

SEDGES – Do you know the Difference? How to Identify the Flower Structure.

... Carl Rayner

Sedges are very common in the heathlands and estuaries of the Eastern Otways, and it is important that we can identify and monitor the various species, so we can ensure their protection. Forty-six sedges are listed in ANGAIR’s indigenous plant list. Saw Sedge *Gahnia* sp., and, particularly, Sword Sedge *Lepidosperma* sp., which has fourteen different species in the district, are two of the major genera in the sedge family. Since flower structure is the basis for the identification of all plants, ANGAIR members need a better knowledge of the flower structure of sedges. Sedges are in the family Cyperaceae and they are monocotyledons, which means they only produce a single leaf when their seed germinates. They are also mostly pollinated by wind, hence they do not have colourful or fragrant flowers, as they do not need to attract insects or birds for pollination.

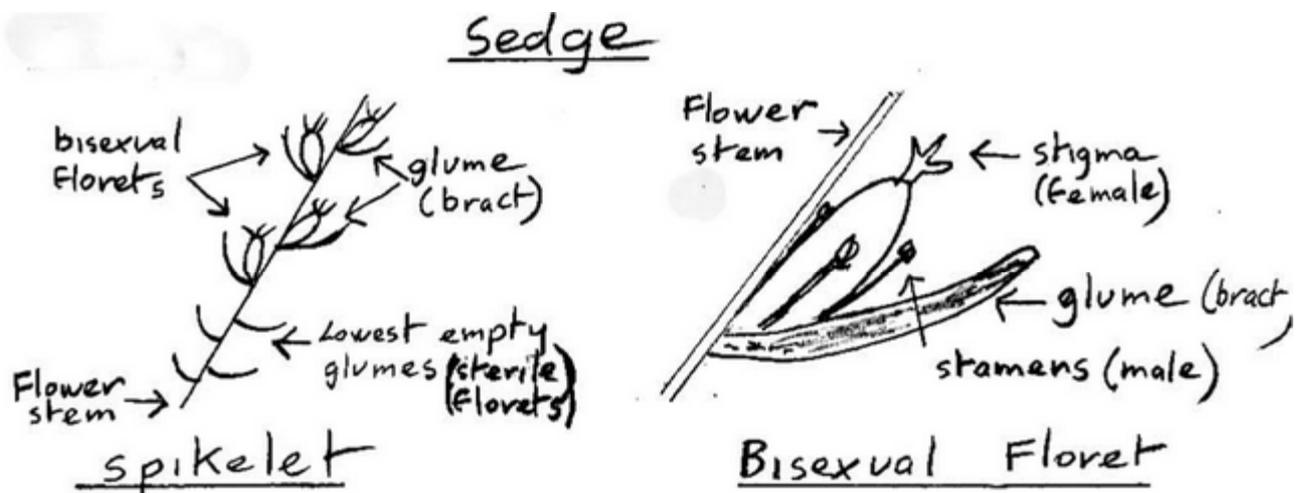
There is only very limited information in books on the flower structure of sedges. Most flowers for this plant group are very small, and require the use of a binocular microscope, with magnification up to 25 times, to accurately dissect the flowers and then identify the plant using keys from Flora of Victoria.

To identify sedges, you need a basic knowledge of the flower structure, so that you know what to look for under the microscope. Below, I have drawn both a bisexual floret (small flower), which forms the seed capsule after pollination, and a spikelet, which shows how the bisexual florets, and sterile or empty florets, are arranged in the flowers. The bisexual florets and empty glumes in the spikelet of Cyperaceae are compressed together as a series of overlapping glumes (or bracts). In my diagram below, I have separated the various components of glumes and bisexual florets, so that it is easy to see the flower structure of the spikelet. You will probably need to dissect the spikelet, when determining its structure. A good way is to use prongs to pull the overlapping glumes away from the flower stem, while you look at it through the microscope.

Some sedges in the family Cyperaceae have many empty glumes, and only a few bisexual florets in the spikelet, while other genera of the family have many bisexual florets, and only a few empty glumes.

We will be searching for sedges on the Nature Walk on Monday, 11 November at 9.30 a.m., and would love to see you. The microscope group also meets after the Nature Walk at 11.30 a.m., so this will be a great opportunity to learn about microscopes and our indigenous plants.

Reference : Ian Clarke and Helen Lee, 2003, *Name that Flower. The identification of flowering plants*, 3rd edn Melbourne University Press, Melbourne



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