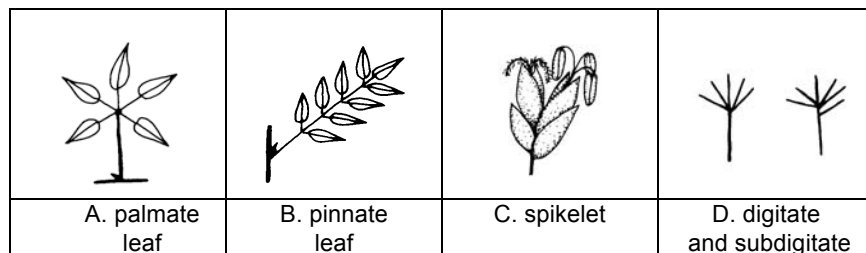


KEY TO GROUP 2

Leaves with numerous parallel veins, chiefly herbs, sometimes epiphytic, **if** veins obscure then plants herbaceous and often epiphytic, **if** woody then floral parts are in multiples of 3. (All are monocots)



- 1 Plants woody, often tall, leaves undivided or palmately (see sketch A – like a hand) or pinnately divided (B) (palms, pandanus, grass trees) go to **Group 2.A**
- 1* Plants herbaceous, usually less than 1 m tall at maturity, except for some grasses, and some orchids, leaves undivided, sometimes long, thick and succulent go to 2
- 2 Mostly herbs, (grasses and sedges excluded), occasional vine, flowers not arranged in membranous spikelets, usually white, red or blue, perianth relatively unmodified i.e., flower parts are readily recognized as sepals and/or petals go to **Group 2.B**
- 2* Grasses and sedges, here flowers are arranged in spikelets (C), usually membranous, perianth highly modified or absent (doesn't look like a normal flower) go to 3
- 3 Leaf sheath closed at the base, stem usually solid, may be triangular go to **Group 2.C**
(Sedges)
- 3* Leaf sheath open, stems solid at the nodes, rounded, a membranous or hairy structure common at junction of leaf blade and sheath (ligule) go to 4
(Grasses)
- 4 Inflorescence digitate or subdigitate i.e., arms arising from the same point or almost (D) go to **Group 2.D**
- 4* Inflorescence not arising from the same point or almost go to 5
- 5 Mature plants usually less than 1 m tall go to **Group 2.E**
- 5* Mature plants usually more than 1.5 m tall go to **Group 2.F**

NOTE: if necessary read through both groups.

GROUP 2.A Plants woody, usually tall, leaves various.

Archontophoenix alexandrae (Alexandra Palm – Arecaceae)

Archontophoenix, from Greek *archon* – chieftain, and *Phoenix* – the date palm, referring to its majestic appearance.

A feather-leaved palm with a solitary trunk, enlarged at the base. Inflorescence to 1 m long; separate male and female flowers, perianth **white to cream**. Fruit are bright red at maturity, 8-14 mm long.

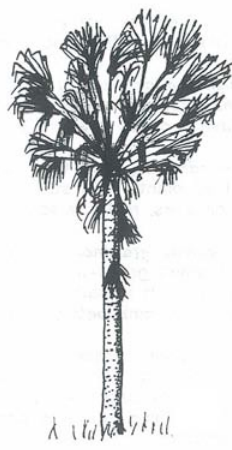
Livistona decora (Fan Palm, Cabbage Tree Palm, formerly *Livistona decipiens* – Arecaceae)

Livistona is named after Patrick Murray, Baron Livingston, whose garden later became the Edinburgh Botanic Gardens.

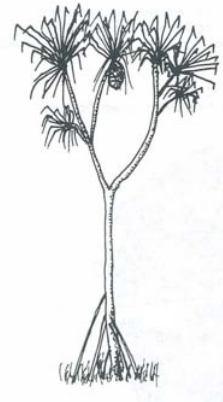
Tall fan-leaved palm with a solitary trunk. The base of the finely divided leaves is blackish. Leaves have been used for many purposes by aborigines and early settlers. Inflorescence to 3.5 m long; flowers **yellow**; fruit shiny black at maturity 12-18 mm long.



Habit of *A. alexandrae*



Habit of *L. decora*



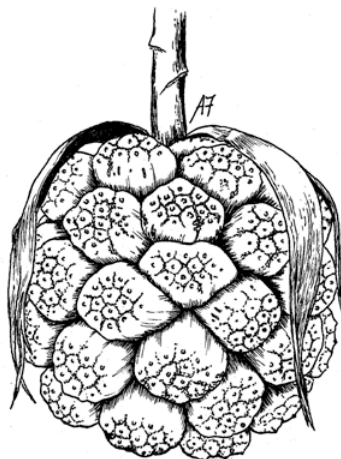
Habit of *Pandanus* sp.

Pandanus tectorius (Pandanus or Screw Pine – Pandanaceae)

Pandanus, from the Malay word for screw pines, *pandan*.

This beachfront species has leaves that are spirally twisted, in older trees, stems may be branched. Prop or stilt roots usually present. The fruiting body resembles a large pineapple; individual nuts separate from the core at maturity.

Pandanus cookii (formerly *Pandanus whitei*), does not usually have stilt roots although there may be protuberances along the stem and the fruiting body is much larger.



Xanthorrhoea johnsonii (Grass Tree – Xanthorrhoeaceae)

Xanthorrhoea, from the Greek words *xantho* – yellow, and *rheo* – to flow, referring to the yellow resin that is often produced from the leaves.

This plant has a thick trunk, topped by numerous long, narrow leaves forming a skirt. An old flower spike is often present. Flowers are **white to cream**; fruit 3 lobed capsules. The chief pollinators are butterflies. Nectar mixed in water makes a sweet drink – ignore the bugs! Resin from the leaves has been used to attach spear heads and for sealing holes.

GROUP 2.B Flowers have readily recognized sepals and/or petals (not modified), usually white, red or blue.

Commelina ensifolia (Wandering Jew, Scurvy Grass – Commelinaceae)

Commelina, named by Linnaeus after Jan and Kaspar Commelin, Dutch botanists. Weak sprawling plants, rooting at the nodes. **Blue** flowers initially enclosed within a green spathe (↑). Fruit a dry dehiscent capsule opening with 2-3 valves. Several other species may be encountered.

Lomandra longifolia (Narrow-leaved Mat Rush – Laxmanniaceae)

Lomandra, from the Greek *loma* – margin or border, and *andros* – male, referring to the nature of the anthers.

Tufted plants with stiff narrow leaves. Inflorescence usually a panicle of clusters, male panicles larger than females, flowers **white to mauve**. Leaf bases, flowers and seeds are edible; fruit a 3-valved capsule. Leaves can be used for weaving. A similar species is *L. hystrix*, but it usually has 4 or more branches per node of the inflorescence rather than 2.



X. johnsonii



C. ensifolia



L. longifolia

Murdannia graminea (Slug Herb, Pink Swamp Lily – Commelinaceae)

Murdannia named for Murdan Aly, an Indian botanist.

This small grass-like plant up to 40 cm high, prefers moist grassland habitats. It usually flowers in February and March. Flowers have 3 **mauve or pink** petals, forming sprays at the end of the stem; fruit a 3-valved capsule to 1 cm long.

Haemodorum coccineum (Scarlet Bloodroot – Haemodoraceae)

Haemodorum, from the Greek words *haima* – blood, and *doron* – gift, referring to the colour of the flowers and the sap in many parts.

Herb to 1 m tall, the mainly basal strap-like leaves die back in winter. Panicles of dark **red** flowers are carried well above the leaves. Fruit a red, 3-lobed capsule. The red sap in the rhizome may be used as a dyestuff.

Dianella caerulea (Blue Flax Lily – Hemerocallidaceae)

Dianella a diminutive of Diana, goddess of the hunt, referring to the woodland habitat.

The long linear leaves alternate along the stem but successive leaves are arranged on opposite sides of the stem, thus 1 to one side and then the next at 180° to it but further up the stem (distichous). Sheaths closed at the base on young leaves. The **blue** flowers with yellow stamens are borne in panicles, which may be spreading or narrow. Other species may occur.

Berries blue, edible. Leaves used for making nets and baskets by indigenous people.



M. graminea



H. coccineum



D. caerulea

Agave vivipara* var. *vivipara (Sisal – Agavaceae)

Agave, from the Greek *agavos* – admirable, referring to the appearance of the flower.

The thick, succulent, greyish-green leaves arranged in a rosette, have sharp hooks along the margins and the tip ends in a spiny point. The flowering spike may be up to 3 m tall. This introduced plant is rapidly becoming a pest.

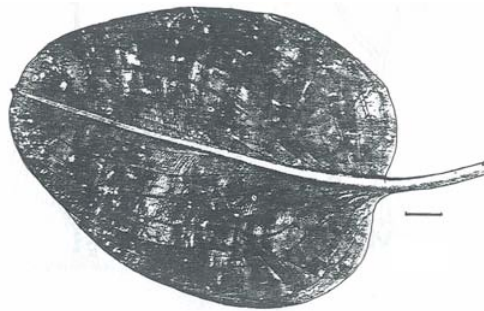
Proiphys infundibularis (Townsville Lily – Amaryllidaceae)

Proiphys, from the Greek meaning to bring forth, referring to the premature germination of the seed.

This lily has a very broad leaf and **white** trumpet-shaped flowers, to 5 cm long and 4.5 cm wide. Fruit a capsule greenish to yellow, to 3.5 cm long.



A. vivipara var. *vivipara*



P. infundibularis

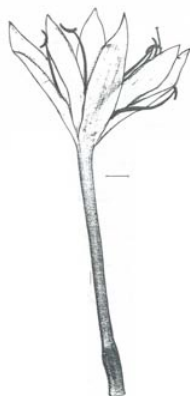
Crinum pedunculatum (Swamp Lily, River Lily, Spider Lily – Amaryllidaceae)

Crinum, from the Greek *crinon* – a lily.

This lily with strap-like leaves, produces large, **white** tubular flowers in summer. The filaments (stalk of the stamens) are white at the base but becoming dark pink near the top. Fruit are green capsules. The mucilaginous sap can be used to soothe the effect of stings. *Crinum angustifolium* (Field Lily) can be distinguished by leaves being 3-6 mm wide rather than up to 10 cm wide, there are also some floral differences.

Eustrephus latifolius (Wombat Berry – Laxmanniaceae)

Eustrephus, from the Greek *eu* – well, and *strepho* – to twine, referring to the climbing habit. Leaves linear to lanceolate, both surfaces are dull, and there are several equally distinct longitudinal veins. Two to ten **pink** flowers in axillary umbels (flower stalks arise from a common point), petals fringed on margin; fruit globular orange, dehiscent. This species may be confused with *Geitonoplesium cymosum* (Scrambling Lily – Hemerocallidaceae). However here the leaves have a shiny upper surface and the midvein is more prominent than the other veins; the flowers are **mauve to white**, fruit black, indehiscent.



C. pedunculatum



E. latifolius



Geitonoplesium cymosum

Orchids recorded for the island are indicated in the list of “Vascular plants collected on Magnetic Island” (Appendix 1). For more details refer to a specialist book.

GROUP 2.C Leaf sheath closed at the base, stem usually solid, often triangular. Sedges, usually in moist areas.

Scleria sphacelata (Razor Grass – Cyperaceae)

Scleria, from *scleros* a Greek word referring to the hard fruits.

Species in this genus are readily recognized by the distinctive whitish nut (↑).

This plant grows to 1 m tall, and has triangular stems. The flat leaves are roughened on the margins.

Abildgaardia vaginata (formerly *Fimbristylis brownii* – Cyperaceae)

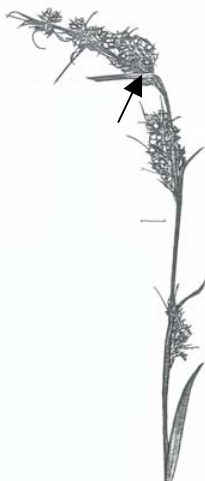
Abildgaardia, named for a Danish veterinarian, Nicolai Abildgaard (1743-1809) who had eclectic interests.

Tufted herb with leaves reduced to sheaths. Spikelets tightly clustered at the end of the flowering stem or peduncle. Glumes are reddish-brown.

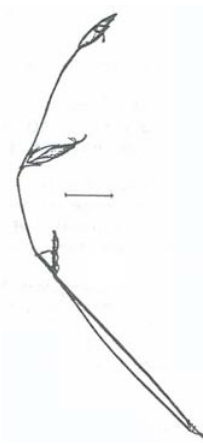
Fimbristylis polytrichoides (Fringe Rush – Cyperaceae)

Fimbristylis, referring to the style which is often ciliate or fringed.

This species is a small leafy plant often found growing in association with the saltwater couch; glumes spirally arranged.



S. sphacelata



A. vaginata



F. polytrichoides

Gahnia aspera (Saw Sedge, Large-seeded Gahnia – Cyperaceae)

Gahnia, named by Linnaeus after a friend, Swedish botanist Dr Henricus Gahn.

Spikelets in terminal clusters. Seeds, reddish-brown, smooth often suspended by a thread from the glumes. Leaves flattened, usually rough.

Eleocharis dulcis (Spike Rush, Bulkuru Sedge, Water Chestnut – Cyperaceae)

Eleocharis, from the Greek *heleos* – marsh, and *charis* – delight, referring to its preferred habitat.

Found growing in swampy places such as the lagoon at Horseshoe Bay. Stems arise from underground rhizomes. Leaves are absent. Inflorescence is a cylindrical, single, terminal many-flowered spikelet. An important food source for many water birds.



G. aspera



E. dulcis

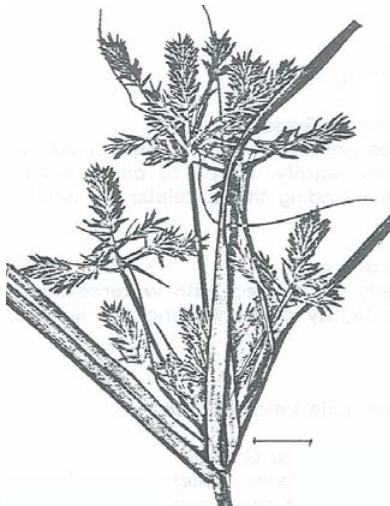
***Cyperus scaber* (Cyperaceae)**

Cyperus, from the Greek – *cyperion* a name used by Homer and Theophrastus for several plants of this genus.

Inflorescence surrounded by several long, leaf-like bracts, glumes distichous i.e. arranged in two opposite rows, one on each side of the axis. Plants up to 1 m tall, stems triangular. **NOTE:** Nut grass is in this genus, it also has the bracts typical of the genus.

***Cyperus pedunculatus* (Pineapple Sedge – Cyperaceae)**

A dune plant with short shoots arising from subterranean stems. These shoots bear slender, rigid, sharply pointed leaves. The inflorescence is surrounded by several leaf-like bracts (↑). Glumes are distichous i.e., opposite one another. This species can be found at the northern end of Horseshoe Bay.



C. scaber



C. pedunculatus

GROUP 2.D Branches of the inflorescence arise from the same point or nearly. (Grasses)

Chloris inflata (Purpletop Chloris, Purpletop Rhodes Grass – Poaceae)*

Chloris, from *chloros* – green, Chloris was the Greek goddess of flowers.

Plant usually about 50 cm tall, but may be up to 1 m. Inflorescence purplish, composed of 6-15 digitate (like fingers from one point) spikes arranged in 1-2 whorls at the top of the stem.

Eleusine indica (Crowsfoot Grass – Poaceae)*

Eleusine, Eleusis was the site of the temple of Ceres, the goddess of the harvest.

The inflorescence of this tufted, more or less procumbent grass is a subdigitate panicle; 2-6 spikes are arranged digitately with 1 usually attached below the others on the stem (↑).

Dactyloctenium aegyptium (Coast Finger Grass, Coastal Button Grass – Poaceae)*

Dactyloctenium, from the Greek *daktylos* – a finger, and *ktenos* – comb, alluding to the comb-like arrangement of the spikelets.

This tufted semi-prostrate grass rarely grows above 20 cm, although it can be much taller. The inflorescence of 5-7 short spikes, 1.2-6.5 cm long, they form a tight whorl at the top of the stem. In *Dactyloctenium radulans* (Button Grass) the spikes are 0.5-1.5 cm long.



C. inflata



E. indica



D. aegyptium

NOTE: *Sporobolus virginicus* (Group 1.B) may key out here, likewise for several common lawn grasses. These are: *Axonopus compressus*, (Broad-leaved Carpet Grass – Poaceae)*; leaves 3-12 mm wide. *Brachyachne convergens* (Common Native Couch – Poaceae), here the glumes cover the fertile floret; and *Cynodon dactylon* (Couch Grass – Poaceae), here the glumes are shorter than the fertile floret.



Axonopus compressus



Cynodon dactylon

**GROUP 2.E Mature plants usually less than 1 m high. SEE also Group 2F.
(Grasses)**

Melinis repens (Red Natal Grass, formerly *Rhynchelytrum repens* – Poaceae)*

Melinis, from the Greek word for a type of millet, *meline*.

A short-lived tufted grass introduced from Africa. Inflorescence is a reddish open panicle; the shiny, hairy spikelets may be pink, purplish or whitish when old. The pedicels also bear long hairs.

Cenchrus echinatus (Mossman River Grass – Poaceae)*

Cenchrus, from the Greek *kenchros* – a type of millet.

This grass, commonly found on dunes and nearby disturbed areas, is easily recognized by its “burrs”, which readily attach to passers-by. This burr is formed by the bristles surrounding the spikelets; the whole falling as a unit.

Echinochloa colona (Awnless Barnyard Grass – Poaceae)*

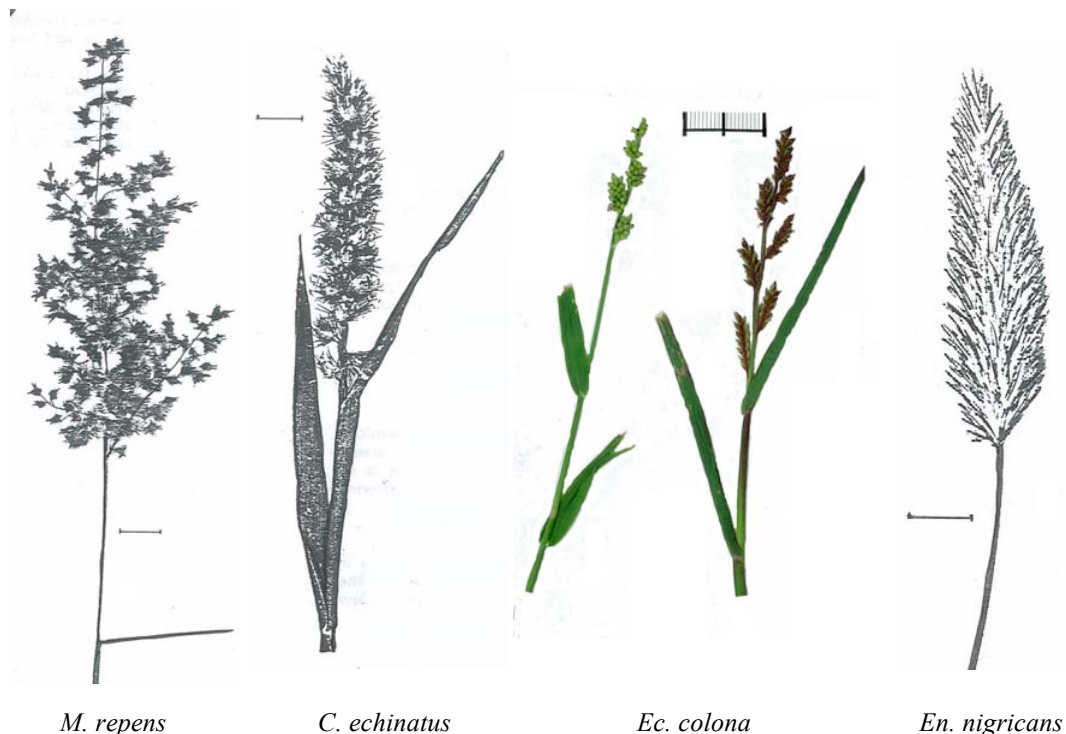
Echinochloa, from the Greek *echinos* – a hedgehog, and *chloe* – young grass, referring to the appearance of the spikelets in some species.

Plant usually erect, sometimes decumbent up to 1 m tall but usually much smaller, spikelets are tightly packed along the racemes. Lower surface of the racemes may be purplish in colour. *Echinochloa crus-galli* (Barnyard Grass or Cockspur Grass)* is readily distinguished by the presence of the awns.

Enneapogon nigricans (Black Heads – Poaceae)

Enneapogon, from *ennea* – nine, and *pogon* – beard, referring to the 9 awns on the back of the lemmas.

A distinctive, small grass with its compact inflorescence, which darkens with maturity. The awns are easily seen with a hand lens.



Triodia stenostachya (Spinifex, Porcupine Grass – Poaceae)

Triodia, from the Greek *treis* – three, and *odous* – tooth, referring to the 3-toothed or 3-lobed lemmas.

This coarse tussocky grass forms large clumps, and with age the central portion of the clump dies and a ring forms. This ring is often very prominent in desert areas. The leaves terminate in sharp, rigid points. Leaf bases are resinous.

Spinifex sericeus (Hairy Spinifex, Beach Spinifex – Poaceae)

Spinifex is derived from the Latin *spina* – thorn, and *facere* – to make, referring to the sharp pointed leaves.

This distinctive, grey-coloured grass, with its silky hairs, is an early colonizer of sand dunes. The female inflorescences form the distinctive heads up to about 20 cm diameter, which are bowled along by the wind.



***Eragrostis* spp.** (Love Grass – Poaceae)

Eragrostis, there are several suggestions for the origin of this name, the most widely accepted is from the Greek, *eros* – love, and *agrostis* – wild grass, apparently referring to their beauty.

Spikelets are flattened in the one plane (↑), each spikelet has many similar florets. There is a lot of variation within the genus in both the size of plants, and of the inflorescence.

Themeda triandra (Kangaroo Grass – Poaceae)

Themeda, from the Arabic name for this plant *thaemed*, the first specimen was collected in Yemen.

A tufted erect plant; the inflorescence is initially a reddish panicle, the colour fading with age. The individual inflorescence clusters often appear to nod, racemes are subtended by spathes (↑). A much taller species, the weed, Grader Grass*, may occur.

Heteropogon contortus (Black Spear Grass – Poaceae)

Heteropogon is derived from the Greek *heteros* – different, and *pogon* – beard, referring to the male spikelet being awnless and the female spikelet is awned.

This grass and the much taller *Heteropogon triticeus* (Giant Spear Grass) are readily recognized by the long twisted awns that are often matted together forming clumps. This species is usually less than 1 m tall and the racemes are less than 6 cm long.

Heteropogon triticeus (Giant Spear Grass – Poaceae)

This species grows to about 2 m tall and the racemes are usually more than 9 cm long. The awns are greenish rather than black as in the previous species.



Eragrostis spp.



T. triandra



H. contortus



H. triticeus

GROUP 2.F Plants usually more than 1 m tall. (Grasses)

Phragmites vallisneria (Reed Grass, formerly *Phragmites karka*, – Poaceae)

Phragmites is derived from the Greek *phragma* – a fence or screen, as it usually grows in dense colonies, so forming a barrier.

This grass is rarely less than 1.5 m tall, grows in wet areas such as in the lagoon at Horseshoe Bay, the tall stems arise from creeping rhizomes. The lowest node of the inflorescence usually has many branches, and only a few spikelets are borne on these lower branches; the upper glume is 4-6 mm long. *Phragmites australis* has only a few branches arising at the lower nodes of the inflorescence; the upper glume is 5-9 mm long.

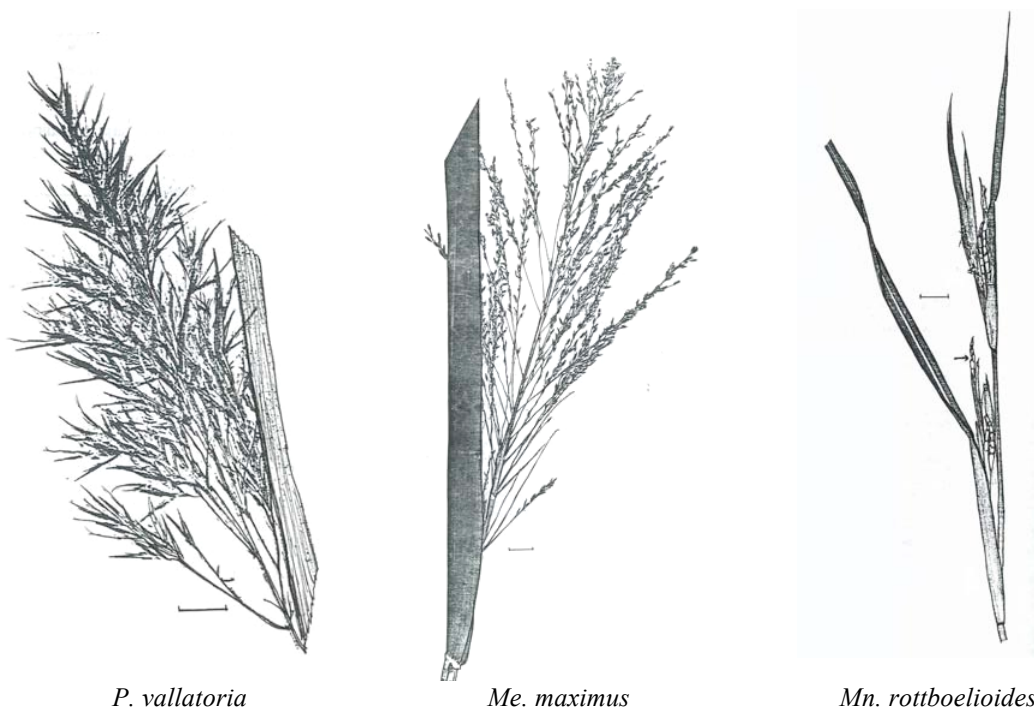
Megathyrsus maximus (Guinea Grass, formerly *Panicum maximum* – Poaceae)*.

Megathyrsus refers to the large inflorescence also known as a thyrsus. *Panicum* is derived from the Latin name for millet or bread, *panis*.

A tall clumping grass to 2 m tall, easily recognized by its very open panicle, with mostly whorled branches and solitary spikelets. This large open panicle is a characteristic of the genus. Introduced from Africa.

Mnesithea rottboellioides (Northern Cane Grass, formerly *Coelorachis rottboellioides*) – Poaceae).

Mnesithea is named for Mnesitheos, a Greek physician who was interested in edible plants. A tall erect grass to 3 m tall, usually found in moist areas. Readily recognized by the inflorescence, which is a panicle of cylindrical racemes, and the paired spikelets which at maturity break off at the joints (↑).



P. vallisneria

Me. maximus

Mn. rottboellioides

Cymbopogon refractus (Barbed Wire Grass – Poaceae)

Cymbopogon, from the Greek *kumbe* – boat, and *pogon* – beard, referring to the boat-shaped spatheoles (↑) subtending the racemes.

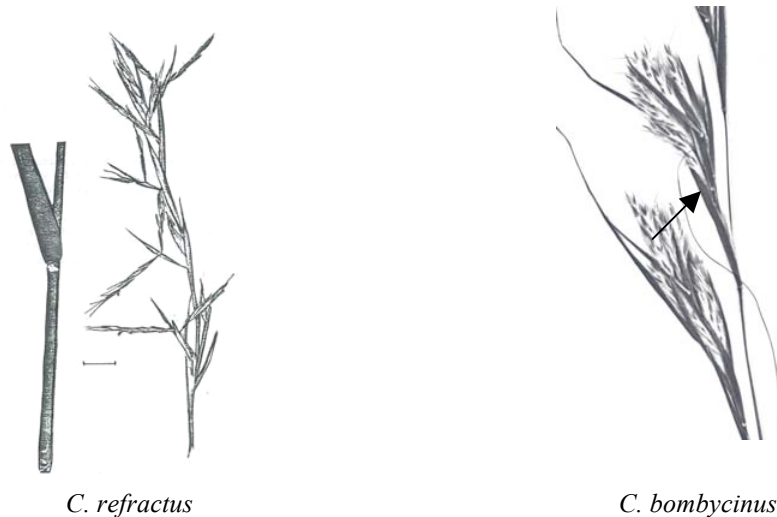
This plant ranges from 30 to 150 cm tall. As with all the other species of this genus, the leaves are faintly aromatic when crushed resulting in a lemony smell. The inflorescence is composed of paired racemes reflexed at maturity but are not woolly. These racemes are subtended by a reddish spatheole (↑). There are two other species, which may be noticed, because both have prominent silky hairs associated with the inflorescence.

Cymbopogon bombycinus (Silky Heads, Citronella Grass, Silky Oil Grass)

Spikelets densely covered with silky hairs 4-7 mm long which arise from the callus at the base of each spikelet, resulting in a fluffy appearance.

Cymbopogon ambiguus (Scent Grass).

Spikelets not completely covered with dense woolly hairs, appears greenish rather than whitish. The leaves are distinctively rolled back and reddish. In *C. queenslandicus* the hairs are shorter and the racemes are reflexed at maturity rather than being erect.



C. refractus

C. bombycinus

Urochloa mosambicensis (Sabi Grass, Perennial Urochloa – Poaceae)*

Urochloa, Greek *ouro* – tail, and *chloe* – grass, refers to the fertile lemma contracting into a short awn, tail-like.

This common, often mat forming grass is distinguished from *Paspalum* by the presence of a lower glume. The ligule (↑) is a rim of short hairs whereas in the latter it is membranous with a tuft of hairs on either end. Sabi Grass in non-grazed or mown areas is an upright plant but sprawls under the pressure of grazing or mowing. The spikelet has 1-3 stiff hairs on the back, these are lacking in Para grass.

Urochloa mutica (Para Grass, formerly *Brachiara mutica* – Poaceae)*

This introduced grass is usually more than 1 m in height, but if plants have fallen over they will appear much shorter, however, smaller plants may be found. It grows from stolons which root at each node. Usually found in moist swampy areas. There are 10-20 racemes per inflorescence.

Urochloa subquadripara (formerly *Brachiara subquadripara*) has fewer racemes (3-5) and is usually found growing in woodland areas.



U. mosambicensis



U. mutica