

The 'place of flowers' is not just a bouquet of pretty blossoms. It is a rich mosaic of sculpted rock, endemic plants and seasonal visitors.

Tell your tribes, when you take them these flowers, that never again shall the earth be bare of them. All through the seasons, a few shall be sent by the different winds, but Yarraga Mayra, the east wind, shall bring them in plenty. The name of the spot where the wirinuns (wise men) first showed the flowers and scattered them is still called Girraween, the place of flowers.

(Langloh,
A Legend Of The Flowers, 1953)

Title background:
Rock textures.
Photo by Michael Stephenson.

Below:
The bird-pollinated flowers of the Five Corners (*Styphelia longifolia*) develop into edible sweet green fruits.
Photo by W Goebel.

Petal rock

by John Moye

Girraween, 'the place of flowers', lies on the northern extremity of the New England uplands at an average elevation of about 900 metres. The 11,700ha national park extends to the Queensland/New South Wales border, and preserves an outstanding example of the Northern New England Tableland biogeographic region. Its granite habitat is unique in Queensland, with the floral and faunal communities resembling more southern types.

The east wind is most prevalent in spring, when the bush is transformed by colourful wildflowers.

A sculpted mosaic

Sun, wind, water and ice sculpted Girraween's boulder-strewn hills and valleys from the ancient granite mass of the New England Tableland. Vegetation patterns are controlled by a combination of factors related to local topography, position on slope, gradient, soil type, aspect, drainage and the decline in rainfall from east to west across the park. The interrelationships of these factors have resulted in a complex mosaic of structural and floristic types.

Girraween soil sequences form downslope, and the soils are mostly coarse and sandy in texture, low in nutrients and quite acid. The diverse landforms support tall, open forest; woodlands with shrub under-storeys; mallee heaths; sclerophyll scrubs; heaths; and sedge swamps.

Like many Australian plant communities, Girraween's vegetation can live on practically nothing – having adapted to low nutrient soils and periodic fires. Heath communities, usually of shrubs less than two metres tall with hard

and prickly leaves, have established around granite outcrops and poorly drained low-lying areas of the park. High on the rounded granite summits, grasses, mat-rushes, lilies and low shrubs sprout in the sparse soil lodged in cracks and joints. Larger depressions with more soil carry dense patches of shrubs.

These rock gardens of the scree slopes and massive granite outcrops offer some of the most attractive springtime landscapes in Girraween. The low dense heath is complemented by a diverse array of flowering shrubs: wattles, pea-flowers, mint and daisy bushes and boronia are common beneath scattered eucalypt and cypress trees.

In the broad shallow valleys, wherever drainage is impeded, 'wet' heath and sedgeland have developed extensively. Wet heath is most widespread, but significant patches of sedgeland turn the community into a mosaic. The most common wet heath shrubs are *Hakea microcarpa*, *Callistemon pityoides*, *Baeckea* sp. (Racecourse Creek LS Smith 775), *Epacris microphylla*, *Leptospermum arachnoides* and *L. gregarium*. Sedges, rushes, swamp selaginella and sphagnum moss are adapted to more waterlogged conditions.

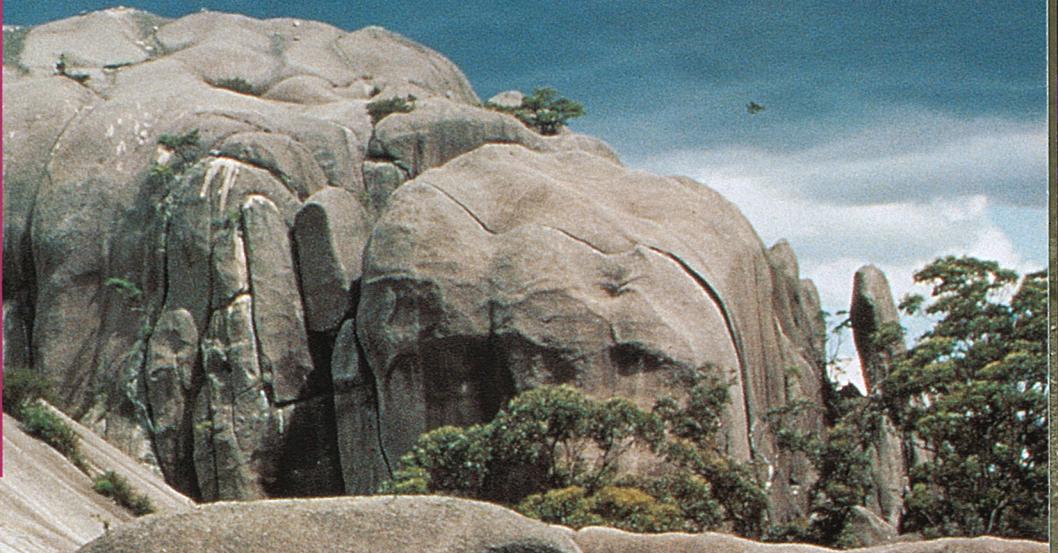
Drier heath and shrub communities occur in association with massive granite outcrops on lithosols and shallow siliceous sands at the margins of outcrops and in depressions or crevices in exposed rocky slopes. Here are found the heath family species *Leucopogon muticus*, *L. neoanglicus*, *Melichrus procumbens*, *Styphelia viridis* var *breviflora* and members of the pea flower family such as *Bossiaea rhombifolia* subsp *rhombifolia*, *Dillwynia retorta* var *phylicoides*, *Hovea purpurea*, *Mirbelia pungens*, *M. speciosa* subsp *speciosa* and the mintbushes *Prostanthera nivea* and *P. phylicifolia*. *Acacia granitica* and *A. venulosa* are widely distributed in heaths on granite outcrops, and *A. venulosa* also occurs in heathy forests.

Richer than rainforests

The Mousebush (*Homoranthus papillatus*), named for its acrid, mouse-like smell, is confined to heaths on major granite outcrops; and *Boronia amabilis* (2RC) is locally common in heathy forest and on granite outcrops. Both species are found only in this area. The mallee *Eucalyptus approximan* subsp. *codonocarpa* (3RC), with its dry heathy shrub layer and distinctive tall whipstick mallee shrubland, is found only on the highest ridges in the park whilst the rare *E. camphora* subsp. *camphora* has adapted to seasonally waterlogged areas. Ground orchids such as *Caladenia carneae* are widespread in heathy forests and woodlands while the endemic *C. atroclavia* (2EC) prefers more moist sites.

Despite the adversities of low winter

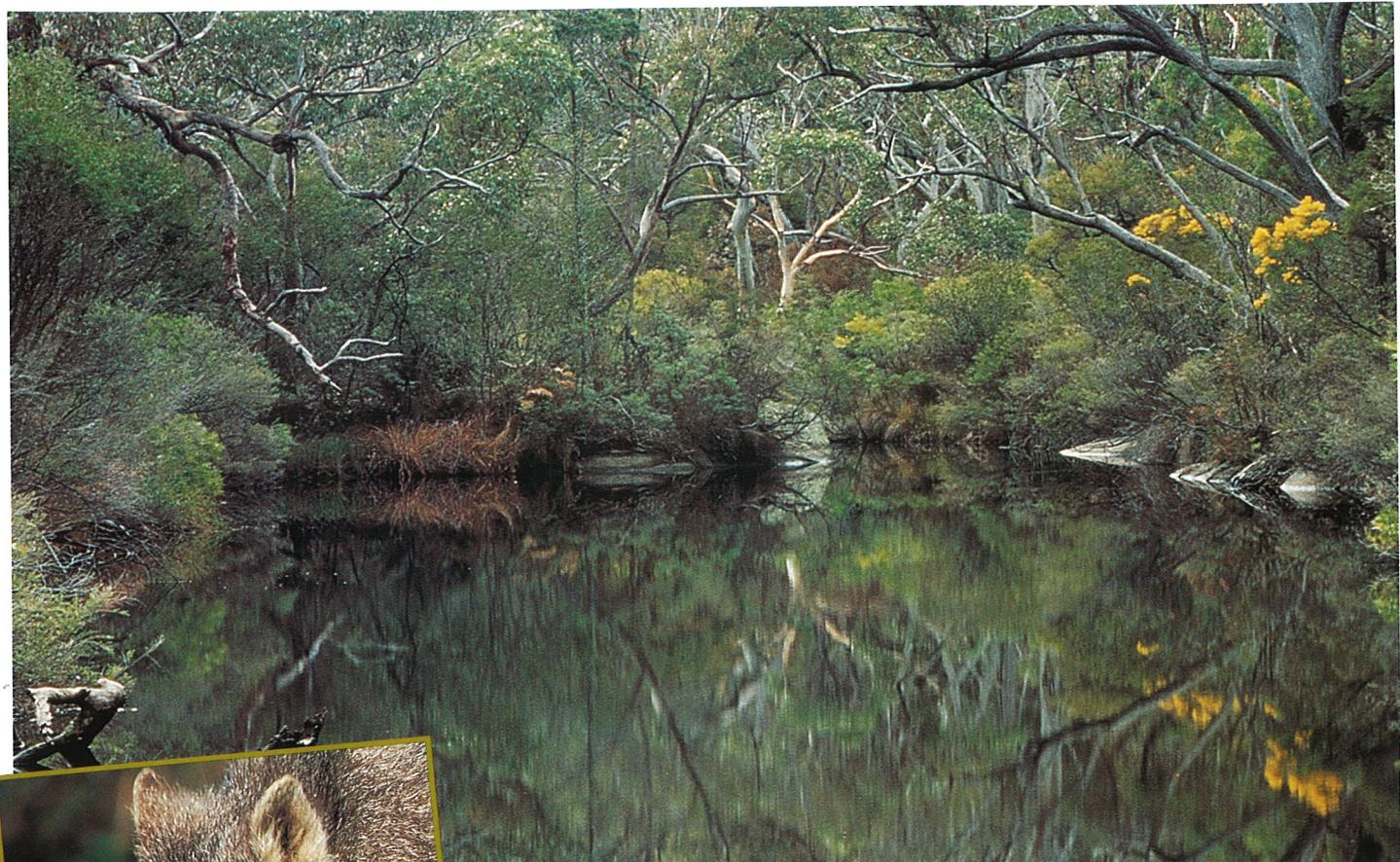




Top right:
To many Girraween visitors, 'wildflowers' means orchids. A late bloomer, the Hyacinth Orchid (*Dipodium variegatum*) flowers from December to January.
Photo by B Goebel.

Above:
The Spider Orchid (*Caladenia dilatata*) grows in moist seepage areas.
Photo by B Goebel.

Background:
Girraween is truly a rock garden, with its steep granite hills, outcrops, tors and boulders forming a backdrop to an impressive range of wildflowers.
Photo by Michael Stephenson.



temperatures, harsh winds, fire, and summer's hot, drying sun, there are over 700 vascular plant species recorded for Girraween. There is no doubt that the heathlands are the richest of plant communities, with a floristic diversity rivalling that of rainforests.

Not by heath alone

Heathland plants often carry striking and colourful flowers – they are renowned for spectacular spring wildflower displays – but their often tough, scratchy and unpleasant-tasting leaves are not attractive to either invertebrates or grazing animals. With the exception of Western Australia's Honey Possum, no mammals and few birds live exclusively on the heaths. However, the flowers, fruits and soft, new shoots are good sources of energy and nutrients and attract seasonal visitors from adjacent forests and shrublands.

Thus, it is the forests and associated heaths of Girraween which support warblers, parrots, treecreepers, flycatchers and honeyeaters. Yellow-tailed Black Cockatoos visit heath areas to feed on grubs found in *Xanthorrhoea* and *Banksia* species. Crimson Rosellas have been observed feeding on *Leptospermum* fruits.

The Red-necked Wallaby is a heath visitor, feeding on grasses and herbs growing amongst the ground cover. Girraween is also the northernmost distribution of the Common Wombat, whose disjunct population ranges around grassy fringes of wet heath and sedgelands to the drier rocky outcrops. The rarely seen Thick-tailed Gecko (*Underwoodisaurus sphyrurus*) has only limited distribution outside these New England uplands.

Insect populations fluctuate with the seasonal growth and flowerings of the heathlands. Ants are particularly attracted to elaiosomes – seeds with fleshy appendages – thus helping with seed removal and dispersal.

The wildflower display actually begins in winter, in late July, with golden wattle brightening the understorey while pea-flowers splash the shrubs and ground with purple. However, September and October are probably the most spectacular months, as the heaths and shrublands burst into flower. Summer-flowering flannel flower, wattles, bottlebrushes and paperbarks bring an end to the display – but not to the beauty and fascination of Girraween.

Top:
Spring brings splashes of yellow to this waterhole.
Photo by Stuart Kinner.

Above:
The Common Wombat is generally an animal of Australia's southeast forests. Girraween is home to the only native Queensland population.
Photo courtesy of the Queensland Department of Environment.

Decoding the plant code

A three-part code for rare or threatened Australian plants has been devised by J D Briggs and J H Leigh of the CSIRO Division of Plant Industry. The first part, the number '1', '2' or '3', represents the distribution category: '1' – species known only from the type collection; '2' – species with a very restricted distribution in Australia and with a maximum geographic range of less than 100km; and '3' – species with a ranger over 100km in Australia but occurring only in small populations which are mainly restricted to highly specific and localised habitats.

The second part is a letter representing conservation status: 'X' – Presumed Extinct; 'E' – Endangered; 'V' – Vulnerable; 'R' – Rare; and 'K' – Poorly Known. The third part relates to the reservation of the species. 'C' indicates the species is known to be represented within a national park or other proclaimed reserve. In some case, this second letter is followed by a lower case letter which relates to the adequacy of reservation of that species.

Thus, a plant coded (2RC) has a maximum geographic range of less than 100km, is rare and is known to be represented within a national park or reserve.

Happy decoding!

John Moye is a ranger with Queensland National Parks & Wildlife Service based at Girraween National Park.