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Medicinal Plant Images

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Figure 1: *Eremophila maculata* (Ker Gawl.) F. Muell. (Family *Scrophulariaceae*) is an endemic Australian plant that was used in traditional First Australian medicine to treat a wide variety of ailments.[1] Additionally, many other members of the genus *Eremophila* also have traditional medicinal uses. The genus consists of more than 200 species that grow in semi-arid and arid regions of Australia. Multiple *Eremophila* spp. are used as traditional medicines by the First Australians in the areas in which they grow to treat diverse conditions including uses as antibacterial, antifungal, antiviral, antioxidant, anti-diabetic, and anti-inflammatory therapies, as well as for their cardio-protective properties. The antibacterial properties of *Eremophila* spp. have been relatively well studied and the several bioactive terpenoids have been identified. This photograph was taken in the Australian Arid Lands Botanic Garden, Port Augusta, Australia, in January 2021 by Ian Cock.

Figure 2: *Syzygium australe* (H.L.Wenfl. ex Link) B. Hyland (commonly known as brush cherry). *Syzygium* is a large genus of evergreen flowering plants of the family Myrtaceae which consists of approximately 500 species.[2] Plants of this genus are widespread, occurring in tropical and subtropical regions of South-East Asia, Australia and Africa. Many *Syzygium* species produce edible fruits and berries. Some *Syzygium* spp. are used in traditional medicine to treat respiratory ailments, tuberculosis, gastrointestinal disorders, diarrhoea and dysentery.[3] Recent reports have also highlighted the Australian *Syzygium S. leuhmannii* and *Syzygium* australe (Bush Cherry) extracts as having exceptionally high antioxidant contents.[4] Antioxidants have been associated with the prevention of cancer, cardiovascular disease and neurological degenerative disorders.[5-7] They are also linked with anti-diabetic bioactivities and have been associated with the reduction of obesity. Antioxidants can directly scavenge free radicals, protecting cells against oxidative stress related damage to proteins, lipids and nucleic acids.[8] Thus, *Syzygium* spp. have potential in the treatment of a significant number of diseases and medical conditions related to cellular redox state.

Many other *Syzygium species* internationally also have documented uses in traditional medicine.[2] In the commercially most important species *Syzygium aromaticum* (clove), the unopened flower bud is used as a spice. This plant also has uses in traditional medicine due to its anaesthetic properties.9 The antibacterial activity of *S. aromaticum* is also well known. Numerous studies have reported on the antibacterial[9] and antifungal[10] activities of oils and extracts from this plant. Other *Syzygium* species from South East Asia (Syzygium jambos)[11] and India (*Syzygium lineare* and *Syzygium cumini*)[12] have also been shown to have antimicrobial activity. Recent studies have also reported the antibacterial activity of *Syzygium cordatum* leaf extracts. Of particular interest was the potent growth inhibitory of the extracts against the bacterial triggers of rheumatoid arthritis[13] and ankylosing spondylitis.[14]

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