic detail to our lives. In the legendary riches of the Goldfields, these are the gems among the gold.

FROM FLUTE TO FRUIT: THE GOLDFIELDS SPECIALTY TIMBER INDUSTRY GROUP

The dormant potential for Goldfields timber might still be asleep today had it not been awakened in the mid 1980s by a chance holiday encounter between an American music professor and a travelling Western Australian forester. The University of Washington's Professor Felix Skowronek was on a long-term world-wide quest to find dense, hard timbers to make thin-walled flutes, when he heard about the Goldfields. He began steady correspondence with CALM's Goldfields Regional Office, which culminated in visits to the region in 1988 and 1993 to gather samples.

Media coverage of, and timber collecting during, Professor Skowronek's first visit stimulated a lot of interest among hobby and professional woodworkers in Western Australia, who began to contact CALM in increasing numbers. In 1991, CALM opened public discussion on the potential for a speciality timber industry for the Goldfields. The response was strong enough for an introductory meeting to be held later that year, and in 1992, the Goldfields Specialty Timber Industry Group (GSTIG) was officially formed, incorporating in May 1993.

One of GSTIG's first undertakings was to organise a Woodline Festival as part of Kalgoorlie-Boulder's 1993 centenary celebrations. The festival, which involved an exhibition, historical display, demonstration, field trip, musical instrument-making workshop and sales, was an unmitigated success.

GSTIG supported an initiative by Timbers of the Goldfields, a private company owned by local operator Phil Panton, to construct a solar kiln based on technology developed by CALM's Harvey Wood Utilisation Research Centre. Boosted by a $25 000 grant from the Federal Government's Renewable Energy Research program, the kiln has allowed sawn timber to be experimentally seasoned under controlled conditions.

GSTIG is also involved in a $140 000 program of research funded by the WA Government Regional Initiatives Fund, private enterprise, CALM and the Goldfields Esperance Development Commission. A locally based committee, which includes Kalgoorlie College, is steering the project, which involves identifying the properties, sawing and seasoning characteristics and overall potential of timbers for application in a wide range of specialist markets. GSTIG now has some 65 members who meet monthly to discuss the issues arising from their sunrise industry, and to organise field trips, craft workshops, wood-turning courses and other activities.

And the flutes? Professor Skowronek's project is still in progress, with some promising interim results identifying some timbers as being world class woodwind instrument timbers. With hundreds of timbers yet to be tested, his partnership with the Goldfields is far from over.

GSTIG can be contacted at PO Box 10173, Kalgoorlie 6430, or phone (090) 21 2677.

Bowl turned from berrigan (*Eremophila longifolia*) by Bill Moriarity of Kalgoorlie. Goblet and flower turned from sandalwood (*Santalum spicatum*), and carved by Gordon Ward of Kelmscott.
Photo – Steve Sadler

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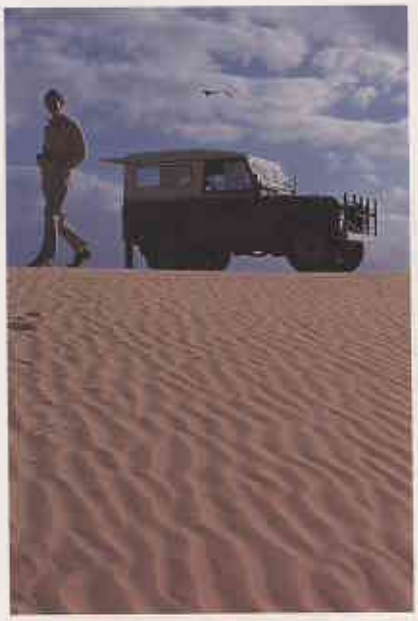

Cooperation between 4WD clubs and CALM is helping to protect WA's special recreation spots through a program of education. See 'Go Lightly' on page 17.

The noisy scrub-bird is one species that is responding well to its recovery plan. 'Recovering from the Brink' (page 10) discusses how such plans are drawn up.

Mt Augustus is the biggest rock in the world; yet few people know it exists. Find out more about this natural wonder on page 28.

There is a great deal written and talked about our forests. But what are the facts? 'Looking Beyond the Obvious' (page 22) dispells some of the myths.

Specially developed computer software is helping speed the identification of plant species in 'The Smart Collection' (page 49).

FEATURES

REGULARS

COVER

The rainbow bee-eater is a common bird found throughout most parts of the State, including Mt Augustus National Park.

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