

# Grasses of Cape York - Mitchell River Fan Aggregation

## *Capillipedium parviflorum* (R.Br.) Stapf

Scented-top Grass; (Car-pill-ee-ped-ee-um; par-vee-floor-um)

This grass is an erect, tufted perennial, between 50-150 cm tall (Fig. 1). The leaves are basal or cauline (positioned along the length of the stem/culm). The basic flowering units or spikelets are usually purple coloured and arranged in clusters in an open inflorescence or flowering head. The flowering head is strongly scented, especially when crushed. The primary branches of the flowering head are arranged along a central stem. The lower branches are often arranged in a whorl, with branches arising from the stem like the spokes of a wheel (Fig. 2). The spikelets (the basic flowering units) are arranged in a cluster of three spikelets. There is 1 spikelet cluster (rarely 2) on each final branch of the flowering head. The spikelet clusters consist of a fertile sessile/stalkless spikelet, which has a prominent twisted awn or bristle 10-16 mm long, and two (rarely 1) much smaller sterile or male spikelets on short stalks or pedicels (Fig. 3). Don't confuse the stalk that holds the cluster as a stalk for the larger sessile spikelet.

### > BOTANICAL DESCRIPTION

A perennial grass with culms 50-150 cm tall (Fig. 1). Leaves basal or cauline; leaf sheaths and culms with long ascending hairs or glabrous. Leaf blades 10-40 cm long, 2-7 mm wide. The inflorescence is an open panicle and primary branches are often arranged in whorls at the lower nodes (Fig. 2). Spikelets are arranged in clusters which consist of a prominent fertile sessile spikelet and one or two sterile or male pedicelled spikelets (Fig. 3). There is one spikelet cluster per branch (rarely two). The sessile spikelets are 2.8-4 mm long and are conspicuously awned, the awn 10-16 mm long, bent towards the tip, with a twisted column. The fertile spikelet is two flowered with a sterile lower floret and upper fertile floret. The lower glume of the sessile spikelet has a shallow groove running between two nerves along its length, this is more prominent in immature material. The pedicelled or companion spikelets are usually 2.5-3.8 mm long and are either male or sterile, containing either empty lemmas or anthers only. The pedicels of the companion spikelets have a translucent furrow that runs along the length of the pedicel (Fig. 4a & b).

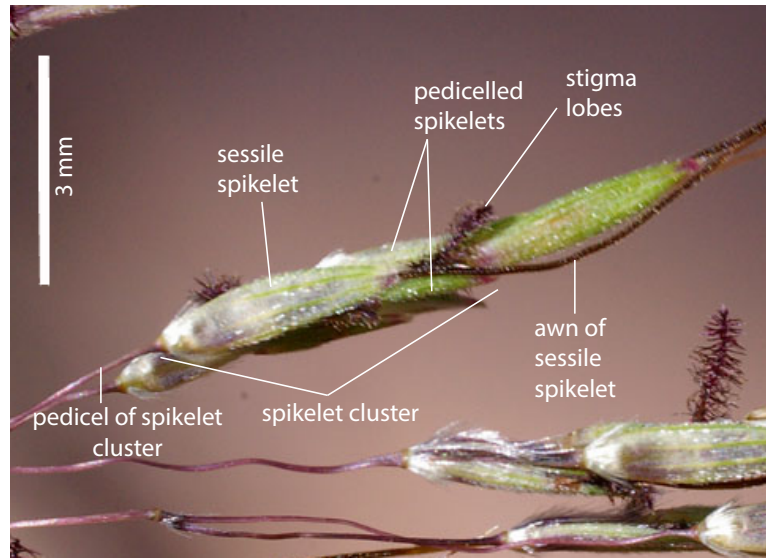


Fig. 1. Habit of *Capillipedium parviflorum* (PHOTO: Chris Gardiner).



Fig. 2. Inflorescence of *Capillipedium parviflorum* note the subsequent branching of the primary branches (PHOTO: RJCumming d19255a).

Fig. 3. Spikelet cluster of *Capillipedium parviflorum* showing sessile fertile spikelet and reduced pedicelled spikelets (PHOTO: RJCumming d2353a).



## > DIAGNOSTIC FEATURES

Species of this genus that occur in Cape York Peninsula can be identified when flowering by the combination of a number of characters; the open usually purple panicle (Fig. 2), the small spikelet size, the composition of the spikelet clusters, the strongly scented flowering head, and the presence of a translucent furrow or midline in spikelet pedicels/stalks (Fig. 4a & b). Two species of *Capillipedium* grow in Cape York Peninsula, *Capillipedium parviflorum* and *Capillipedium spicigerum*. *Capillipedium parviflorum* has only one or rarely two spikelet clusters per stem and usually two companion/pedicelled spikelets per cluster (Fig. 4a). *Capillipedium spicigerum* has 3-8 clusters per stem and one companion/pedicelled spikelet in a cluster, except for the cluster at the end of the branch which typically has two companion/pedicelled spikelets (Fig. 5 & 6). The overall affect of these differences gives the flowering head of *C. parviflorum* a more delicate appearance (Fig. 5 & 6). In addition, the lower glume of the sessile spikelet of *Capillipedium spicigerum* has 4-5 nerves on the outer surface and is more or less flat or domed, compared to 2 nerves and shallowly grooved in *C. parviflorum*. *Capillipedium parviflorum* can also be confused with *Melinis minutiflora* (Fig. 7 & 8) and species of *Bothriochloa* (Fig. 9), which are both strongly scented. From *M. minutiflora* it is distinguished by the presence of companion/pedicelled spikelets in the cluster, whereas *M. minutiflora* has only solitary spikelets (Fig. 8). From species of *Bothriochloa* it is distinguished by the larger more branched flowering head. *Bothriochloa* inflorescences have several branches arising from a central stem (Fig. 9), but these branches are not branched further as they are in *Capillipedium* (Fig. 2). Similarities to *Arundinella* species are discussed under A. setosa profile in this series.

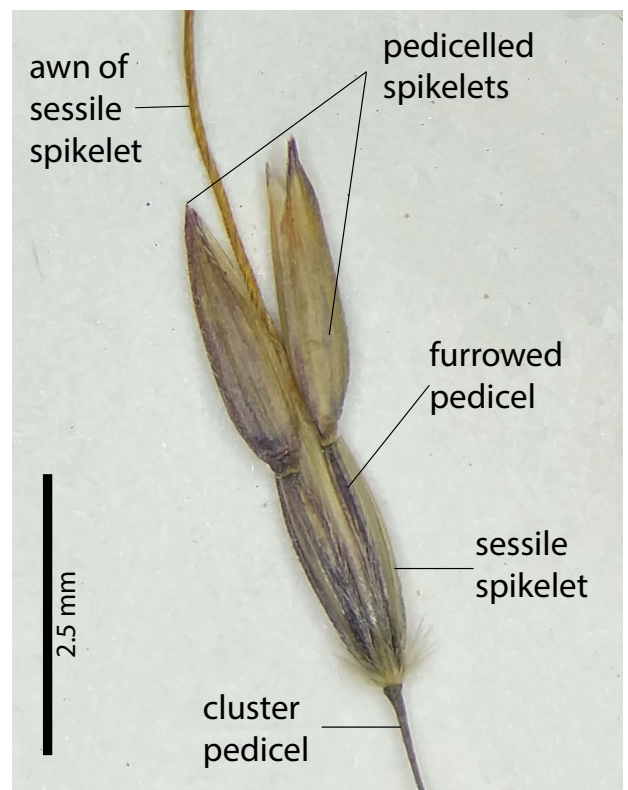


Fig. 4a. Spikelet cluster of *Capillipedium parviflorum* showing furrowed pedicel of pedicelled spikelets (PHOTO: ATH, specimen: QRS6736).

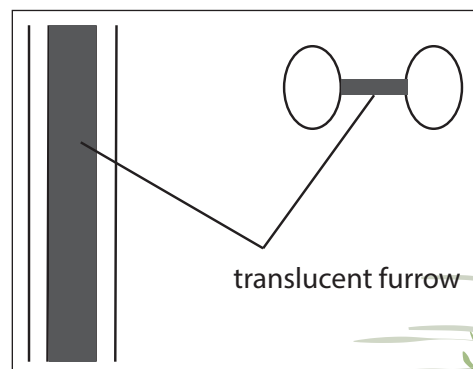


Fig. 4b. Stylised line drawing of furrowed pedicel in side view (on left) and cross section (on right).

## > NATURAL VALUES

This species contributes to the diversity of the savanna ground layer and the health of the ecosystem, however, specific attributes are not available to report here.

## > HABITAT

This species is widespread in eucalypt woodlands throughout Cape York Peninsula (Fig. 10). The absence of records in the SW quadrant of CYP is likely to be a reflection of sampling effort in the area. This species is common in the upper reaches of the Mitchell River/ Coleman River catchments and is expected to be found throughout the system. Distributed throughout northern WA, NT, and Qld, and along the east coast of Qld into central NSW. Also recorded for Africa, Temperate Asia, Tropical Asia, and Australasia.



Fig. 5. Inflorescences of *Capillipedium spicigerum* (left) and *Capillipedium parviflorum* (right) showing the longer spikelet bearing segments of *C. spicigerum* compared to *C. parviflorum* (PHOTO: RJCumming d54317a).



Fig. 6. Inflorescence branches of *Capillipedium spicigerum* with up to 8 spikelet clusters per segment (PHOTO: RJCumming d52846a).



Fig. 7. Inflorescence of *Melinis minutiflora* (PHOTO:Chris Gardiner).

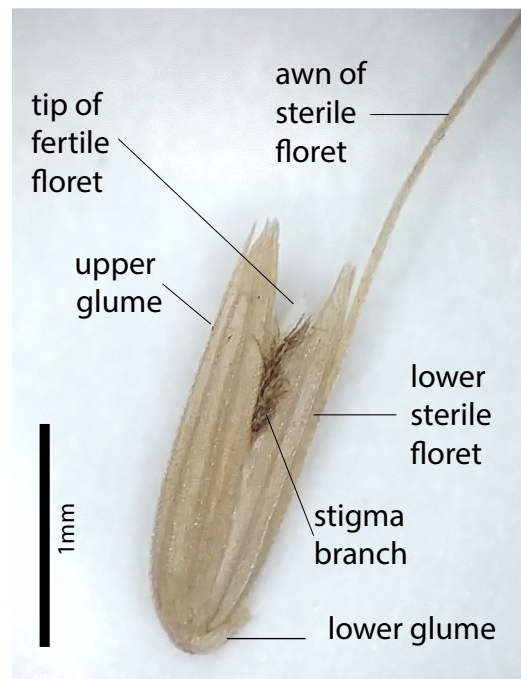


Fig. 8. Solitary spikelet of *Melinis minutiflora* (PHOTO: ATH, specimen: MBA6869).



Fig. 9. Inflorescence of *Bothriochloa bladhii*, note the simple undivided primary branches (PHOTO: RJCumming d18998a).

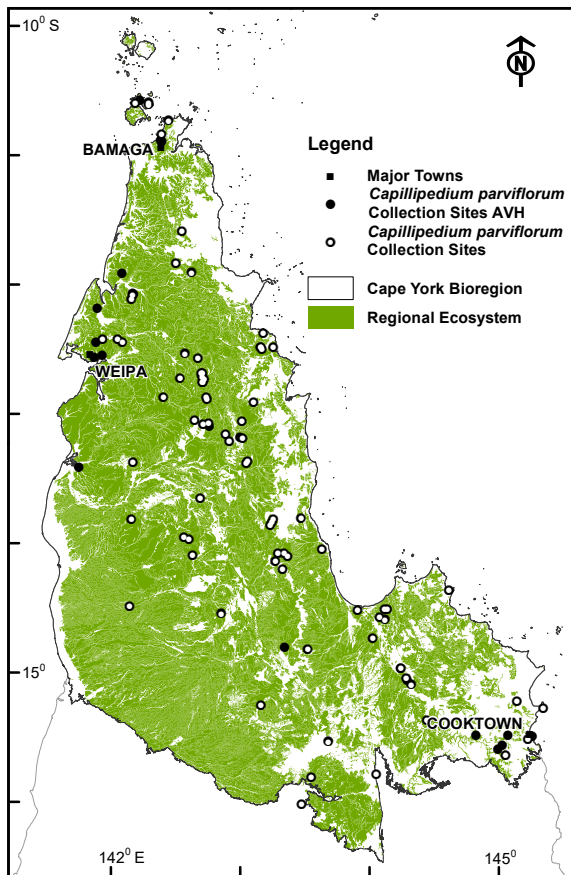


Fig. 10. Map of CYP bioregion showing actual herbarium collections (from BRI and CNS) (solid circle) and site records (open circle) of *Capillipedium parviflorum*. The green shading indicates areas where this species might also be found, based on similarity of habitat to locations where the species has been recorded. (Mapping supplied by P. Bannink, DES). Data attribution: Environment and Science, Queensland Government, Biodiversity status of pre-clearing and 2015 remnant regional ecosystems series - version 10.0 licensed under Creative Commons Attribution.

## > LAND MANAGEMENT NOTES

Both species of *Capillipedium* “are reported as being eaten by stock although they are not recognised to be of high fodder value, and their presence is an indication the pasture is not overgrazed” (Andersen 2003). Flowers Nov.-Aug.

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This project is funded by Queensland Government's Natural Resources Investment Program