FLORA

ARROWGRASS - THE TRIGLOCHINS

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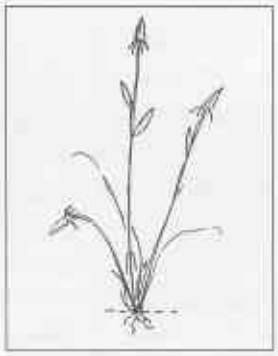
WA is the world centre of diversity for annual triglochins, or arrowgrasses. These tiny wetland annuals are found around the damp margins of both fresh and naturally saline lakes. They are often very numerous, but easy to overlook as, not only are they small, but their flowers are green or brown and so do not stand out from the background. If you have an undisturbed wetland – granite outcrop pool, clay-based ephemeral swamp or natural saline lake – chances are you will have some, take a look!

Triglochins are in the Arrowgrass Family, Juncaginaceae, a small worldwide family of wetland plants. The name 'arrowgrass' comes from the arrow-head shaped seedpods found in some species. '*Triglochin*' has a similar derivation; it means 'three pointed fruit'. Worldwide, there are some 60 species in 5 genera. We in WA have only the one genus, *Triglochin*, with officially 18 species (one introduced), some only recently discovered during the Wheatbelt Survey.



Triglochin calcitrapum, *spurred arrowgrass, life size*

The species that will be familiar to anyone looking at freshwater areas in the southwest is water ribbons, *T. lineare* (has been incorrectly called *T. procera*), an aquatic or dampland perennial with long, strap-like leaves and a flowering stalk that can reach 2m high. The small green flowers don't attract the eye until you brush against them when a great cloud of pollen is released. The plant grows from a thick rhizome buried in the mud from which some of the roots develop tubers. In the eastern States, Aboriginal people were reported to have baked and eaten these, but we have no record of Noongyars eating them, or even having a name for the plant.

Water ribbons, Triglochin lineare, *Bullsbrook. Photo: T. Smith*

Water ribbons, or closely allied species, are widespread worldwide. The tiny annual species, however, are not. It is these little fellers that, once again, demonstrate that WA is a centre for biodiversity.

Open, winter-wet soils on granite outcrops or around the shallow edges of undisturbed fresh or salt lakes are a good place to look. In good seasons they can be covered by a great drift of tiny annuals and geophytes. (Nb: a 'geophyte' is a plant whose aerial portions die off in summer, reshooting again next year from a bulb, corm or tuber.) Tiny sedges, daisies, hydrocotyls and triggerplants (in the wheatbelt, look especially for the minute hundreds-and-thousands, *Stylidium inundatum*) abound, along with the arrowgrasses. It is not uncommon to find three or four different *Triglochin* species at the same site, all with slightly different substrate requirements and flowering times. The geophytes are equally diverse, with various members of the 'lily-like' and orchid families specializing in this niche. Often the swamp specialist, *Tribonanthes*, can be so numerous as to cover the swamp floor with a foam of furry white flowers.

It is this extreme biodiversity that is threatened by secondary salinity, as, although many of these plants grow well on the brackish surface moisture in the wet season, they cannot cope with surface salt crusts. For a start, their seeds cannot germinate in highly saline water.

The main threat to the granite outcrop species is the destruction of the shallow, winter-wet soils by hard-hoofed stock or wheeled recreational vehicles.

This winter, look for the great diversity of little tiny things growing around the edges of wet areas, and think how you are going to manage for those, as well as for the more obvious shrubs and trees.