

Typha orientalis in Western Australia

By Greg Keighery

***Typha* a genus of 30 species and seven named hybrids is mainly from the northern hemisphere. Australia has three species: *T. orientalis* (currently native to all states apart from WA, Russia, China, Myanmar, Philippines, Indonesia and New Zealand); *T. domingensis* (native throughout Australia and at least another 115 countries) and in eastern Australia an introduced European species *T. latifolia*. *Typha* is known in Australia from fossil seeds from the Miocene (over 5 million years ago) in Victoria and both species were collected very early in Australia (1801).**

Keighery and McCabe in 2015 concluded that *Typha orientalis* is also native to WA, because of its early collection in 1839, lack of historical listings as a weed and use by Noongars as a major food source.

The altered hydrology of many wetlands to permanently wet, increased nutrient inflows and the many permanent artificial wetlands have advantaged *Typha* since European settlement. Other native sedges prefer low nutrient status, summer dry wetlands. The widespread drainage schemes of the 1930s on the coastal plain, development of permanently opened estuaries, expansion of metropolitan Perth, reduced Noongar usage and increased agricultural runoff have increased the invasion of *Typha* into many wetlands. Widespread concerns about *Typha* as an invasive species commenced in the 1950-60s and may have contributed to the first listing of *Typha orientalis* as an introduced weed in 1981.

Separating the two species is difficult as population samples of inflorescences and leaves are required. However about 90 per cent of plants can be allocated to species by the leaves, which in *T. domingensis* are narrow and grass green, aging yellow to light brown at senescence, while *T. orientalis* has broad bluish-green leaves that age dull grey and the sheathing base of the leaves is at a straight slope in *T. domingensis* but with a distinct bump in *T. orientalis*. However since both are native and invasive, managing populations not the species is the requirement.

More than 336,000 seeds are produced per inflorescence for *T. orientalis* and 682,000 for *T. domingensis*. Plants have 10-50 flowering shoots per square metre, producing up to 17 million seeds, of which 95 per cent is viable. *Typha* species are colonisers of newly emergent mud (the seeds need sunlight to germinate and establish) via their abundant wind dispersed seeds. One seed can produce a plant covering an area of 3m in diameter in one season!

Bulrushes are aggressive native invaders that can transform natural ecosystems unless actively managed. They displace native sedges by their tall dense canopies and dense rhizomes, shrubs by increasing hot autumn fires and the dense mats of dead material stop recruitment causing a loss of biodiversity from wetlands. Both species are moderately salt tolerant and invade estuarine margins such as the Swan River.

Maintaining a natural hydrology and low nutrient status of wetlands limits the ability of *Typha* to invade and dominate. Its competitive advantage can be limited by burning and mowing to remove stalks (something the Noongars did by harvesting the



Typha orientalis invaded the entire lake bed of Lake Mealup after declining rainfall, changes in surrounding land use and drainage resulted in the ephemeral lake becoming dry for substantially longer periods each year (top). Three years of slashing and spraying treating more than 54ha of *Typha* followed by altering drainage to reconnect the lake to its catchment and reinstate deeper and longer periods of inundation has restored the lake. This has led to regeneration of other fringing native sedges and the return of waterbirds (above). Photos – Heidi Bucktin.

rhizomes as food) followed by prolonged flooding. Control measures of *Typha* are given in [Florabase](#).

Typha orientalis as a native species should not require a licence to take on crown lands (although you can be legally required to do so under Section 23, B2 of the Wildlife Conservation Act) because the excuse in law is that managing *Typha* is part of the land manager's duty and obligation under operational activities and/or an approved plan. Parks and Wildlife applies this to managers of road verges, forests and local governments for their day to day activities in managing *Typha* and the other 49 native species that act as environmental weeds in WA.

Further reading:

Finlayson M, Forrester RI, Mitchell DS and Chick AJ (1985) Identification of native *Typha* in Australia [Australian Journal of Botany](#) 33(1), 101–107.

Keighery G (2013) Weedy native plants in Western Australia: an annotated checklist [Conservation Science Western Australia](#) 8(3), 259–273.

Keighery G and Keighery B (2015) Banksia behaving badly [Western Australian Naturalist](#) 29(4), 270–277.

Keighery G and McCabe S (2015) Status of *Typha orientalis* in Western Australia [Western Australian Naturalist](#) 30 (1), 30–35.

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