

## SOME FIRE RETARDANT NATIVE PLANTS for the SOUTHERN HIGHLANDS REGION

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Bushfires are a common occurrence in summer for many Australians, and protecting your family and assets to a significant degree is not difficult if you plan ahead. However, the unprecedented extent and ferocity of the 2019-20 bushfire season in eastern Australia may well be the “new normal” under a changing climate, and has renewed public interest in fire-retardant plant species.

Unfortunately, there have been some misleading articles and images on social media suggesting exotic plant species as being the only fire-retardant species. However, other images are available clearly showing exotic species being just as impacted by fire. In the images portraying exotic rural gardens surviving the fires, the emerald green swathes of lawn and garden beds over a wide area would indicate other factors, especially regular irrigation, plant spacing factors, regular maintenance, choice of plant species and materials are a very significant part of the survival of these gardens in rural or semi-rural zones. Under the drying climate in the Southern Highlands, water availability may be curtailed, and fewer residents may have the luxury of unlimited water for irrigation of domestic gardens.

There are many native plant species that are fire-retardant. Many fire-retardant lists containing native and exotic species are available on a web search. Some care is required by searching for those listing which are relevant to the region you are in, and even whether the species are available within the wholesale/retail trade. The following list of native species has been prepared from a number of sources and could have been much, much longer. The time has been taken to cull the many species available on the various lists down to a list of very reliable species for a variety of situations in the Southern Highlands, and which are available through retail and community outlets. Some details and comments on the species are provided, and if the estimated height and width suit your garden needs, more detail on these species is readily available on the internet by typing in the botanical name.

Botanical name	Common name	##Approx. Height & Width	Comments
<i>Acacia acinacea</i>	Gold-dust Wattle	2m x 2m	
<i>Acacia buxifolia</i>	Box-leaf Wattle	2m x 2m	
<i>Acacia cardiophylla</i>	Wyalong Wattle	3m x 3m	Can spread – remove unwanted seedlings
<i>Acacia cultriformis</i>	Knife-leaf Wattle	3m x 4m	Can spread – remove unwanted seedlings
<i>Acacia dealbata</i>	Silver Wattle	7m x 6m	
<i>Acacia deanei</i>	Deane’s Wattle	7m x 4m	
<i>Acacia decora</i>	Western Silver Wattle	2.5m x 3m	
<i>Acacia decurrens</i>	Early Black-wattle	10m x 4m	
<i>Acacia fimbriata</i>	Fringed Wattle	6m x 5m	Can spread – remove unwanted seedlings
<i>Acacia floribunda</i>	White Sallow-wattle	6m x 4m	
<i>Acacia howittii</i>	Sticky Wattle	6m x 3m	
<i>Acacia implexa</i>	Lightwood	5m x 4m	
<i>Acacia iteaphylla</i>	Flinders Range Wattle	4m x 4m	
<i>Acacia mearnsii</i>	Black Wattle	16m x 6m	
<i>Acacia melanoxylon</i>	Blackwood	15m x 10m	

<i>Acacia pendula</i>	Weeping Myall	8m x 5m	
<i>Acacia penninervis</i>	Hickory Wattle	6m x 3m	
<i>Acacia podalyriifolia</i>	Queensland Silver Wattle	6m x 5m	
<i>Acacia pravissima</i>	Ovens Wattle	6m x 6m	Can spread – remove unwanted seedlings
<i>Acacia terminalis</i>	Sunshine Wattle	3m x 2m	
<i>Acacia vestita</i>	Hairy Wattle	3m x 5m	Can spread – remove unwanted seedlings
<i>Ajuga australis</i>	Austral Bugle	0.2m x 0.4m	
<i>Allocasuarina verticillata</i>	Drooping She-oak	6m x 4m	
<i>Angophora costata</i>	Smooth-barked Apple	25m x 15m	
<i>Anigozanthos sp.</i>	Kangaroo paws	1m x 1m	
<i>Atriplex cinerea</i>	Coast or Grey Saltbush	1.5m x 1.5m	
<i>Atriplex nummularia</i>	Old Man Saltbush	3m x 3m	
<i>Banksia ornata</i>	Desert Banksia	1.5m x 1.5m	
<i>Brachychiton populneus</i>	Kurrajong	10m x 6m	
<i>Bulbine bulbosa</i>	Bulbine Lily	0.4m x 0.4m	
<i>Bursaria spinosa</i> subsp. <i>lasiophylla</i>	Sweet Bursaria	4m x 2m	
<i>Casuarina cunninghamiana</i>	River She-oak	20m x 12m	
<i>Cheilanthes austrotenuifolia</i>	Green Rock-fern	0.3m x 0.1m	
<i>Cheilanthes sieberi</i>	Narrow Rock-fern	0.3m x 0.1m	
<i>Coprosma hirtella</i>	Rough Coprosma	2m x 1.5m	
<i>Correa alba</i>	White Correa	1m x 1.5m	Most correas sp. may be fire-retardant
<i>Correa reflexa</i>	Common Correa	1.5m x 1.5m	Many varieties and cultivars
<i>Crocea saligna</i>	Willow-leaf Crocea	1.5m x 1.5m	
<i>Cyathea australis</i>	Rough Tree-fern	5m x 4m	
<i>Daviesia mimosoides</i>	Leafy Bitter-pea	2m x 2m	
<i>Dianella longifolia</i>	Pale Flax-lily	0.5m x 0.5m	
<i>Dianella revoluta</i>	Black-anther Flax-lily	0.5m x 0.5m	
<i>Dianella tasmanica</i>	Tasman Flax-lily	0.5m x 0.5m	
<i>Dichondra repens</i>	Kidney-weed	pros x 1m	
<i>Doodia aspera</i>	Prickly Rasp-fern	0.4m x 1m	
<i>Einadia hastata</i>	Saloop	0.4m x 1.5m	
<i>Einadia nutans</i> ssp. <i>nutans</i>	Nodding Saltbush	0.6m x 1.5m	
<i>Enchylaena tomentosa</i>	Ruby Saltbush	0.4m x 1m	
<i>Eremophila debilis</i>	Creeping Emu-bush	0.4m x 1m	
<i>Eremophila glabra</i>	Common Emu-bush	1.5m x 1.5m	Many forms available
<i>Eremophila maculata</i>	Spotted Emu-bush	1.5m x 1.5m	Many forms available
<i>Grevillea aquifolium</i>	Holly Grevillea	1.5m x 1.5m	
<i>Grevillea shiresii</i>	Blue Grevillea	3m x 3m	
<i>Grevillea victoriae</i>	Royal Grevillea	3m x 4m	
<i>Hakea salicifolia</i>	Willow-leaf Hakea	6m x 6m	
<i>Lasiopetalum macrophyllum</i>	Shrubby Velvet-bush	2m x 1.5m	
<i>Microlaena stipoides</i>	Weeping Grass	0.3m x 1m	
<i>Myoporum bateae</i>	Pink Boobiella	3m x 2m	
<i>Myoporum insulare</i>	Common Boobiella	4m x 3m	
<i>Myoporum montanum</i>	Water Bush	3m x 3m	
<i>Myoporum parvifolium</i>	Creeping Boobiella	pros x 1.5m	
<i>Myoporum viscosum</i>	Sticky Boobiella	2m x 1.5m	
<i>Pelargonium sp.</i>	Storksbill sp.	0.4 x 0.5m	
<i>Rhagodia spinescens</i>	Spiny Saltbush	1m x 2m	
<i>Scleranthus biflorus</i>	Twin-flower Knawel	pros x 0.4m	
<i>Solanum linearifolium</i>	Kangaroo Apple	3m x 3m	
<i>Thelionema grande</i>	Tufted Granite Lily	1.2m x 0.3m	
<i>Veronica derwentiana</i>	Derwent Speedwell	1m x 1m	
<i>Viola hederacea</i>	Ivy-leaf Violet	pros x 1m	

## The heights and widths provided are a guide only. Any species can vary depending on its suitability to the site in which it is planted. Many environmental factors will influence the way a plant will grow.

### **Other factors to consider in establishing a fire-retardant garden**

Establishing a garden using plant species that are regarded as “fire-retardant” or “fire-resistant” is no guarantee or surety that they will stop a fire. They may help slow a fire and reduce radiant heat, but anything organic will burn if conditions are right. It is necessary that even those species with fire-retardant qualities are still in good condition and health, especially with regard to being adequately hydrated and maintained free of dead material. Using fire-retardant species is only one aspect of establishing a fire-resistant garden. Some other issues are:

#### **Choice of species**

Whether fire-resistant or not, the plant species you choose can contribute to fire-resistance.

As an example, eucalypts are fire prone, exuding many flammable oils and some have rough, flammable bark, or produce hanging ribbons of bark which enable fire to rise into the crown of the tree. However, there are some species of eucalyptus in the local region (e.g. *E. mannifera*, *E. rossii* and *E. pauciflora*) that have smooth bark which sheds in flakes, and can make splendid specimens if sited away from structures in open, maintained grassed areas with lower limbs pruned to raise the distance between the ground and crown.

In many rural areas grey water can be used to maintain a “green” area. This can be irrigated grass or even a grassed area with a watered low to medium height hedge or windbreak on the most likely side of the garden from which the fire will approach. A watered hedge or windbreak has the potential to reduce radiant heat and reduce (trap) embers. Plants with smooth bark and broad or fleshy well-hydrated leaves are better choices in these situations, as plants with high moisture or salt content and/or low oil content will take a longer time to ignite and may burn more slowly (see above list of fire-resistant species).

#### **Mulches**

Mulches can be organic or inorganic materials, both assisting in conserving soil moisture and acting as a barrier to unwanted “weed” growth.

Inorganic pebble, stone or gravel mulches on the fire-prone side of the house will assist in slowing the spread of fire. Organic mulches are chipped organic matter, and comes in a variety of forms. It is better to use larger interlocking chips rather than light, small particles. Organic material breaks down over time, assisting in increasing soil fertility and structure, but will need topping up. Organic mulch can burn, but if used can greatly reduce unwanted plant growth (weeds) that may carry fire faster. Wetting of organic mulch in preparation for fire can reduce it carrying fire.

Another form of organic mulching is the use of low-growing, fire-resistant live plants. These should be (or usually are) used in conjunction with either inorganic or organic mulches.

#### **Garden Maintenance**

Appropriate levels of garden maintenance can also make a difference.

Remove the lower branches from trees and shrubs, thus increasing the distance from ground level to the lower branches of the individual plant.

Remove dry or dead material from plantings, and ensure dead weed material is removed from under plantings and across the whole garden bed.

Undertake a minimum of one general pruning of shrubs each year to keep the foliage fresh and green. Tufty plants such as grasses should be pruned over winter to ensure they have fresh green growth and limited dead material.

### **Spacing**

Attempt to keep shrubs at appropriate spacings so they do not become dense impenetrable thickets. It is useful to separate larger plants with species of smaller or ground-cover dimensions between these larger species. Trees should be chosen and sited far enough apart to maintain a gap between canopies, and should not overhang built structures/assets. More importantly, maintain a safe space between assets and the bush, but continue to enjoy the natural garden and critical habitat for wildlife that your bushland provides.

### **A Caution**

The above list of plant species is provided as many people were requesting information on fire-retardant native species. As indicated earlier, no-one should assume that by using these species your garden will become safe from fire. Anything organic will burn given suitable circumstances. These species can be used in conjunction with all other recommended means of preparing for bushfire events. They do not have any effect on the need for a bushfire plan, ensuring assets are as resistant to fire as possible, and maintaining areas free of combustibles and appropriate clear areas from fire-prone vegetation etc.

### **References**

- “*Fire Resistant & Retardant Plants*” 2018. Neil Marriot - Australian Plants Society (Victoria) Inc.
- “*Fire Retardant Plants for Canberra*” undated. ACT Government (Yarralumla Nursery)
- “*Grow What Where*” 1981. Australian Native Plant Study Group. Published by Thomas Nelson Australia.
- “*Plants recommended for Fire Prone Areas*” 1995. SGAP Canberra Region Journal Vol 10 No 4 page 11, April 1995.