

Sandstone Plants Guide

This guide to plants of the sandstone or stone country is based on field work in the Djidbidjidbi area, Mt. Brockman, Mirarr country, Kakadu National Park.

This guide aims to increase understanding of the diversity of plants in unique sandstone vegetation communities of the stone country – kun-warddewardde – of the West Arnhem and Kakadu region.

The sandstone landscapes support a high diversity of species, and have the highest number of endemic plant species (and terrestrial vertebrates) anywhere in the Northern Territory.

Examples of diverse plant genera in these environments include *Acacia* (wattles), *Utricularia* (bladderworts), *Hibbertia*, *Corymbia* (bloodwoods), *Goodenia*, *Grevillea*, *Stylidium* (triggerplants), *Ipomoea* (morning glories), *Lindernia*, *Eucalyptus* (gum trees), *Indigofera*, *Ficus* (figs), *Spermacoce*, *Eriocaulon*, *Hibiscus*, *Terminalia* and *Pityrodia*.

In the Djidbidjidbi area there are vegetation communities associated with sandstone escarpments and rocky hillslopes, valley floors and creeklines with seasonally wet soils, and monsoon vine thicket patches or clumps in sheltered locations.

This guide is the first part of a series, and covers trees, shrubs and a selection of vines. Trees are generally defined as a woody plant with a distinct, unbranched trunk and shrubs as a woody plant with multiple stems arising close to the ground. Other life-forms that occur in the area are herbs, ferns, grasses, sedges, mistletoes and epiphytes.

The plants are listed alphabetically by species name, with common name in brackets where there is a recognised English common name. Gundjeihmi names are provided where possible; these are from the book *The Food We Eat* (Fox and Garde, 2018).

Other useful resources about plants that can be referred to are:

Bowman, D.M.J.S., Wilson, B.A. and Fensham, R.J. 1990. Sandstone vegetation pattern in the Jim Jim Falls region, Northern Territory, Australia. *Australian Journal of ecology* 15: 163-174.

Brennan, K. 1986. *Wildflowers of Kakadu*. K.G. Brennan, Jabiru NT.

Brennan, K. 1996. *An annotated checklist of the vascular plants of the Alligator Rivers Region, Northern Territory, Australia*. Supervising Scientist Report 109, Barton ACT.

Brennan, K. 2007. *A field key to the trees and shrubs in the Jabiru area*. Supervising Scientist Report 187, Darwin NT.

Brock, J. 1993. *Native Plants of Northern Australia*. Reed Books, Sydney.

Fox, G. and Garde, M. 2018. *An-me Arri-gnun. The Food We Eat*. Gundjeihmi Aboriginal Corporation, Jabiru NT.

Northern Territory Herbarium. 2015. FloraNT Northern Territory Flora Online. Department of Land Resource Management. <<http://eflora.nt.gov.au>>

Russell-Smith, J. 1995. *Flora*. pp. 127-166. In: eds. T. Press, D. Lea, A. Webb & A. Graham. *Kakadu: Natural and Cultural Heritage and Management*. Australian Nature Conservation Agency and North Australia Research Unit, Darwin.

Russell-Smith, J., Ryan, P.G., Klessa, D., Waight, G. and Harwood, R. 1998. Fire regimes, fire-sensitive vegetation and fire management of the sandstone Arnhem Plateau, monsoonal northern Australia. *Journal of Applied Ecology* 35: 829-846.



Acacia humifusa

Spreading shrub to 3m. Characteristics: broad hairy 'leaves' (phyllodes) with 3-4 obvious veins, yellow spike flowers.

Habitat: rocky slopes, often on rock slabs



Acacia plectocarpa Note: several other wattles occur in the area

Slender tree to 8m. Characteristics: Thin 'leaves' (phyllodes) with resinous sheen, yellow spike flowers, zig-zag pods. Habitat: slopes and sandy flats beside streams



Acacia sericiflora

Endemic to the Top End

Slender upright shrub to 4m. Characteristics: slightly curved 'leaves' (phyllodes), yellow spike flowers along stem, coiled pods. Habitat: sandy flats near streams; often in clumps



Acacia torulosa

Tree to 8m. Characteristics: relatively thin 'leaves' (phyllodes), rough grey bark. Habitat: on slopes and in deep sand. A widespread tree in sandy areas.



Allosyncarpia ternata (Anbinik)

Endemic to Arnhem Land

Large, often spreading tree to 25m. Characteristics: shiny leaves in groups of 3 (trifoliate)
Habitat: fire-protected sites near rocks, at top of valley and near Gubara.



View of Anbinik (deep green) among sandstone



Alyxia tropica (=ruscifolia)

Endemic to the Top End

Small shrub to 3m. Characteristics: shiny prickly leaves, white sap.
Habitat: shady sites sheltered from fire, vine thickets



Banksia dentata Gundjeihmi: Kuybuk

Small tree to 5m. Characteristics: toothed leaves, large cones stay on tree.
Habitat: sandy, seasonally wet areas. A widespread tree on sandy soils.



Blepharocarya depauperata

Medium tree to 10m. Characteristics: rounded to oblong leaflets, pale underneath.
Habitat: rocky slopes and ridges



Boronia lanceolata Note: there are other species of *Boronia* in the area

Sub-shrub to 2m. Characteristics: leaves aromatic, flowers pinkish with yellow centre.
Habitat: rocky slopes, shallow soils



Bridelia tomentosa Gundjeihmi: An-birlimanjwarre

Shrub or small tree to 5m. Characteristics: regularly arranged leaves on branches.
Habitat: vine thicket patches, sheltered sites



Callitris intratropica (Northern Cypress)

seedling

Upright tree to 15m. Characteristics: tiny leaves, dark rough bark.
Habitat: woodlands; generally requires fire protection.



Calophyllum sil (Beauty Leaf)

Tree to 12m. Characteristics: smooth shiny leaves, multiple veins.
Habitat: shady sites sheltered from fire, vine thickets



Carallia brachiata Gundjeihmi: An-wirdu

Tree to 10m. Characteristics: smooth shiny green leaves, ripe red fruit (edible).
Habitat: sites sheltered from fire, vine thickets



Calytrix spp. *Calytrix exstipulata* (Turkey Bush; left) and *C. ?brownii* (right)

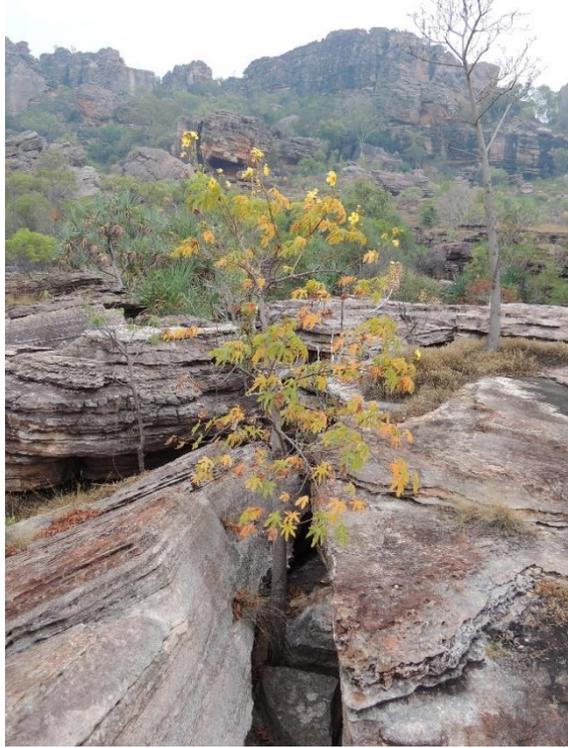
Straggly shrubs to 2-4m. Characteristics: small to tiny leaves, star-shaped flowers. *Calytrix achaeta* and *C. megaphylla* also occur in the area.



Calytrix arborescens

Endemic to the Top End

Tree to 8m. Characteristics: white star-shaped flowers, leaves tiny; unusually large for a *Calytrix*. Habitat: sandy flats near sandstone.



Cochlospermum ?gregorii (Rock Kapok) Gundjeihmi: An-biyarrng

Small tree to 5m. Characteristics: yellow flowers, palmate 5-6 'fingered' leaves.
Habitat: sandstone, slopes and pavements



Corymbia kombolgiensis

Tree to 10m. Characteristics: pale bark, thin leaves, small nuts.
Habitat: rocky slopes



Corymbia ptychocarpa (Swamp Bloodwood) - formerly known as *Eucalyptus ptychocarpa*
 Tree to 10m. Characteristics: large smooth leaves, rough bark, red blossom, big nuts
 Habitat: valley floors, seasonally wet soils



Eucalyptus phoenicea
 Tree to 10m. Characteristics: gum tree with flaky bark, orange blossom.
 Habitat: rocky ridges in valleys. A widespread tree in rocky areas.



Eucalyptus tetradonta (Stringybark)

Tall tree to 15m. Characteristics: upright tree, stringy fibrous grey bark, leave lanceolate. Habitat: valleys with deeper soils. A widespread tree in savannas.



Exocarpos latifolius (Native Cherry)

Small tree usually 3-5m. Characteristics: flattish smooth leaves with 5-7 main veins, fruit with fleshy base. Habitat: sites sheltered from fire, vine thickets



Ficus cerasicarpa (Cherry Rock-fig) Gundjeihmi: An-bamek

Small tree to 5m. Characteristics: smooth to felty leaves, red ripe fruit, exposed roots. Habitat: bare sandstone rocks, crevices and slopes.



Ficus ?brachypoda (Rock Fig)

Low bunched tree to 6m. Characteristics: generally smooth leaves, white sap.
Habitat: Clings to rock surfaces, often with exposed roots. Fruits eaten by rock-wallabies.
Note: there is likely to be more than one species of Rock Fig in the area



Gardenia sp. ? *faucicola*

Endemic to Arnhem Land

Small tree to 5m. Characteristics: smallish leaves clustered at ends of branches, orangey bark. Habitat: on or near rocks.



Gardenia sp. ? *kakaduensis* Note: there are several species of *Gardenia* in the area

Small tree to 5m. Characteristics: smooth leaves in pairs, white flowers (?).
Habitat: sandstone slopes and crevices



Grevillea dryandri subsp. *dasycarpa* Gundjeihmi: An-djamko

Shrub to 2m. Characteristics: fine pinnate (feather-like) leaves, red flowers.
Habitat: rocky slopes and crevices, and on adjacent sandy soils



Grevillea pteridifolia (Fern-leaved Grevillea) Gundjeihmi: An-barnko / An-dadjek

Slender tree to 8m. Characteristics: fine pinnate (feather-like) silvery-green leaves, orange flowers with abundant nectar. Habitat: seasonally wet, sandy flats. A widespread plant.



Hibiscus brennanii

Endemic to the Mt. Brockman outlier

Shrub to 3m. Characteristics: covered in hairs and prickles, leaves and pink flower clustered at ends of branches. Habitat: sandy areas associated with sandstone and among rock outcrops. Endemic to Mt. Brockman outlier.



Jacksonia dilatata

Shrub or small tree to 4m. Characteristics: slender slightly toothed leaves, yellow pea flowers. Habitat: sandy areas associated with sandstone. A widespread plant of rocky areas.



Livistona inermis (Fine-leafed Sand Palm) Gundjeihmi: An-djarkele

Palm to 6m. Characteristics: Slender palm with fine fan-shaped leaves.
Habitat: Sandstone and other rocky substrates.



Lophostemon lactifluus (Swamp Box)

Tree to 12m. Characteristics: flaky reddish-brown bark, shiny elliptic leaves.
Habitat: near drainages and wet areas.



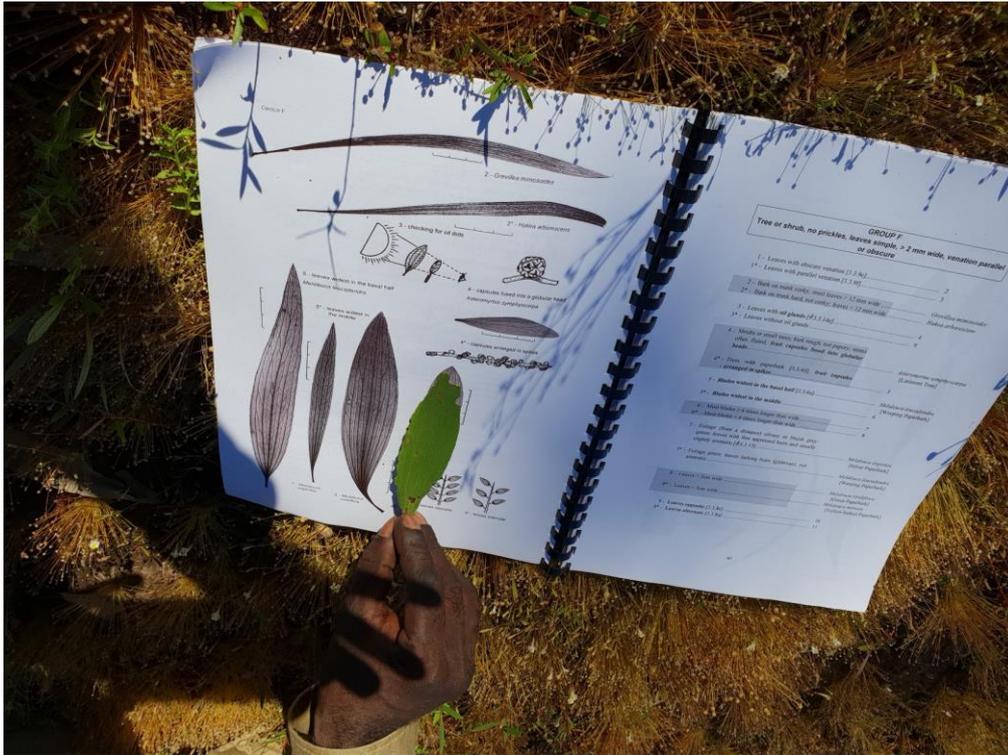
Melaleuca nervosa (Fibrebark)

Straggly tree to 10m. Characteristics: grey fibrous bark, leaves smallish, stiff.
Habitat: valley floors, seasonally wet areas



Melaleuca viridiflora (Broad-leaved Paperbark) Gundjehmi: Mabbarr

Paperbark tree, often under 5m but grows to 12m. Characteristics: Papery bark, thick, stiff leaves with 5-7 main veins. Habitat: valley floors, seasonally wet soils. A widespread plant.



Several species of Paperbark (*Melaleuca*) occur in the area – these can be distinguished by the size and shape of the leaves, the flakiness of the bark and the fruiting spikes.



Osbeckia australiana (Osbeckia) Gundjeihmi: Mayawu

Shrub to 2m. Characteristics: bright green leaves with 3 main veins, obvious purple flowers. Habitat: Valley floors on sandy, seasonally wet soils. A widespread plant.



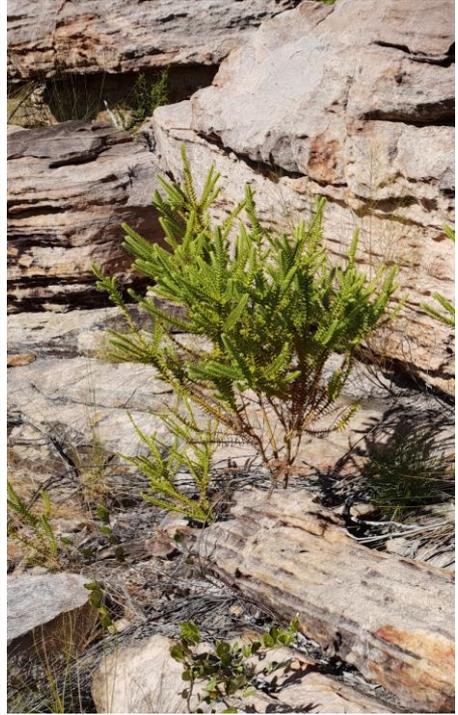
Pandanus basedowii (Rock Pandanus) Gundjeihmi: An-morre
Endemic to western Arnhem Land

Screw palm usually 3-5m. Characteristics: much-branched, spiky leaves, prop roots.
 Habitat: bare sandstone rocks, crevices and slopes



Pandanus spiralis Gundjeihmi: An-yakngarra

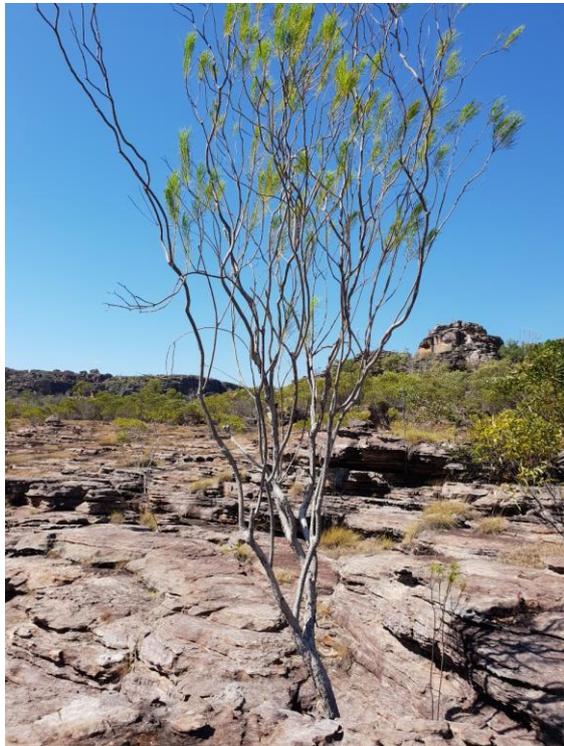
Screw palm can grow to 10m. Characteristics: prickly long leaves in spiral arrangement.
 Habitat: Creeklines and adjacent flats. A widespread plant in the Top End on wet sites.



Pityrodia ?jamesii Note: there are a number of species of *Pityrodia* in the sandstone.

Sub-shrub to 1.5m. Characteristics: aromatic leaves in spiral pattern.

Habitat: sandy areas in valleys and lower slopes in sandstone escarpment country. A food plant for the Leichhardt Grasshopper.



Platysace arnhemica

Endemic to Arnhem Land sandstone

Odd slender shrub to 2.5m. Characteristics: upright plant, thin scented leaves.

Habitat: Grows on bare rock.



Persoonia falcata (Milky Plum) Gundjeihmi: An-dak

Slender tree to 5m. Characteristics: strap-like leaves, yellow flowers, ovoid fruit (edible).
Habitat: slopes and valleys. A widespread woodland plant.



Seringia (Keraudrenia) adenolasia

Endemic to western Arnhem Land

Shrub to 2.5m. Characteristics: hairy, smelly leaves (smells soapy), pink flowers.
Habitat: minor valley floors on sandy soils



Solanum ?ultraspinosum Note: there are several (endemic) species of *Solanum* in the area.
 Low shrub to 1m. Characteristics: spiky stems, rounded fruit.
 Habitat: sandy areas near rocks.



Sterculia quadrifida (Peanut Tree) Gundjeihmi: An-koko
 Tree to 8m. Characteristics: broad leaves on long stalks, black (edible) seeds in boat-like pods. Habitat: sites sheltered from fire, vine thickets



Terminalia carpentariae Gundjeihmi: An-marabula

Tree to 8m. Characteristics: felty (hairy) leaves, beaked fruit (edible).
Habitat: sandstone, slopes and pavements



Verticordia cunninghamii Note: there are three species of *Verticordia* in the area

Shrub to small tree. Characteristics: small slender leaves, fluffy white flowers.
Habitat: sandy flats



Xanthostemon paradoxus

Tree to 12m. Characteristics: rough, grey bark; leaves paler under, blossom in season.
Habitat: on rocks (fire protected?) in area but grows in a variety of habitats



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VINES



Flagellaria indica (Supplejack) Gundjeihmi: Karrawukka/An-rong
Strappy vine with coiled leaf tips.



Gynochthodes australiensis
Scrambling vine with leathery leaves, grey stems.

Endemic to Arnhem Land



Muehlenbeckia sp. Mt. Brockman
Scrambling vine growing on rocks.

Endemic to Arnhem Land



Smilax australis Gundjeihmi: Morrung
Leathery leaves with thorny bumps on stems.

