NORTHERN TERRITORY GOVERNMENT

Top End Native Plant Society

A field guide to plants of Darwin Sandsheet Heath

David T. Liddle, Ian D. Cowie, Sarah R. Hirst and Ben M. Stuckey

Version 1.1 August 2017

A collaborative project funded by:

Territory Natural Resource Management

Australian Government | National Landcare Programme

Top End Native Plant Society
PO Box 135. Palmerston, NT 0831
Email: topendnativeplantsociety@hotmail.com
Web: www.topendnativeplants.org.au

Northern Territory Herbarium
PO Box 496, Palmerston NT 0831
Email: herbarium@nt.gov.au
Web: eflora.nt.gov.au

Dedication

To Joyce Stobo and Allison Worsnop, both of whom had the foresight to recognise the special values of sandsheet and the tenacity to stand up to look after sandsheet well before the biodiversity values were widely appreciated.

This field guide may be downloaded from the "Resources" tab on the Top End Native Plant Society website.

Citation
D.T. Liddle, I.D. Cowie, S.R. Hirst and B.M. Stuckey (2017). A field guide to plants of Darwin Sandsheet Heath. Report to Territory Natural Resource Management, Project NTRM00420. Top End Native Plant Society in collaboration with Northern Territory Herbarium, Northern Territory Government, Darwin.

Cover photographs: *Stylidium ceratophorum* (ID Cowie)*; Utricularia lasiocaulis* (ID Cowie); *Goodenia neglecta* (ID Cowie)

Contents

Huxleya linifolia
Limnophila fragrans
Lindernia lobelioides
Mitrasacme laevis
Mitrasacme nummularia
Mitrasacme subvolubilis
Murdannia cryptantha
Murdannia gigantea
Murdannia graminea
Murdannia vaginata
Oldenlandia leptocaulis
Phyllanthus exilis
Rhamphicarpa australiensis
Salomonia ciliata
Sauropus sp. sand plains (I.D. Cowie 12879)
Selaginella pygmaea
Sowerbaea alliacea
Spermacoce calliantha
Stylidium ceratophorum
Stylidium cordifolium
Stylidium dunlopianum
Stylidium ericksoniae
Stylidium fissilobum
Stylidium pedunculatum
Stylidium tenerrimum
Stylidium turbinatum
Trithuria lanterna
Typhonium taylori
Utricularia caerulea
Utricularia capilliflora
Utricularia chrysantha
Utricularia circumvoluta
Utricularia dunstaniae
Utricularia hamiltonii
Utricularia holtzei
Utricularia involvens
Utricularia kamienskii
Utricularia kimberleyensis
Utricularia lasiocaulis
Utricularia leptoplectra
Utricularia leptorhyncha
Utricularia limosa
Utricularia minutissima
Utricularia nivea
Utricularia odorata
Utricularia quinquedentata
Utricularia simmonsii
Utricularia subulata
Utricularia uliginosa
Uvedalia linearis
Vandellia aplectra
Vandellia scapigera
Xyris cheumatophila
Xyris complanata
Xyris indica
Xyris oligantha
Xyris pauciflora

Plants Part 2: Sedges

Centrolepis banksii
Centrolepis exserta
Cyperus pulchellus
Dapsilanthus spathaceus
Fimbristylis acuminata
Fimbristylis dunlopii
Fimbristylis furva
Fimbristylis lanceolata

Fimbristylis macassarensis
Fimbristylis nutans
Fimbristylis pallida
Fimbristylis pauciflora
Fimbristylis punctata
Fimbristylis simplex
Fimbristylis sp. A Kimberley Flora
Fuirena ciliaris
Rhynchospora longisetis
Schoenus punctatus
Scleria annularis
Scleria laxa
Scleria novae-hollandiae
Scleria pygmaea
Scleria rugosa
Scleria sp. Oenpelli
Tricostularia undulata

Plants Part 3: Grasses

Alloteropsis semialata
Aristida holathera
Dimeria ornithopoda
Eriachne burkittii
Eriachne triseta
Germainia grandiflora
Ischaemum decumbens
Sacciolepis indica
Sacciolepis myosuroides
Sorghum intrans
Thaumastochloa major
Urochloa humidicola
Whiteochloa capillipes

Plants Part 4: Trees and Shrubs

Acacia latescens
Banksia dentata
Eucalyptus alba
Grevillea pteridifolia
Hakea arborescens
Lophostemon lactifluus
Melaleuca nervosa
Melaleuca viridiflora
Pandanus spiralis
Planchonia careya
Verticordia cunninghamii

Acknowledgements

This field guide would not have been possible without the survey work undertaken by staff and volunteers of the Flora and Fauna Division of the Northern Territory Department of Environment and Natural Resources, particularly those affilated with the Northern Territory Herbarium. Similarly, the endeavours of the Top End Native Plant Society across many field trips over more than two decades has contributed significantly to our knowledge of sandsheet. Furthermore, the committee of Top End Native Plant Society have provided guidance and support with administration of this project.

In recent years there has been an expansion of work on the sandsheets involving many organisations including Greening Australia NT, Charles Darwin University, Power and Water Corporation, the Extractive Industry Association Northern Territory and the NT Environment Protection Authority. Our thanks go to all those who have contributed to our understanding of the landscape and the plants that comprise sandsheet vegetation.

The contribution of photographers who have generously shared their images is a key component of this guide. A credit is provided adjacent to each image.

This field guide builds upon a series of projects conducted over many years and the support of the Northern Territory Government and Australian Government is gratefully acknowledged. Financial support for compilation of the field guide has come from Territory Natural Resource Management via a community grant to the Top End Native Plant Society. The project was supported by the Top End Native Plant Society through funding from the Australian Government's National Landcare Program and technical support from the Northern Territory Government Herbarium.

How to use this guide

This guide is designed to be either used on a tablet or phone, or could be printed as a paper copy. Plants are arranged in four parts based upon lifeform: herbs; sedges; grasses; and trees and shrubs. Each section has a different colour banner and plants are arranged alphabetically by name within each section.

The photographs provide a primary tool for identification of plants. A brief description is provided with a focus on key characteristics for distinguishing each species from other sandsheet plants. Plain English has been used where possible, however, some technical jargon has been required in specialised groups, particulalry the sedges and grasses. A short glossary of terms and an illustration of flower parts is provided within this guide.

The emphasis on plain English is deliberate and for more detailed descriptions, users are referred to the extensive array of resources available in taxonomic publications, many of which are accessible via the internet. "Flora NT" at http://eflora.nt.gov.au/ is an excellent web resource maintained by the Northern Territory Herbarium. The website maintained by the Top End Native Plant Society at http://www.topendnativeplants.org.au/ has galleries of images arranged by flower colour.

The content of this guide is focused on species that occur on Darwin Sandsheet Heath and includes all the plants commonly encountered therein, however, be aware that there are many more plants that grow in wetlands around Darwin and some of these may occasionally turn up on sandsheet country.

What is Darwin Sandsheet Heath?

Sandsheet heath is vegetation associations occurring on seasonally saturated or inundated sandy to silty hydrosols (soils that are saturated with water for long periods of time) characterised by the dominance of mid-tall heathshrubs, shrubs and/or low trees in the upper stratum (typically *Banksia dentata, Grevillea pteridifolia, Lophostemon lactifluus, Melaleuca nervosa,*

Melaleuca viridiflora and *Verticordia* spp.) and a ground stratum with a diverse range of sedges, herbs and grasses but typically dominated by the restiad *Dapsilanthus spathaceus* (Flora and Fauna Division, pers comm 2015). The term Darwin Sandsheet Heath has been adopted in this field guide to provide focus on the sandsheet heath vegetation that occurs in close proximity to Darwin and is well represented within the Howard Sand Plains Site of Conservation Significance. The sandsheet country is recognised as a particular biodiversity highlight within the Site of Conservation Significance, which is classified as internationally significant due to the concentration of threatened plant and animal species that occur there (Harrison *et a*l. 2009). Threatened species associated with Darwin Sandsheet Heath include the herb *Typhonium taylori*, the carnivorous bladderwort, *Utricularia dunstaniae* and the Howard River Toadlet, *Uperoleia daviesae*.

Darwin Sandsheet Heath is characterised by sandy infertile soils and extremes of moisture, being seasonally inundated in the wet season and parched by the end of the dry season. The harsh conditions are unfavourable to most woody plants and well suited to a diverse assemblage of herbs and sedges. Many of which are specialist plants and many are endemic to the Northern Territory. These specialists include carnivorous annual plants within the genera *Utricularia*, *Drosera* and *Byblis*.

The Top End region has been identified as one of two world centres of diversity for the genus *Utricularia* with 36 species known from the area and 26 species in the Howard Sand Plains Site of Conservation Significance. In prime Sandsheet Heath, up to a dozen different species may occur in an area the size of a basketball court. The highest diversity areas typically occur on the margin of the floodplains where sandsheet heath habitat is fed by seepage from the adjoining slighly elevated Eucalypt woodlands for a couple of months into the dry season.

This rich diversity in the Top End is also reflected in other genera which extend onto sandsheet. This includes *Eriocaulon* with 21 species in the north

of the Territory, along with *Lindernia* and *Vandellia* which are under revision but with more than 25 taxa. Speciation in a broad range of genera such as *Byblis, Calandrinia, Centrolepis, Drosera, Fimbristylis, Mitrasacme, Oldenlandia, Stylidium, Trithuria* and *Typhonium* all add to the diversity on Darwin Sandsheet Heath. The species composition of this flora appears to vary in response to subtle changes in the texture, drainage and period of inundation of these sandy colluvial and alluvial soils found in drainage depressions, on upstream floodplains, along minor drainage lines and in seepage areas.

How the species list was compiled

Twenty-one vegetation units were described and mapped in a study of the vegetation and biodiversity values of the seasonally saturated lands of the Howard Sand Plains Site of Conservaiton Significance (Liddle *et al.* 2013). Six of the mapped units comprise Darwin Sandsheet Heath vegetation and were sampled by a total of 36 field plots, each 20 m x 20 m in size. Ninety-six plants were recorded in three or more plots and were adopted as the primary list of Darwin Sandsheet Heath plant species. Although infrequently encountered, a further 26 taxa were recorded at one or two plots and were considered to have a strong affinity to Darwin Sandsheet Heath. In addition, 17 species that were not encountered in the plots have been included for the following reasons:

- rare species with affinity to sandsheet such as the threatened *Typhonium taylori*:
- to provide a more complete coverage of species known from similar wet habitats near Darwin in the genera *Drosera, Calochilus, Goodenia, Habenaria, Mitrasacme, Stylidium* or *Utricularia*; and
- one introduced species, the invasive Tully grass, *Urochloa humidicola*, that is spreading rapidly across Darwin Sandsheet Heath and is a extremely serious threat to the existence of Darwin Sandsheet Heath vegetation.

Thus the guide includes photographs and brief descriptions of 139 plants of which all but one are native to Darwin Sandsheet Heath. The notes accompanying the species descriptions include the percentage of plots at

which the species was recorded out of a total of 36 plots. The guide includes all plant species that have been requlary encountered in sampling of Darwin Sandsheet Heath undertaken by the Northern Territory Herbarium or plants that are considered to have an affinity with the community.

Please provide feedback for future versions

Our knowledge of the plants of Darwin Sandsheet Heath will grow in the future and there will always be room for improvement in a field guide such as this. One of the reasons this guide has been provided electronically is to facilitate updates without the expense of printing. Feedback from users will be appreciated so that future versions can be tailored to those who use this guide. So if you have a favourite set of characteristics, a hint that informs you of the identify of a plant, or a suggestion for improvement please let the authors know. The forthcoming wet season wil provide an opportunity to expand the selection of images from the field. Please revisit the website where you have downloaded this guide to check for updates. The version, month and year are included on the cover. Feedback may be provided by email to **topendnativeplantsociety@hotmail.com**

Glossary

Axil – the angle between the stem and the leaf (think of it as the armpit!).
Bifid – divided at the tip in two (usually equal) parts usually of a flower style.
Bract – a modified specialised leaf below the flower (or flower stalks) of an inflorescence.
Capsule – dry splitting fruit with two or more segments that open by valves, slits or pores.
Floret – a single flower, usually refers to grasses and daisies.
Gland – an area producing nectar or other secretions, usually found either within the surface as for oil dots in gum leaves (*Eucalyptus*) or as a sticky-tipped hairs as for sundews (*Drosera*).
Glandular – covered with glands or a zone of secretion producing tissues.
Glume – lower (outer) bracts on a grass or sedge inflorescence.
Inflorescence – the part of the plant that bears the flowers and including the bracts.

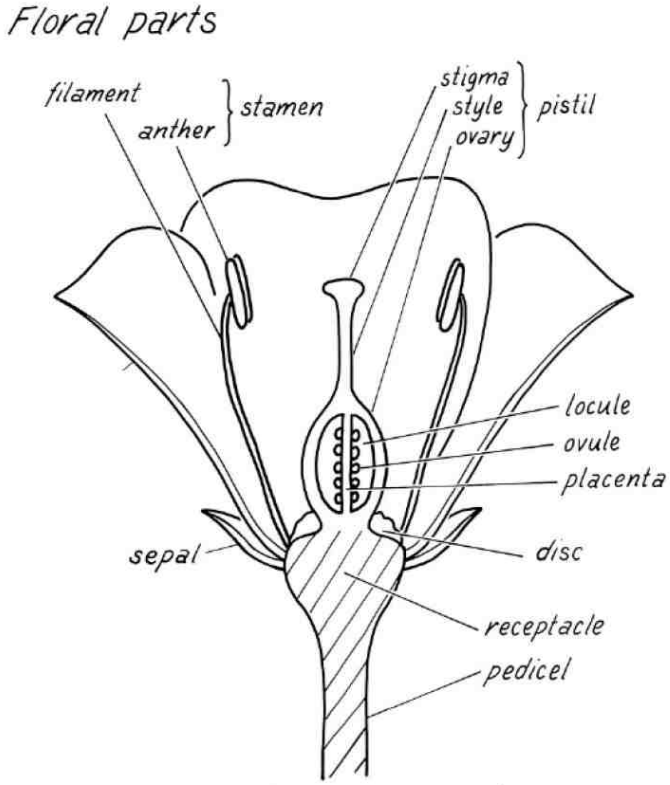
Sessile – having no stalk, attached directly to.

Stigma – the receptive female part of a flower where pollen is received; may be on top of the style or sessile.

Style – stalk of the female part of a flower; if present the style extends from the ovary beneath to the stigma at the tip.

Terminal – at the tip of; stem or inflorescence ending with.

Valve – one of the parts (segments) produced by the splitting of a capsule when ripe.



Source: Cowie *et al.* (2000). Floodplain flora.

If you are looking for the meaning of a botanical term there are several useful glossaries available online. These include:

FloraBase - the Western Australia Flora
https://florabase.dpaw.wa.gov.au/help/glossary

New South Wales Flora Online
http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&glossary=yes&alpha=A

Flora of Australia
http://www.environment.gov.au/biodiversity/abrs/online-resources/glossaries/vascular/index.html

Flora NT
http://eflora.nt.gov.au/glossary

References

Cowie, I. D., P. S. Short and M. Osterkamp Madsen (2000). Floodplain flora: a flora of the coastal floodplains of the Northern Territory, Australia, ABRS, Canberra / PWCNT, Darwin.

Harrison, L., L. McGuire, S. Ward, A. Fisher, C. Pavey, M. Fegan and B. Lynch (2009). An inventory of sites of international and national significance for biodiversity values in the Northern Territory. Darwin, NT, Department of Natural Resources, Environment, the Arts and Sport.

Liddle D. T., P. Harkness, J. Westaway, D.L. Lewis and I.D. Cowie (2013). Vegetation communities and plant biodiversity values of the seasonally saturated lands of the Howard Sand Plains Site of Conservation Significance in the Northern Territory of Australia. Report to the Australian Government Caring for our Country initiative. Palmerston, Northern Territory Government Department of Land Resource Management.

Buchnera gracilis

DESCRIPTION: Erect annual herb to 60 cm with the stem topped by an inflorescence. **Flowers near Darwin generally blue, through mauve to white. Axis of the inflorescense and sterile parts projecting from the flower without hairs.** Flowers Nov. - Aug. Fruit Nov. - Aug. (Orobanchaceae)

B Stuckey

NOTES: 66% of plots.

Burmannia juncea

Burmannia

DESCRIPTION: Erect annual herb to 25 cm. **Flowers purple with wings and a yellow tip. Flowering most months. Fruiting mostly recorded Mar - June.** (Burmanniaceae)

ID Cowie

NOTES: 3% of plots.

Byblis aquatica

DESCRIPTION: Straggling carnivorous herb to 50 cm. **Leaves: spreading, long and narrow; with long sticky hairs with somewhat globular (fresh) or disc-shaped (dried) tips. Flower petals dark purple. Flowering and fruiting Dec - Jun**, seeds with conspicuous longitudinal channels. (Byblidaceae)

ID Cowie

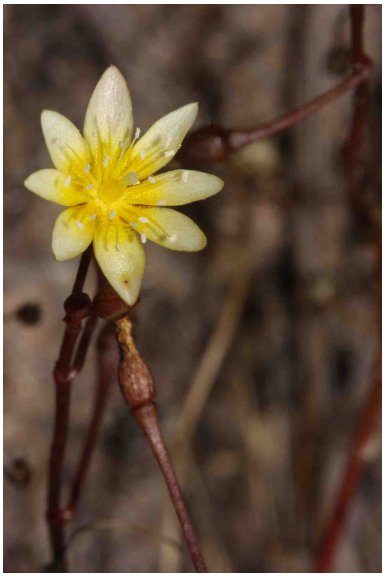
NOTES: Infertile plants easily confused with *Drosera indica* which has hairs with club-shaped ends. *Byblis linifolia* has mauve petals (at least above) that are 7-10 mm long and seeds with a somewhat honeycomb appearance. 28% of plots.

Calandrinia gracilis

Calandrinia

DESCRIPTION: Herb erect or trailing to 50 cm. **Leaves fleshy, linear to 80 mm long and to 2 mm wide**. Gap between leaves less near the base with leaves appearing to form a rosette. Fleshy stems often appear reddish as plants die off in the dry season. Flowers pink to creamy-white. Flowering and fruiting mostly Mar - July. (Portulaceae)

NOTES: 22% of plots.



NT Herbarium

Calochilus caesius

Blue Beard Orchid

DESCRIPTION: Erect herb to around 30 cm or more. Stems annual, dying back to an underground tuber during the dry season. Plants have been observed with either no leaves or a single leaf when flowering. Flowers with purple hairs observed in the Howard River Catchment. Flowering and fruiting Dec. - Feb. (Orchidaceae)

BM Stuckey

BM Stuckey

NOTES: Not recorded in plots.

Cartonema parviflorum

Cartonema

DESCRIPTION: Perennial herb to 50 cm or more. Stems annual, dying back to an underground tuber during the dry season. **Stems and other parts with glandular hairs.** Flowers yellow with **short stalks, all <3 mm long; outer parts of the flower (calyx) .** Flowering and fruiting mostly Jan - Jul. (Commelinaceae)

NOTES: 22% of plots.

ID Cowie

Cartonema sp. pedicellate (M. Lazarides 7850)

Cartonema

DESCRIPTION: Perennial herb to 40 cm. Stems annual, dying back to an underground tuber during the dry season. **Stems and other parts with glandular hairs.** Flowers white to yellow. **Flower stalks long, greater than around 4 mm.** Flowering and fruiting mostly Feb - May. (Commelinaceae)

NOTES: 8% of plots.

ID Cowie

Cartonema trigonospermum

Cartonema

DESCRIPTION: Perennial herb to 50 cm or more. Stems annual, dying back to an underground tuber during the dry season. Flowers yellow to creamy yellow. **Flower stalks very short. Hairs on the flower stalk long, tangled and held close and flat to the surface, up to 1-3 mm long**. Flowering and fruiting mostly Feb - May. (Commelinaceae)

NOTES: 86% of plots.

ID Cowie

Cassytha capillaris

Cassytha, Hairless Dodder-laurel, Snotty Gobble

DESCRIPTION: Vine, stems 0.2-1 mm diameter; hairless or rarely sparsely hairy with rusty hairs; green to reddish brown. Leaves rounded about 1-1.6 mm long. Flowers white. Fruit rounded about 3.7-5.5 mm long, 2.5-4.5 mm diameter; reddish brown to yellow, drying darker; hairless or with short stiff rusty or white hairs; sometimes ribbed or with stripes. Flowering and fruiting most months. (Lauraceae)

ID Cowie

NOTES: 11% of plots. A parasite that may attach to host at multiple points.

Cassytha filiformis

Cassytha, Dodder-laurel, Hairy Dodder-laurel

DESCRIPTION: Vine, stems 0.4-1.7 mm diameter; hairless or hairy with rusty or white hairs; brown to orange. Leaves rounded about 1-2.3 mm long. Flowers white. Fruit rounded about 4.5-6.7 mm long, 4.5-7.9 mm diameter; green, orange to red, sometimes white, drying black; hairless. Flowering and fruiting all months. (Lauraceae)

ID Cowie

NOTES: 17% of plots. A parasite that may attach to its host at multiple points.

Corynotheca lateriflora

Corynotheca

DESCRIPTION: Perennial leafless herb to 50 cm tall, occasionally more. Stems tangled, wiry, with leaves reduced to minute scales. Flowers with 6 petals, whitish to pale pink or pale mauve. Flowering and fruiting mostly Jan - June.

NOTES: This genus endemic to Australia. 8% of plots.

B Stuckey

Desmodium trichostachyum

Desmodium

DESCRIPTION: A prostrate annual herb that can form dense mats. Leaves with 3 leaflets. Small pea flowers purple. Flowering and fruiting Feb. - June. (Fabaceae)

NOTES: A number of similar species are common in the Top End, however, the only purple pea flower usually seen on the sandsheet. Endemic to and widespread in northern Australia. 14% of plots.

BMS

Drosera banksii

Drosera, Sundew

DESCRIPTION: Herb with **leaves borne on a weak stem 4-15 cm long. Leaf stalks linear 4-12 mm long, attached off-center to blade. Leaf blades somewhat circular, 1-3 mm diameter. Flowers white**; Apr. - July. Fruit around June - July. (Droseraceae)

NOTES: Recorded from near Humpty Doo. Usually recorded from seasonal seepage lines and the margins of Melaleuca swamps. 0% of plots.

B Stuckey

Drosera brevicornis

Drosera, Sundew

DESCRIPTION: Herb with **inflorescences generally more than 30 cm long. Leaves arranged in a basal rosette; with leaves held horizontal or almost so with the soil surface, with only the inner ones semi-erect; with obvious leaf stalks; and blades 3-5 mm diameter.** Flowers pink or white; Nov. - Apr. (Droseraceae)

NOTES: Appears to be confined to the Top End. 8% of plots.

Please, do you have a photograph we could use in the next version?

Drosera burmanni

Drosera, Tropical Sundew, Burmans Sundew, Sundew

DESCRIPTION: Herb with inflorescense 3-37 cm long, generally <20 cm on sandsheet. **Leaves arranged in a basal rosette; with little or no stalk; and blades fan shaped, being broader away from the stem.** Flowers white or pink. Flowering and fruiting throughout the year. (Droseraceae)

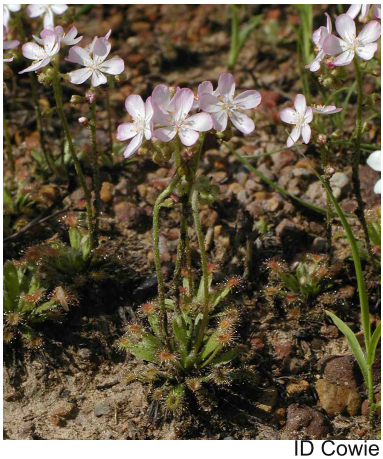
NOTES: 14% of plots.

ID Cowie

Drosera dilatatopetiolaris

Drosera, Sundew

DESCRIPTION: Herb with **inflorescences less than 18 cm long. Leaves arranged in a basal rosette; with all leaves or at least the inner leaves held semi-erect to erect; with obvious leaf stalks; outermost leaves, if still attached, with linear leaf stalks and inner leaves with leaf stalks broader towards the blade.** Flower stalks 3-7 mm long. Flowers pink or white; mostly Oct. - Feb. (Droseraceae)



ID Cowie

NOTES: Often called *Drosera petiolaris* in the past. 47% of plots.

Drosera fulva

Drosera, Sundew

DESCRIPTION: Herb with **inflorescense more than 21 cm long. Leaves arranged in a basal rosette; with obvious leaf stalks; mid to inner leaves semi-erect to erect; leaf stalk linear or somewhat broadened towards the blade 10-28 mm long, 1.2-2.5 mm wide; blades broad 2.3-4 mm long, 2.1-4 mm wide.** Flowers white or pink. Flowering mostly Nov. - Apr. (Droseraceae)

ID Cowie

NOTES: 25% of plots.

Drosera indica


ID Cowie

Drosera, Narrow-leaved Sundew, Flycatcher, Indian Sundew, Sundew

DESCRIPTION: Herb with **leaves borne on a weak stem 5-70 cm long. Leaf blades linear 2-12 cm long, 0.5-1.5 mm wide. Sticky carnivorous hairs.** Flowers can be white, pink or reddish. Flowering and fruiting Apr. - Aug. (Droseraceae)

NOTES: Hot pink flowers common on sandsheet. Mauve-flowered forms are also known. See *Byblis aquatica* as a similar species. 31% of plots.

Empusa habenarina


ID cowie

Liparis

DESCRIPTION: Perennial herb to 50 cm or more. Stems annual, dying back to an underground tuber during the dry season. **Leaves 3-4, in a basal cluster below flowers**, blades 10-25 cm long, 2.5-4 cm wide. **Flowers pale yellow-green to yellow when older, sometimes reddish.** Flowering and fruiting Jan - April. (Orchidaceae)


ID cowie

NOTES: 8% of plots.

Eriocaulon species

A common diverse group of typically annual herbs on sandsheet requiring detailed examination of flower parts to confirm identification. However, some species have characteristic inflorescences or growth habits that can be used to guide identification in the field. Six species were recorded in sandsheet plots and are illustrated below.

For a detailed treatment refer to the key constructed by Dr. G.J. Leach in the "Floodplain Flora: A flora of the coastal floodplains of the Northern Territory, Australia". An extract from the publication is available to download as a pdf from Flora NT, found with a search by name with the genus *Eriocaulon*.

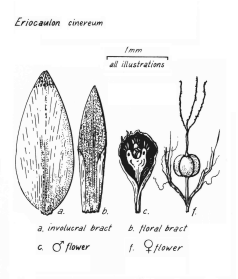
Eriocaulon cinereum

Eriocaulon

DESCRIPTION: Herb 2.5-18 (23) cm tall. Narrow leaves in a basal rosette, 2-9 cm long, 1.6-2 mm wide. Flowering and fruiting Feb. - Nov. (Eriocaulaceae)

B Stuckey

NOTES: 19% of plots.



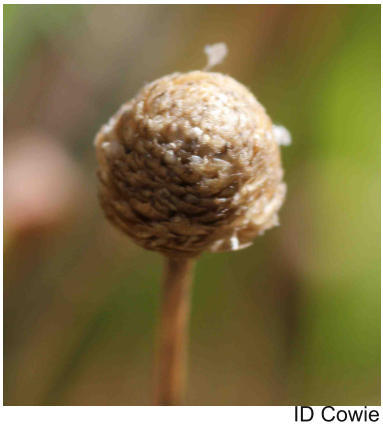
M Andrews

Eriocaulon fistulosum

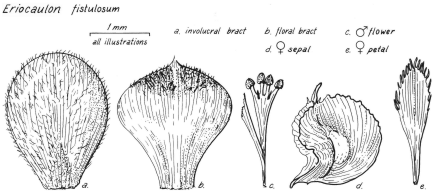
Eriocaulon

DESCRIPTION: Herb 6-33 cm tall. Leaf blades linear 1.5-14 cm long, 1-3.5 mm wide. Flowering and fruiting Jan. - Sept. (Eriocaulaceae)

NOTES: 75% of plots.



ID Cowie



M Andrews

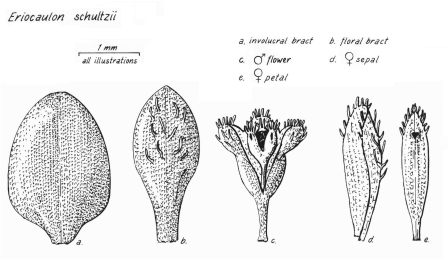
Eriocaulon schultzii

Eriocaulon

DESCRIPTION: Herb 4-24 cm tall. Narrow leaves in a basal rosette, 2.5-13 cm long, 1-3 mm wide. Flowering and fruiting Jan. - Oct. (Eriocaulaceae)

NOTES: 47% of plots.

ID Cowie

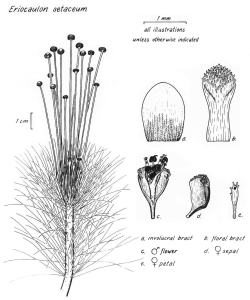


M Andrews

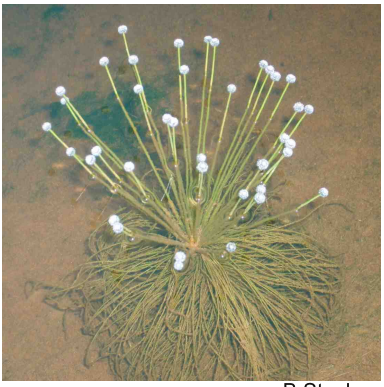
Eriocaulon setaceum

Eriocaulon

DESCRIPTION: Herb 12-70 cm long. A **submerged annual aquatic herb** in water to about 1 m deep. **Very narrow leaves crowded along the stem**, 2.5-16 cm long. Flowering and fruiting all year. (Eriocaulaceae)



M Osterkamp



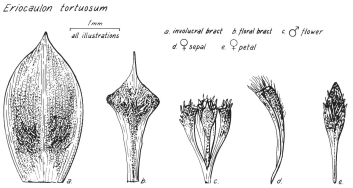
B Stuckey

NOTES: The only fully aquatic *Eriocaulon* near Darwin. 11% of plots.

Eriocaulon tortuosum

Eriocaulon

DESCRIPTION: Herb 6-35 cm tall. Narrow leaves in a basal rosette, 1.2-6 cm long, 1.6-7 mm wide. Flowering and fruiting Feb. - July.
(Eriocaulaceae)



M Andrews

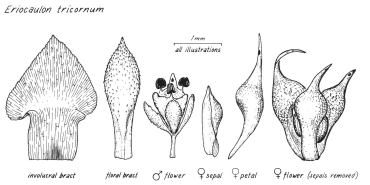
NOTES: 14% of plots.

Eriocaulon tricornum

Eriocaulon

DESCRIPTION: Herb 4-8 cm tall. Lance shaped leaves in a basal rosette, (3) 4.5-6.5 cm long, 4-7 cm wide. Flower heads globular (like a ball). Flowering and fruiting Apr. - May. (Eriocaulaceae)

NOTES: Unusual in that persistent petals of the female flower are modified to form floats, which may help disperse the seed. A rare species recorded in 3% of plots.



M Osterkamp

B. Stuckey

Eriosema chinense

Eriosema

DESCRIPTION: Erect herb to 80 cm tall with annual aerial parts and perennial rootstock. **Stems and leaf undersurfaces densely hairy.** Yellow resinous deposits present on leaf underside. **Yellow flowers apear from the junction of the leaves and stem. Pod dark brown to almost black with long rust coloured hairs.** Flowering Nov. - Apr. Fruiting Dec. - July. (Fabaceae)

NOTES: The only species of this genus to occur in Australia. More at home in Eucalypt woodland but occasionally occurs on the sandplain. 11% of plots.

ID Cowie

Euphorbia muelleri

Euphorbia

DESCRIPTION: Prostrate perennial herb, producing foliage annually from a perennial rootstock. Leaf blades rounded 4-24 mm long, 4-18 mm wide. Milky sap. Often with purplish margin to bracts that protect the growing tip. White flowers June - Nov. Fruit recorded in Apr. (Euphorbiaceae)

MB

NOTES: Common in Eucalypt woodland around Darwin. 19% of plots.

Goodenia elaiosoma

Goodenia

DESCRIPTION: Annual herb with trailing semi-erect stems to 70 cm long. Leaves alternate, scattered along the stem and pointing upwards, narrow, 6-35 mm long, 1-2 mm wide. Flowers solitary. petals 3.3-4 mm long, purple-brown. Style unbranched. Seed oblong, smooth, glossy, with a fleshy appendage. Flowering and fruiting Apr - June. (Goodeniaceae)

ID Cowie

NOTES: Similar to the common *G. armstrongiana* but differs especially by the reduced wing on the upper petals, the purple-brown petals, and the smaller, smooth, oblong seed with a fleshy appendage. 3% of plots.

Goodenia neglecta

Goodenia

DESCRIPTION: Weak stemmed annual herb to 20 cm tall. Glandular and coarse simple hairs present throughout, especially dense and long on the ovary. Leaves narrow, broadest towards the apex, 15-60 mm long, 3-20 mm wide, often with 1 or 2 acute, irregular basal lobes, margin finely or coarsely toothed. Petals more or less yellow, 10-15 mm long. Style 3-branched. Seeds smooth. Flowering and fruiting Jan - May (Goodeniaceae)

ID Cowie

NOTES: Occurs in poorly drained areas including floodplain margins in *Pandanus* and *Melaleuca* woodland. Not recorded in plots.

Goodenia purpurea

Goodenia

DESCRIPTION: Annual herb with prostrate to ascending stems to 40 cm long. Leaves broadest towards the apex or centre, 1-18 cm long, 0.2-1.4 cm wide, sparsely and shallowly toothed or toothless. Flowers on stalks 1-5 cm long, the stalks conspicuously hairy with both long glandular and long non-glandular hairs. Petals mauve, purplish or violet, 8-13 mm long, externally with glandular hairs. Style 3-branched. Seeds with wart-like projections. Flowering and fruiting mainly Apr. - Aug.(Goodeniaceae)

ID Cowie

NOTES: Endemic to the Darwin and Alligator Rivers regions. 28% of plots.

Goodenia symonii

Goodenia

DESCRIPTION: Small prostrate to erect annual herb with stems to 20 cm long. **Short glandular and coarse simple hairs present throughout.** Leaves broadest towards apex. 3-65 mm long, 2-12 mm wide, decreasing in size up the stem, **margins shallowly toothed.** Flower stalks 3-4 mm long. Petals purple-brown, pink-orange or reddish brown, often yellow at base, to 13 mm long. Style 3-branched. Seeds smooth. Flowering and fruiting Apr - June. (Goodeniaceae)

B Stuckey

NOTES: 36% of plots.

Habenaria halata

Habenaria

DESCRIPTION: Erect herb to 40 cm tall. Stems annual, with a perennial tuber. **Leaves 2-3. at base of stem. Flowers in a spike at the top of the stem; white.** Flowering and fruiting usually Dec. - Feb. (Orchidaceae)

NOTES: Not recorded in plots.

ID Cowie

Habenaria rumphii

Habenaria

DESCRIPTION: Slender erect herb to 50 cm tall. Leaves 6-8 in a stiffly spreading rosette; 14 cm long x 2 cm wide. Flowers white; crowded in a spike at the top of the stem. Flowering recorded in Feb.
(Orchidaceae)

NOTES: Endangered with extinction in the NT. Recorded only once in the NT, in the Howard River Catchment from sandplain at the edge of a spring-fed rainforest. Not recorded in plots.

J Russell-Smith & D Lucas

Huxleya linifolia

Huxleya

DESCRIPTION: Slender perennial herb to about 30 cm tall. Stems annual, with a persistent perennial rootstock. **Leaves opposite each other, very narrow, sometimes with 1-2 teeth. Flowers in a cluster at the top of the stem. Petals white, with a long floral tube.** Flowering and fruiting usually Jan - May. (Lamiaceae)

NOTES: Endemic to the NT. 28% of plots.

ID Cowie

Limnophila fragrans

Limnophila

DESCRIPTION: Somewhat succulent, spreading to erect terestrial herb or emergent aquatic. Branches to around 30 cm long. Stem cut in cross-section has simple radiating spokes. **Leaves strongly scented like camphor when crushed**. Flowers held close to the stem; cream, white, pink or pale mauve throughout. Flowering and fruiting mainly Mar. - Sept. (Plantaginaceae)

ID Cowie

NOTES: 22% of plots.

Lindernia lobelioides

Lindernia

DESCRIPTION: Erect herb to 30 cm tall. **Leaves broad, in a cluster at base. Leaves smell strongly of aniseed when crushed**. **Flowers mauve to deep purple with a yellow throat.** Flowering and fruiting Feb - July. (Linderniaceae)

NOTES: 58% of plots.

ID Cowie

Mitrasacme laevis

Mitrasacme

DESCRIPTION: Erect annual herb to 20 cm tall. Stems usually with leaves along their length. **Flowers yellow, though sometimes only underneath.** Capsule about 2 mm long. Flowering and fruiting throughout the year. (Loganiaceae)

NOTES: 6% of plots.

ID Cowie

Mitrasacme nummularia

Mitrasacme

DESCRIPTION: Annual herb, stems erect or trailing, to 23 cm tall. Stems usually with leaves along their length. Leaves oval with largest where inflorescence branches. **Flowers white**. Capsule about 2 mm long. Flowering and fruiting Apr. - Aug. (Loganiaceae)

NOTES: Not recorded in plots.

S Hirst

Mitrasacme subvolubilis

Mitrasacme

B Stuckey

DESCRIPTION: Annual herb, stems erect or trailing, often twining, to 70 cm long. Leaves opposite each other, narrow and widely spaced. **Flowers white with yellow throat; single or sparse clusters**. Flowering and fruiting Jan. - Sept. (Loganiaceae)

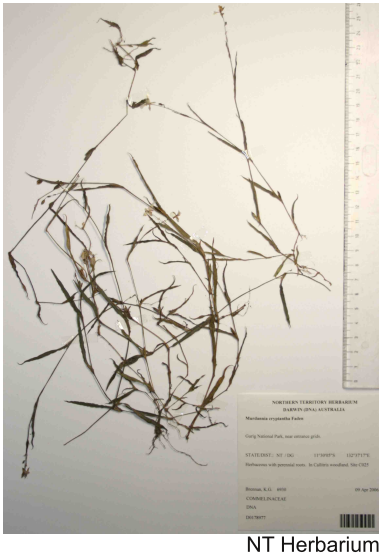
NOTES: There are many species of Mitrasacme in the Top End, with this species prominent on sandsheet. 25% of plots.

Murdannia cryptantha

Murdannia

DESCRIPTION: Perennial herb to 50 cm tall, stems annual, dying back to underground root tubers during the dry season. Flowers pale mauve. Flowering and fruiting mostly Mar. - May. (Commelinaceae)

NOTES: 17% of plots.



NT Herbarium

Murdannia gigantea

Murdannia

DESCRIPTION: Perennial herb to 1 m or more, stems annual, dying back to underground root tubers during the dry season. Leaves to 15 mm wide, along a basal stem. Flowers crowded towards end of stem, white or pale mauve. Flowering and fruiting Nov. - May. (Commelinaceae)

NOTES: Endemic to the NT. 8% of plots.

ID Cowie

Murdannia graminea

Murdannia

DESCRIPTION: Perennial herb to 50 cm or more, dying back to a cluster of fleshy undergound root tubers during the dry season. Leaves to 15 mm wide, along a basal stem. Flowers scattered in an open inflorescence, white or pale mauve. Flowering and fruiting Dec. - May. (Commelinaceae)

ID Cowie

NOTES: 14% of plots.

Murdannia vaginata

Murdannia

DESCRIPTION: Weak-stemmed annual herb, to about 40 cm tall. Flowers 1-4 in simple clusters at the end of the stems, mauve. Flowering and fruiting Jan. - May. (Commelinaceae)

NOTES: Endemic to the NT. 11% of plots.

Please, do you have a photograph we could use in the next version?

Oldenlandia leptocaulis

Oldenlandia

DESCRIPTION: Slender annual herb to 20 cm tall, stems erect to trailing. Leaves opposite each other, very narrow, well spaced. Flowers white to pink, in open inflorescences. Flowering and fruiting Apr. - Aug. (Rubiaceae)

NT Herbarium

NOTES: 14% of plots.

Phyllanthus exilis

Phyllanthus

DESCRIPTION: Erect, many-stemmed, broom-like subshrub to 60 cm tall. Leaves alternate, held erect against the stems, 4-15 mm long. Flowers small, to 3 mm diameter. Two male and one female flower in each leaf junction. Seed capsule about 3 mm diameter, seeds smooth. Flowering and fruiting Dec. - July. (Phyllanthaceae)

NT Herbarium

NOTES: 14% of plots.

Rhamphicarpa australiensis

Rhamphicarpa

DESCRIPTION: Erect herb to 50 cm tall. Leaves opposite each other, deeply lobed, lobes narrow. Flowers solitary in leaf junctions. Petals white, joined at base to form a prominent floral tube. Seed capsule about 12 mm long, beaked. Seeds small, numerous. Flowering and fruiting Mar. - May. (Orobanchaceae)

NOTES: The white flowers open at night. Status Near Threatened in the NT. 3% of plots.

ID Cowie

ID Cowie

Salomonia ciliata

Salomonia

DESCRIPTION: Slender annual herb to 40 cm tall, usually less. Leaves alternate. 4-8 mm long, edge of leaf blade not indented. Flower spike 4-10 cm long, flowers crowded. Petals joined in lower half, mauve-pink to purple, 2-2.5 mm long. Flowering and fruiting most months. (Polygalaceae)

NOTES: 39% of plots.

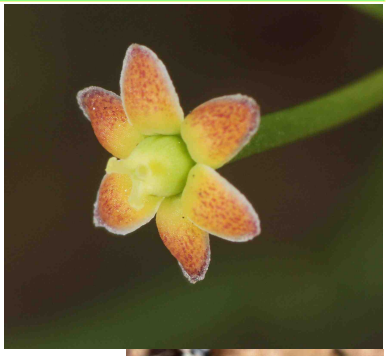
B Stuckey

Sauropus sp. sand plains (I.D. Cowie 12879)

Sauropus

DESCRIPTION: Multi-stemmed perennial herb to 30 cm, with annual above ground shoots and a perennial woody base. Stems erect or trailing. Leaves linear, pointed. The erect inner stems bear male flowers and trailing outer stems carry female flowers which are solitary in leaf junctions. Petals greenish or reddish with pale margins. Fruit rounded. Flowering and fruiting Dec. - Apr. (Phyllanthaceae)

NOTES: Known only from the Darwin area. Not recorded in plots, however, likely under-reported.



ID Cowie

ID Cowie

Selaginella pygmaea

Selaginella

DESCRIPTION: Erect fern-like plant, stems to 35 cm long, tufted and much-branched. Fertile plants recorded all months. (Selaginellaceae)

NOTES: 11% of plots.

S Hirst

Sowerbaea alliacea

Sowerbaea

DESCRIPTION: Perennial herb to 40 cm. **Long narrow leaves point up and out, to form a tuft. Flowers mauve with yellow in the center.** Flowering and fruiting Jan. - Aug. (Asparagaceae)

NOTES: 61% of plots.

ID Cowie

Spermacoce calliantha

Spermacoce

DESCRIPTION: Annual or short-lived perennial herb to 80 cm, though generally <50 cm on sandsheet. **Leaves linear or slightly broadened. Flowers mauve to blue, rarely white arranged in a many flowered head.** Flowering and fruiting Nov. - Aug. (Rubiaceae)

NOTES: Endemic to the NT. 39% of plots.

ID Cowie

Stylidium ceratophorum

Stylidium, Trigger Plant

DESCRIPTION: Erect herb to around 30 cm tall. Leaves in a rosette at the base. **Flowers large (20 mm), orange to yellow, with lobes paired vertically.** Flowering and fruiting Feb. - May. (Stylidiaceae)

NOTES: 3% of plots.

ID Cowie

Stylidium cordifolium

Stylidium

DESCRIPTION: Herb with leaves +/- circular, cordate, stalkless**.** Flowering and fruiting Mar. - Aug. (Stylidiaceae)

NOTES: 11% of plots.

NT Herbarium

Stylidium dunlopianum

Stylidium

DESCRIPTION: annual herb with large leaves in a basal rosette. Flower pink or mauve with a long cylindrical ovary beneath petals. Flowering Mar. - Nov. Fruiting May - Nov. (Stylidiaceae)

NOTES: Not recorded in sandsheet plots.

ID Cowie

Stylidium ericksoniae

Stylidium

DESCRIPTION: Herb with leaves in a basal rosette. A single pink flower on each leafless stalk. Flowering and fruiting Mar. - Sept. (Stylidiaceae)

JA Wege

NOTES: 8% of plots.

JA Wege

Stylidium fissilobum

Stylidium

DESCRIPTION: Herb with tiny bract-like leaves scattered along stem. Flowers pink or white, lobes paired vertically. Flowering and fruiting Mar. - Aug. (Stylidiaceae)

ID Cowie

NOTES: Not recorded in sandsheet plots.

ID Cowie

Stylidium pedunculatum

Stylidium

DESCRIPTION: Herb with basal leaves below a stout erect hairy stem, then a cluster of hairy narrow leaves with a few long flower stalks emerging from them. Flower petals yellow underneath. Flowering and fruiting Mar. - Sept. (Stylidiaceae)

NOTES: Not recorded in sandsheet plots.

Please, do you have a photograph we could use in the next version?

Stylidium tenerrimum

Stylidium

DESCRIPTION: Herb with leaves evenly scattered along stems. Flowers white, red at base. Flowering and fruiting Apr. - Aug. (Stylidiaceae)

NOTES: 3% of plots.

ID Cowie

Stylidium turbinatum

Stylidium

DESCRIPTION: Herb with upper leaves linear, arranged in a very distinct terminal tuft, may appear basal on short stem. Flowers pink. Flowering and fruiting Apr. - Aug. (Stylidiaceae)

ID Cowie

ID Cowie

NOTES: 6% of plots.

Trithuria lanterna

Trithuria

DESCRIPTION: Very small (10 mm high, 30 mm diameter). Distinguishing features are reddish leaves and long basifixed anthers. Flowers leafless at base. Flowering Mar. June. Fruiting May - June. (Hydatellaceae)

NOTES: 3% of plots. Likely under-reported due to cryptic nature.

Please, do you have a photograph we could use in the next version?

Typhonium taylori

Typhonium

DESCRIPTION: Herb to 5 cm tall. short-lived flower appears with the first leaves for the season. Flowering likely Dec., recorded in Jan. (Araceae)

NOTES: Listed as endangered with extinction. Only known from the near Darwin area with all records in the Howard River catchment. Not recorded in sandsheet plots.

NT Herbarium

Utricularia caerulea

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 15 cm tall. Single flower white or blue - purple; lower lip entire or slightly lobed. Flowering and fruiting recorded in most months. (Lentibulariaceae)

NOTES: 3% of plots.

B Stuckey

Utricularia capilliflora

Utricularia, Bladderwort

DESCRIPTION: Erect herb to 10 cm. Single yellow brown flower with 2 vertical threadlike upper lobes, lower lip 5-lobed. Flowering or fruiting Feb. - June. (Lentibulariaceae)

NOTES: 31% of plots.

B Stuckey

Utricularia chrysantha

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 40 cm tall. Flowers pale to bright yellow, reddish on underside; upper lip not lobed, lower lip 4-lobed. Flowering recorded in most months. Fruiting recorded Jan - June, and Sept. (Lentibulariaceae)

NOTES: Widespread near Darwin, appears tolerant to a variety of moisture regimes. 44% of plots.

B Stuckey

Utricularia circumvoluta

Utricularia, Bladderwort

DESCRIPTION: Twining herb. Flowers about 5 mm long; pale yellow. Flowering and fruiting Feb. - Jun. (Lentibulariaceae)

NOTES: Not recorded in sandsheet plots.

S Hirst

Utricularia dunstaniae

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 12 cm tall. Single yellow-reddish flower with 2 thread-like lobes arising sideways from the lower lip base; lower lip a well developed triangular lobe. Flowering and fruiting Jan. - June. (Lentibulariaceae)

NOTES: Listed in the Northern Territory as vulnerable to extinction. 6% of plots.

DT Liddle

Utricularia hamiltonii

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 10 cm tall. Single flower usually mauve, 6–12 mm long, tip of upper lip divided into two triangular lobes (rabbit ears), lower lip 4-angled. Flowering and fruiting Feb. - Jun. (Lentibulariaceae)

NOTES: 31% of plots.

ID Cowie

Utricularia holtzei

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 10 cm tall. Single flower white to cream; 4–8 mm wide; lower lip deeply divided into 5-lobes. Flowering and fruiting Feb. - May. (Lentibulariaceae)

NOTES: 28% of plots.

S Hirst

Utricularia involvens

Utricularia, Bladderwort

DESCRIPTION: Twining herb to 20 cm. Flowers bright yellow, 10–15 mm long. Flowering and fruiting Jan. - Jun. (Lentibulariaceae)

NOTES: 3% of plots.

B Stuckey

Utricularia kamienski

Utricularia, Bladderwort

DESCRIPTION: Erect herb to 15 cm tall. Single flower white to pale mauve; < 6 mm long; lower lip with 3 long oblong lobes. Flowering and fruiting Feb. - May. (Lentibulariaceae)

NOTES: 31% of plots.

DJD1111

Utricularia kimberleyensis

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 15 cm tall. Single flower mauve, >6mm long, lower lip not lobed. Flowering and fruiting Feb. - May. (Lentibulariaceae)

NOTES: 31% of plots.

ID Cowie

Utricularia lasiocaulis

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 15 cm tall. Corolla 6 mm long or more, lower lip not lobed. Flowers mauve to purple. Flowering and fruiting Feb. to Aug.
(Lentibulariaceae)

ID Cowie

ID Cowie

NOTES: 42% of plots.

Utricularia leptoplectra

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 40 cm tall. Flowers purple above contrasts with orange on underside; 10-25 mm long; lower lip deeply divided into 2 lobes. Flowering and fruiting most months.
(Lentibulariaceae)

NOTES: Displays a wide ecological tolerance, growing on a variety of soil textures and depth of water. 44% of plots.

B Stuckey

Utricularia leptorhyncha

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 15 cm tall. Flowers mauve-purple >6mm long, lower lip of 3 short rounded lobes. Flowering Jan. - May. Fruiting Mar. - May. (Lentibulariaceae)

ID Cowie

B Stuckey

NOTES: 3% of plots.

Utricularia limosa

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 15 cm tall. Single flower mauve to white 3–6 mm long, spur 3–10 mm long. Flowering and fruiting Feb. - Aug. (Lentibulariaceae)

NOTES: Not recorded in sandsheet plots.

ID Cowie

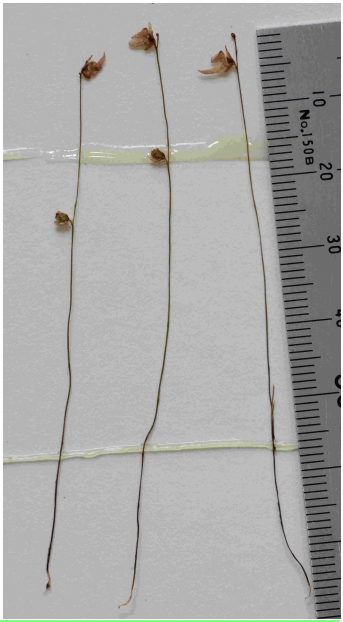
ID Cowie

Utricularia minutissima

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 6 cm tall. Flowers mauve-purple 4 mm long, lower lip shallowly 3-lobed. Flowering or fruiting Dec. - July. (Lentibulariaceae)

NOTES: 6% of plots.



ID Cowie

Utricularia nivea

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 6 cm tall. Single flower white; minute (4 mm). Flowering Feb. - May. Fruiting Mar. - May. (Lentibulariaceae)

NOTES: 33% of plots.

B Stuckey

Utricularia odorata

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 55 cm tall. Flowers bright yellow 10–15 mm long, upper lip wider than the calyx, lower lip not lobed. Stems usually have a many flowered inflorescence. Flowering and fruiting Feb. - Nov. (Lentibulariaceae)

NOTES: A strong affinity to sandsheet heath country in the near Darwin area. 33% of plots.

NT Herbarium

Utricularia quinquedentata

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 3 cm tall. Single flower white, 2 mm wide, lower lip 5-lobed. Flowering and fruiting Mar. - June. (Lentibulariaceae)

NOTES: 11% of plots.

DT Liddle

Utricularia simmonsii

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb 3-8 mm tall. Flowers dark red 1.5 mm long or less. Flowering and fruiting May - July. (Lentibulariaceae)

NOTES: Not recorded in sandsheet plots.

ID Cowie

B Stuckey

Utricularia subulata

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 5cm tall. Single flower pale yellow. Flowering and fruiting Jan. - May, typically flowers in the early wet season on sandsheet near Darwin. (Lentibulariaceae)

NOTES: Not recorded in sandsheet plots.

ID Cowie

Utricularia uliginosa

Utricularia, Bladderwort

DESCRIPTION: Erect annual herb to 15 cm tall. Flowers white or mauve, lower lip rounded, not lobed. Flowering and fruiting most months. (Lentibulariaceae)

NOTES: Not recorded in sandsheet plots.

NT Herbarium

Uvedalia linearis

Mimulus

DESCRIPTION: Annual herb to 40 cm tal, stems erect to sprawling. **Leaves opposite, scattered along stems. Flowers mauve with a yellow throat or yellow throughout**. Flowering and fruiting Mar - Sept. (Phrymaceae)

NOTES: There are two varieites, var. *lutea* with yellow flowers and var. *linearis* with mauve flowers. Previously known as *Mimulus uvedaliae*. 28% of plots.

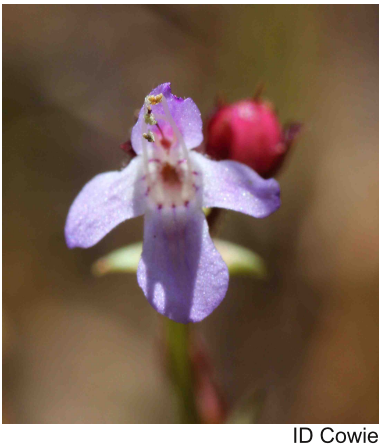
B Stuckey

Vandellia aplecta

Lindernia

DESCRIPTION: Erect annual herb to 30 cm tall. Leaves broad, in a cluster at the base. Flowers purple, clustered at the top of the stem. Flowering and fruiting Mar. - July. (Linderniaceae)

NOTES: Previously known as *Lindernia aplectra*. 3% of plots.



ID Cowie

Vandellia scapigera

Lindernia

DESCRIPTION: Erect annual herb to 40 cm tall. Leaves broad, toothed, scattered along stem. Flowers white to mauve, sometimes with 2 purple patches. Flowering and fruiting most months. (Linderniaceae)

NOTES: Previously known as *Lindernia scapigera*. 14% of plots.

S Hirst

Xyris cheumatophila

Xyris

DESCRIPTION: Perennial herb. Leaves fine often somewhat wrinkled at base. Flowers yellow. Flowering and fruiting throughout the year. (Xyridaceae)

NOTES: 31% of plots.

S Hirst

Xyris complanata

Xyris, Hatpins, Yellow Iris

DESCRIPTION: Perennial herb. Leaves usually broader, with minute bulges on margin. Flowers yellow. Flowering and fruiting throughout the year. (Xyridaceae)

NOTES: 72% of plots.

BMS

Xyris indica

Xyris

DESCRIPTION: Perennial herb. Leaves long, broad and spongy with a smooth margin. Flowers yellow. Flowering and fruiting Apr. - July. (Xyridaceae)

NOTES: 3% of plots.

B Stuckey

Xyris oligantha

Xyris

DESCRIPTION: Annual herb. Leaves with a finely toothed margin visible with a hand lense. Always has a ribbed stem. Flowers yellow. Flowering and fruiting Apr. - July. (Xyridaceae)

NOTES: 11% of plots.

ID Cowie

ID Cowie

Xyris pauciflora

Xyris

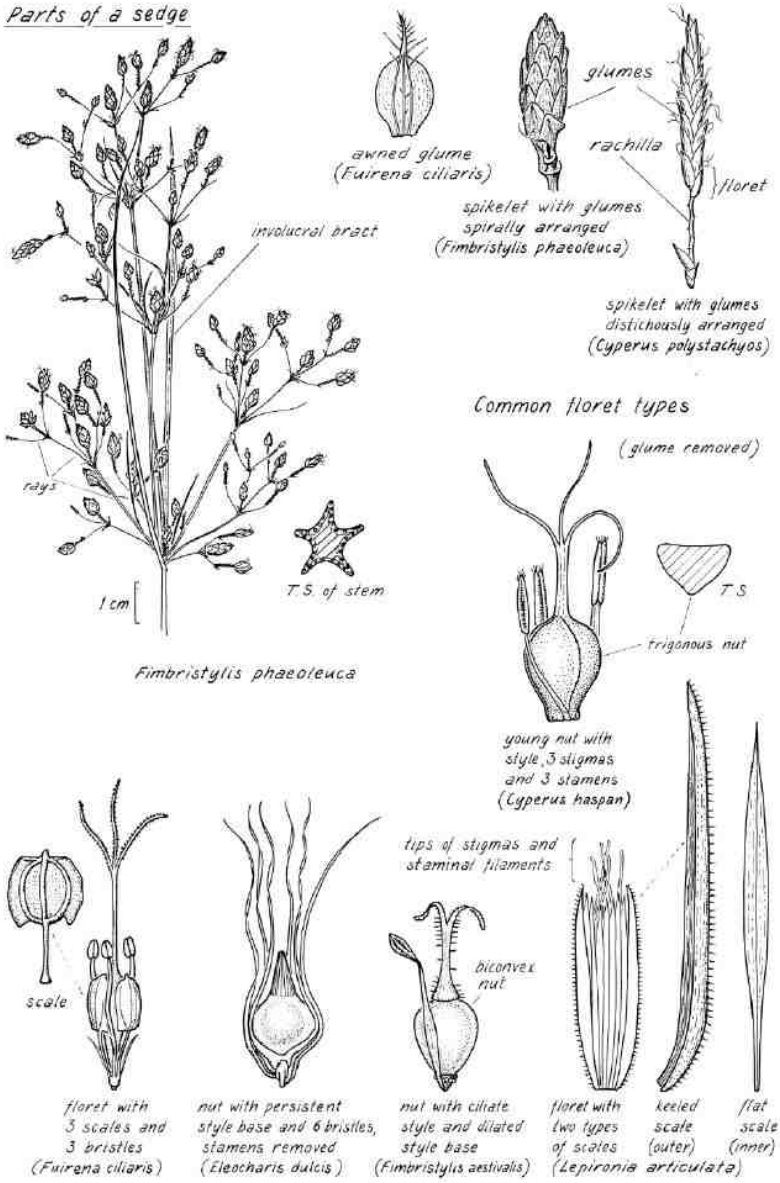
DESCRIPTION: Annual herb, stem not ribbed, lacking leaf ligule. Flowers yellow. Flowering and fruiting Apr. - Oct. (Xyridaceae)

NOTES: 6% of plots.

ID Cowie

ID Cowie

Sedges



Source: Cowie *et al.* (2000). Floodplain flora.

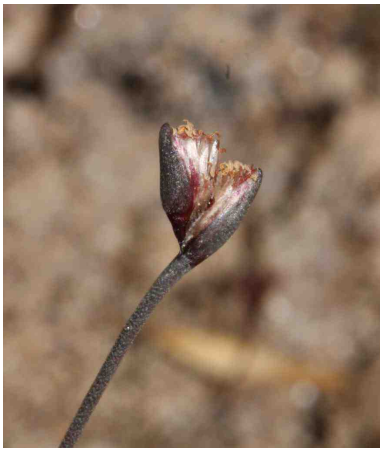
Centrolepis banksii

Centrolepis

DESCRIPTION: Erect tufted annual to 10 cm, not hairy. Flowering and fruiting mostly Apr. - Jul. (Centrolepidaceae)

NOTES: 6% of plots.

ID Cowie



NT Herbarium

Centrolepis exserta

Centrolepis

DESCRIPTION: Erect tufted annual to 10 cm tall, distinctly hairy. Flowering and fruiting Mar. to Aug. (Centrolepidaceae)

ID Cowie

ID Cowie

NOTES: 33% of plots.

Cyperus pulchellus

Cyperus, White Button Sedge, Nutgrass

DESCRIPTION: Erect annual sedge to 25 cm tall. Inflorescence white. At least 2 very long bracts spreading out below the head. Flowering and fruiting mostly Jan. - June. (Cyperaceae)

ID Cowie

NOTES: 22% of plots.

Dapsilanthus spathaceus

Dapsilanthus

DESCRIPTION: Tussock-forming, perennial, grass-like plant to 0.7 m tall. Flowering and fruiting most months. (Restionaceae)

NOTES: 78% of plots.

B Stuckey

NT Herbarium

Fimbristylis acuminata

Fimbristylis, Fringe-rush

DESCRIPTION: Tussock-forming annual sedge, to 50 cm tall. Heads solitary, erect. Nut biconvex, with transverse ridges. Flowering and fruiting most months. (Cyperaceae)

NOTES: 36% of plots.

ID Cowie

Fimbristylis dunlopii

Fimbristylis, Fringe-rush

DESCRIPTION: Annual sedge to 60 cm tall. Heads solitary, erect or several together in an open inflorescence. Glumes with long-hairy margins. Nuts pear-shaped, with minute projections. Flowering and fruiting Feb. – May. (Cyperaceae)

NOTES: 14% of plots.

B Stuckey

Fimbristylis furva

Fimbristylis, Fringe-rush

DESCRIPTION: Tussock-forming annual or perennial sedge, to 50 cm tall. Heads in an open inflorescence. Glume apex acute. Nut purplish-black. Flowering and fruiting most months. (Cyperaceae)

NOTES: 31% of plots.

ID Cowie

Fimbristylis lanceolata

Fimbristylis, Fringe-rush

DESCRIPTION: Erect annual or perennial sedge, to about 60 cm tall. Most distinctive feature is the orange sheaths. Long dark spikelets. Glumes red gland dotted. Black nut. Twisted style, hairy at base. 3 stigmas. Flowering and fruiting Jan. - July. (Cyperaceae)

NOTES: 28% of plots.

Please, do you have a photograph we could use in the next version?

Fimbristylis macassarensis

Fimbristylis, Fringe-rush

DESCRIPTION: Tussock-forming annual sedge, to 50 cm tall. Heads in an open inflorescence. Glume apex with two obtuse lobes. Nut purplish-black. Flowering and fruiting mostly Feb. – July. (Cyperaceae)

ID Cowie

NOTES: 6% of plots.

ID Cowie

Fimbristylis nutans

Fimbristylis, Fringe-rush

DESCRIPTION: Perennial sedge to 60 cm tall. Heads solitary, nodding. Nut biconvex, with transverse ridges. Flowering and fruiting most months. (Cyperaceae)

NOTES: 3% of plots.

DEA

Fimbristylis pallida

Fimbristylis, Fringe-rush

DESCRIPTION: Tussock-forming annual sedge, to 35 cm tall. Heads solitary, erect. Glumes lacking hairs. Nut biconvex, with transverse ridges. Flowering and fruiting Mar. – Sept. (Cyperaceae)

NOTES: 50% of plots.

S Hirst

ID Cowie

Fimbristylis pauciflora

Fimbristylis, Fringe-rush

DESCRIPTION: Tussock-forming annual sedge, to 20 cm tall. Heads solitary, erect. Flowering and fruiting most months. (Cyperaceae)

NOTES: 17% of plots.

ID Cowie

Fimbristylis punctata

Fimbristylis, Fringe-rush

DESCRIPTION: Tussock-forming annual sedge, to 50 cm tall. Heads solitary, erect. Glumes hairy. Nuts biconvex or three-angled, with transverse ridges. Flowering and fruiting Feb. - July. (Cyperaceae)

NOTES: 31% of plots.

Please, do you have a photograph we could use in the next version?

Fimbristylis simplex

Fimbristylis, Fringe-rush

DESCRIPTION: Tussock-forming perennial sedge, to 20 cm tall, stems fine. Heads solitary, erect. Flowering and fruiting mostly Feb. – Oct. (Cyperaceae)

NOTES: 6% of plots.

NT Herbarium

Please, do you have a photograph we could use in the next version?

Fimbristylis sp. A Kimberley Flora

Fimbristylis, Fringe-rush

DESCRIPTION: Tussock-forming annual sedge, to 20 cm tall. Heads solitary, strongly nodding. Nuts biconvex, with transverse ridges. Flowering and fruiting Mar. –June. (Cyperaceae)

NOTES: Previously known as *Fimbristylis* sp. Howard River. 14% of plots.

Please, do you have a photograph we could use in the next version?

Fuirena ciliaris

Fuirena, Small Club Rush

DESCRIPTION: Annual sedge to 60 cm tall, though generally <30 cm on sandsheet. **Stems blunt angled, 1-2 mm wide. Inflorescences with a cluster of spikelets at the end.** Flowering and fruiting mostly Mar - July. (Cyperaceae)

NOTES: 3% of plots.

BMS

Rhynchospora longisetis

Rhynchospora

DESCRIPTION: Slender annual sedge, to 45 cm tall. Flowers crowded in a compact head, with 5-6 leaf-like bracts below. Bristles 5-6, much longer than the nut, densely hairy at the base. Nut oblong, flattened, style base as wide as the nut apex and 2/3 of the nut length. Flowering and fruiting Jan. – Aug. (Cyperaceae)

ID Cowie

NOTES: 19% of plots.

Schoenus punctatus

Schoenus,

DESCRIPTION: Tussock-forming perennial sedge to 70 cm tall. Base tough, reddish. Leaves very narrow, fine. Inflorescence narrow, elongate, open, drooping. Spikelets 5-6 mm long of 1-2 flowers. Flowering and fruiting most months. (Cyperaceae)

NOTES: 6% of plots.

ID Cowie ID Cowie

Scleria annularis

Scleria

DESCRIPTION: Slender annual sedge, to 50 cm tall, stems sharply 3-angled. Inflorescence narrow, elongate. Nut white (when fresh), egg-shaped, smooth, shining, disc triangular with rounded angles. Flowering and fruiting: Jan. – June. (Cyperaceae)

NOTES: 8% of plots.

NT Herbarium

NT Herbarium

Scleria laxa

Scleria,

DESCRIPTION: Slender annual sedge, to 30 cm tall. Inflorescence narrow, elongate. Nut white, globose, longitudinally ridged, smooth above each disc lobe, apex with minute projections, disc shortly lobed. Flowering and fruiting mostly Feb. – Sept. (Cyperaceae)

NT Herbarium

NOTES: 22% of plots.

NT Herbarium

Scleria novae-hollandiae

Scleria

DESCRIPTION: Slender annual sedge, to 40 cm tall. Inflorescence narrow, elongate. Nut white, more or less oblong, with parallel sides, smooth or slightly latticed, disc flattened, lobes rounded. Flowering and fruiting: mostly Jan. – July.

NT Herbarium

Please, do you have a photograph we could use in the next version?

(Cyperaceae)

NOTES: 22% of plots.

Scleria pygmaea

Scleria

DESCRIPTION: Small annual sedge to about 15 cm, often spreading. Inflorescence crowded. Nut greyish, globular, with 3 longitudinal ridges and minute projections between. Flowering and fruiting Mar. – Aug. (Cyperaceae)

S Hirst

NOTES: 53% of plots.

NT Herbarium

Scleria rugosa

Scleria

DESCRIPTION: Slender annual sedge, to 40 cm tall, often very hairy. Inflorescence narrow. Spikelets frequently held on short, thick, recurved stalks. Nut white, globose, smooth or with short projections, disc shortly lobed. Flowering and fruiting mostly Jan. – Aug. (Cyperaceae)

NOTES: 19% of plots.

NT Herbarium

Scleria sp. Oenpelli

Scleria

DESCRIPTION: Slender annual sedge, to 20 cm tall. Inflorescence narrow. Glumes often red-brown. Nut white, globose, longitudinally ridged, latticed above each disc lobe, apex with minute projections, disc shortly lobed. Flowering and fruiting Feb.-June. (Cyperaceae)

NT Herbarium

NOTES: 14% of plots.

NT Herbarium

Tricostularia undulata

Tricostularia

DESCRIPTION: Robust perennial sedge to 1 m tall, forming dense tussocks. Stem bases thickened, reddish-brown. Inflorescence open, spike-like to much branched. Spikelets in clusters of 2-8, reddish.

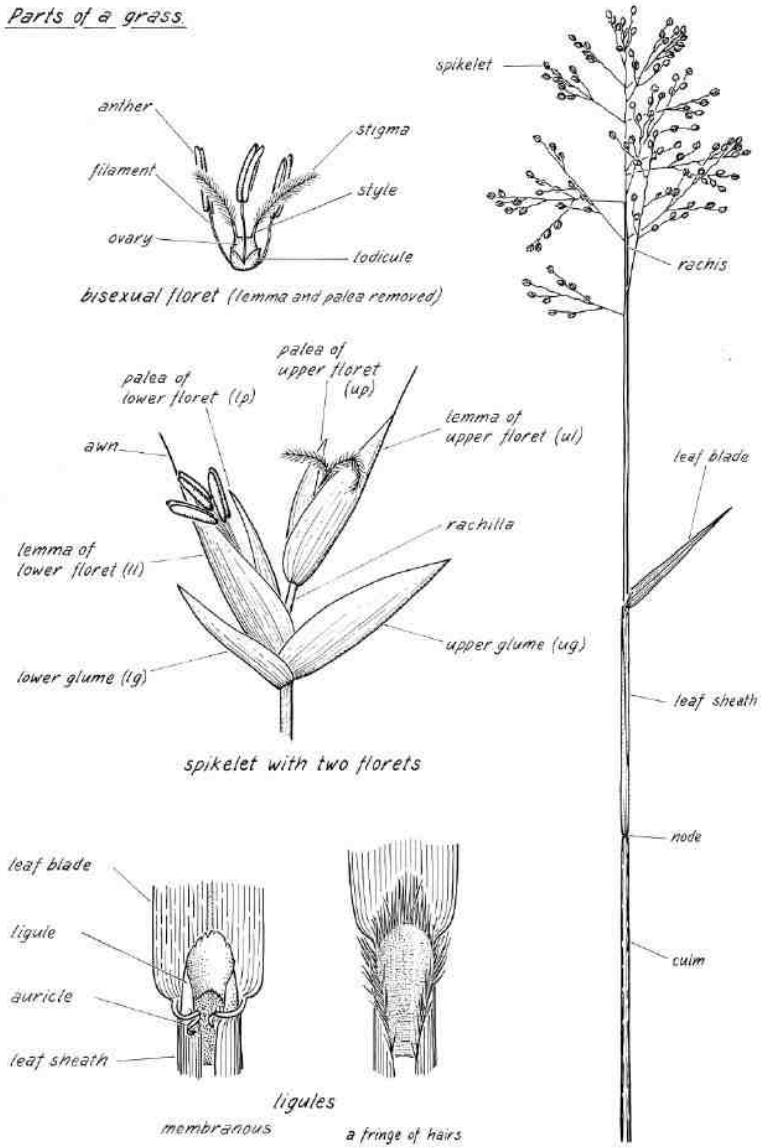
ID Cowie

Flowering and fruiting most months. (Cyperaceae)

NOTES: 39% of plots.

ID Cowie

Grasses



Source: Cowie *et al.* (2000). Floodplain flora.

Alloteropsis semialata

Alloteropsis, Cockatoo Grass

DESCRIPTION: Tussock-forming perennial grass to 1.2 m tall. Inflorescence with three divergent branches. Spikelets with a prominent marginal fringe of short hairs. Flowering and fruiting mostly Nov. – Apr., sometimes later. (Poaceae)

NOTES: 56% of plots.

B Stuckey

Aristida holathera

Aristida,

DESCRIPTION: Wiry, tussock-forming perennial or annual grass to 60 cm tall. Inflorescence open. Florets with three long awns. Flowering and fruiting most months. (Poaceae)

NOTES: 11% of plots.

B Stuckey

Dimeria ornithopoda

Dimeria

DESCRIPTION: Slender annual grass to 40 cm tall, usually less. Inflorescence with several slender branches. Flowering and fruiting: mostly Apr. – Aug., occasionally at other times. (Poaceae)

NOTES: 14% of plots.

ID Cowie

Eriachne burkittii

Eriachne

DESCRIPTION: Perennial grass to about 1 m, occasionally annual. Inflorescence open. Each floret with a single long awn. (Poaceae)

NOTES: 17% of plots.

B Stuckey

Eriachne triseta

Eriachne

DESCRIPTION: Perennial grass to 80 cm tall. Inflorescence open, lax. Florets with 3 awns. Flowering and fruiting mostly Mar. - June, occasionally at other times. (Poaceae)

NOTES: 83% of plots.

B Stuckey

Germainia grandiflora

Germania,

DESCRIPTION: Tussock-forming perennial grass to 1 m tall. Flower head about 30 mm long. Spikelets in dissimilar pairs. Awns well developed. Flowering and fruiting mostly Feb. – July. (Poaceae)

NOTES: 42% of plots.

ID Cowie

Ischaemum decumbens

Ischaemum

DESCRIPTION: Weak-stemmed annual grass to around 30 cm tall. Stems and leaves becoming reddish with age. Flower head about 30 mm long. Spikelets paired. Awns well developed. Flowering and fruiting mostly Mar. – July. (Poaceae)

NOTES: 11% of plots.

ID Cowie

Sacciolepis indica

Sacciolepis

DESCRIPTION: Slender annual grass to around 60 cm tall. Flowers 2.5-3 mm long, crowded in a dense terminal spike. Florets lacking awns. Flowering and fruiting most months. (Poaceae)

NOTES: 47% of plots.

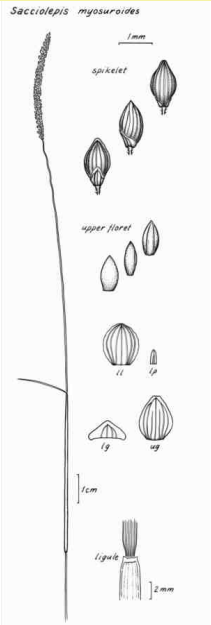
BMS

Sacciolepis myosuroides

Sacciolepis

DESCRIPTION: Slender annual grass to around 60 cm tall. Flowers 1-1.2 mm long, crowded in a dense terminal spike. Florets lacking awns. Flowering and fruiting mostly Mar. - July, some times later. (Poaceae)

NOTES: 3% of plots.



M Osterkamp

Sorghum intrans

Sorghum, Spear Grass

DESCRIPTION: Erect annual grass to 2.5 m tall. Flowers mostly 10-15 mm long, in more or less open inflorescence. Spikelets in dissimilar pairs. Basal point 3-6 mm long, sharp. Awn 7-11 cm long. Flowering and fruiting: mostly Feb – Apr. (Poaceae)

NOTES: 69% of plots.

ID Cowie

Thaumastochloa major

Thaumastochloa

DESCRIPTION: Weak-stemmed annual grass to around 35 cm tall. Flowers embedded in a thickened spike-like head 15-30 mm long. Florets lacking awns. Flowering and fruiting mostly Feb –July. (Poaceae)

ID Cowie

NOTES: 25% of plots.

Urochloa humidicola

Humidicola, Tully Grass

DESCRIPTION: Stoloniferous perennial grass with trailing stems. Flowering and fruiting Nov – June. (Poaceae)

NOTES: Not recorded in plots. An introduced species that is an extreme threat to the sandsheets as it displaces native species and fundamentally changes the nature of the vegetation community.

Whiteochloa capillipes

Whiteochloa

DESCRIPTION: Annual or perennial grass to 1 m. Inflorescence open. Flower stalks very slender. Florets laterally flattened. Flowering and fruiting: Feb - Sept. (Poaceae)

NOTES: 22% of plots.

ID Cowie

Acacia latescens

A wattle

DESCRIPTION: Erect tree to 9 m though generally <5 m on sandsheet. **Bark brown, fissured**. **Phyllodes (leaves) generally long and narrow**; 80-260 mm long**,** 4-18 mm wide; typically with 2 primary veins; usually with 3 glands (felt as tiny bumps) along curve of phyllode. **Flowers white to cream with globular heads**; Apr - July. Pods 50-210 mm long, 11-20 mm wide; Aug - Jan. (Fabaceae)

NOTES: Endemic to the NT. 8% of plots.

BM Stuckey

BM Stuckey

Banksia dentata

Banksia

DESCRIPTION: Shrub or small tree to 6 m. **Leaves: different colours top and bottom; edges lobed with spines;** 140-270 mm long, 47-70 mm wide. **Flowers yellow forming a hard woody cone**; Mar - Aug. Old cones stay on the tree. (Proteaceae)

NOTES: The only Banksia in the NT. 44% of plots.

BM Stuckey

Eucalyptus alba

Salmon Gum, White Gum

DESCRIPTION: Tree to 12+ m. **Bark smooth and white**, sometimes a little flakey bark near the base. Petioles 12-42 mm long. Leaf blades lance shaped, slightly curved, (65)80-150(200) mm long, 14-60 mm wide. Flowers white, in groups of 7 in the leaf axils; July - Sept. Fruit cup 3-5 mm long, 5-7 mm wide with valves protuding above lip of cup; Aug - Oct. (Myrtaceae)

NOTES: Often on the margins of floodplains near sandsheet. 6% of plots.

D Lewis

C Dunlop

Grevillea pteridifolia

Fern-leaved Grevillea

DESCRIPTION: Tree 6 m. **Bark dark grey, finely fissured.** Petiole 45-90 mm long. **Leaves with 7 - 11 pairs of lobes, deeply dissected to mid-rib, sometimes lower lobes further divided; lobes linear to 180 mm long, 1.5 - 4 mm wide. Flowers orange**; May - Aug. Fruit Jun - Oct. (Proteaceae)

NOTES: Common on sandsheet. When flowering an important food resource for birds and bats. 75% of plots.

ID Cowie

Hakea arborescens

Hakea

DESCRIPTION: Tree to 8 m though often a bush <2 m on sandsheet. **Bark rough, grey and fissured. Narrow leaves without a stalk;** blades 50-185 mm long, 3-11 mm wide with faint parallel veins. Flowers small in clusters; Jan - July. **Fruit a hard woody follicle** 28-58 mm long, 14-26 mm wide; **persists throughout the year**. (Proteaceae)

NOTES: The only *Hakea* in the Darwin region. 8% of plots.

B Stuckey

Lophostemon lactifluus

Red Paperbark

DESCRIPTION: Tree 5-15 m. **Bark brown, papery, flaky.** Petioles 20-45 mm long. **Leaves blades appear similar on both sides**; blades 68-174 mm long x 13-94 mm wide. Sprouts from roots can form dense clonal patches (thickets). Flowers cream with small rounded petals; a strong scent of honey; mainly July-Nov. Fruit 4-5 mm wide; mainly July-Nov.

NOTES: Endemic to the Top End of the NT. 19% of plots.

G Wightman

Melaleuca nervosa

Yellow-barked Paperbark

DESCRIPTION: Tree to 10 m though generally <6 m on sandsheet. **Bark often grey or brownish, can be papery but not flakey.** Petioles 4-11 mm long. **Leaf blades stiff and broad for most of their length, 42-95 mm long, 7-31 mm wide.** Flowers green, cream; May - Sept. Fruit 3.5-4 mm long, 3.5-4 mm wide; June - Oct. (Myrtaceae)

NOTES: The common paperbark on sandsheet. 89% of plots.

J Brock

DT Liddle

Melaleuca viridiflora

Green Paperbark

DESCRIPTION: Tree 2 to 16 m though often <4 m on sandsheet. **Bark white and papery.** Petioles 8-15 mm long. **Leaf blades thick, (55) 95-170 mm long, (7) 22-50 mm wide.** Flowers green or greenish white, cream; Feb - May. Fruit 4.5-5 mm wide; all year. (Myrtaceae)

NOTES: While common on floodplains, the less common paperbark on sandsheet. Sometimes on disturbed sites with a modified water regime. 11% of plots.

ID Cowie

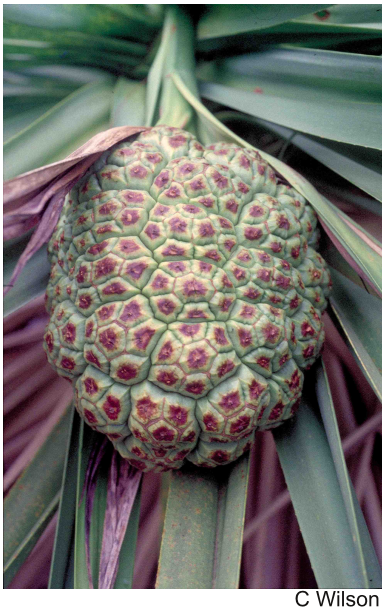
DT Liddle

Pandanus spiralis

Screw Palm

DESCRIPTION: Small tree to 10 m, though generally <6 m on sandsheet. **Long strap like leaves in a tuft at the ends of branches. Leaves have a prominent mid rib and sharp prickles on their margins.** Flowering Oct - March. Fruit a woody cluster around 20 cm in diameter. (Pandanaceae)

NOTES: A distinctive spiral pattern on its trunk formed from leaf scars. 50% of plots.



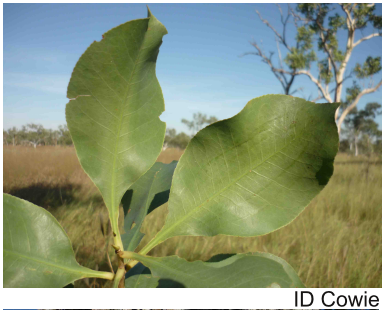
C Wilson

Planchonia careya

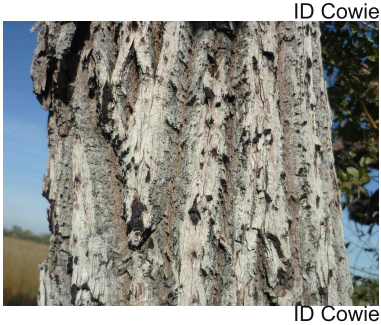
Cocky Apple

DESCRIPTION: Small tree generally <6 m on sandsheet. **Bark rough and corky on old plants. Leaves pale green, oval shaped with a slightly serrated margin. Old leaves turn red in the dry season.** Flowers appear white with prominent stamens that are pink near their base; July-Nov. Fruit egg shaped with tough, fibrous flesh, around 7 cm long. (Lecythidaceae)

NOTES: 14% of plots.



ID Cowie



ID Cowie

Verticordia cunninghamii

ID Cowie

Cunningham's Featherflower

DESCRIPTION: Shrub to 4 m. **Narrow pointed leaves in opposite pairs with alternate pairs at right angles, thus forming 4 rows**. Leaves 10-15 mm long, about 0.5 mm wide. **White flowers** with stamens about 2.5 mm long. Flowering and fruiting June - Oct. (Myrtaceae)

NOTES: 50% of plots. Leaves scented when crushed. *Verticordia verticillata* occurs on sandy soils and has a similar appearance, however, has leaves arranged in whorls and is usually on more elevated sites that are not seasonally flooded.