



THE CHANGING SEASONS AT BRIXTON STREET WETLANDS

Urban Nature, Department of Environment and Conservation
Friends of Brixton Street Wetlands

Seasonal Clay-based Wetlands

While the majority of seasonal wetlands in south-west Australia are connected to the regional ground water, there are a series of wetlands found on clay substrates that rely solely on rainwater to fill. These wetlands are characterised by temporally overlapping suites of annual herbs that flower and set seed as the wetlands dry through spring. Over summer the clay substrates dry to impervious pans. The plant communities of clay-based wetlands comprise a flora of over 600 taxa. At least 50% are annual or perennial herbs, 16 occur only on the clay-pans and many are rare or restricted.

The seasonally inundated clays that support these communities are relatively productive agricultural soils and many were cleared soon after settlement. Those that remained intact were largely located on the Swan Coastal Plain in close proximity to metropolitan Perth. In more recent years large areas have disappeared under urban development and today the plant communities of seasonal clay-based wetlands are amongst the most threatened in Western Australia.

Brixton St Wetlands Field Herbarium

One of the most important occurrences of these plant communities, The Brixton Street Wetlands lies only 20km south east of Perth at the foot of the Darling scarp. Most of the wetland soils at Brixton St are water logged through the winter months and deep pools form in clay depressions. When the pools are full they support a number of aquatic plants but as they dry over spring and summer a series of annual and perennial herbs grow, flowers and set seed. The flats surrounding the deeper clay-pans support a diverse range of native herbs, sedges and rushes and slightly higher in the landscape Marri Woodlands cover low sandy rises.



Illustration by Margaret Pieroni

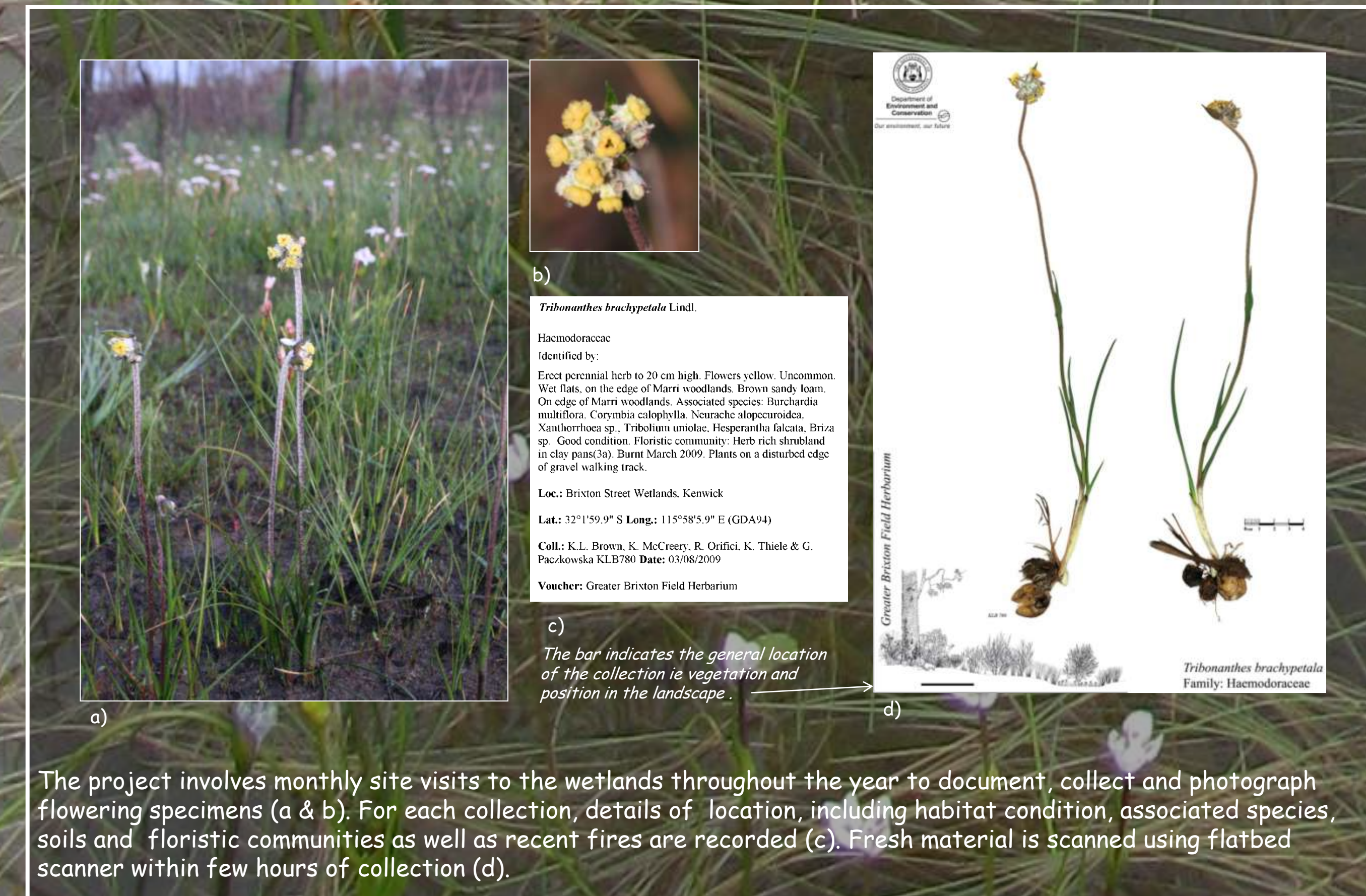
The area has recently been the focus of a project to further document the diverse flora of seasonal clay-based wetlands. The aim is also to provide a flora identification tool for managers of clay-based wetlands including the friends of Brixton St Wetlands through the compilation of a field herbarium and vouchering of collections, photographs and scans at the Western Australian Herbarium.



Winter Most of the wetland soils at Brixton St are water logged through the winter months and deep pools form in clay depressions. When the pools are full they support a number of aquatic plants



Spring Temporally overlapping suites of annual herbs flower and set seed as the wetlands dry through spring.



Tribesmanthus brachypetalus Lindl.
Haemodorraceae
Identified by:
Erect perennial herb to 30 cm high. Flowers yellow. Uncommon. Wet flats, on the edge of Marri woodlands. Brown sandy loam. On edge of Marri woodlands. Associated species: *Burchardia umbellata*, *Cenchrus ciliatellus*, *Stenochloa speciosa*, *Stenochloa* sp., *Tribesmanthus uncinatus*, *Proserpinaca fulgens*, *Brya* sp. Good seedling. *Pharusia* common. Herb rich in essential oil (see page 14). Benth March 2009. Photos on a detached edge of ground surface track.

Location: Brixton Street Wetlands, Nornalup
Locs: 121°19'0" E, 34°56'0" S (GDA84)
Coll: K.L., Brown, K., McCleary, B., Orlidge, R., Thode & G.
Field No.: 121190
Date: 03/06/2009
Voucher: Greater Brixton Field Herbarium

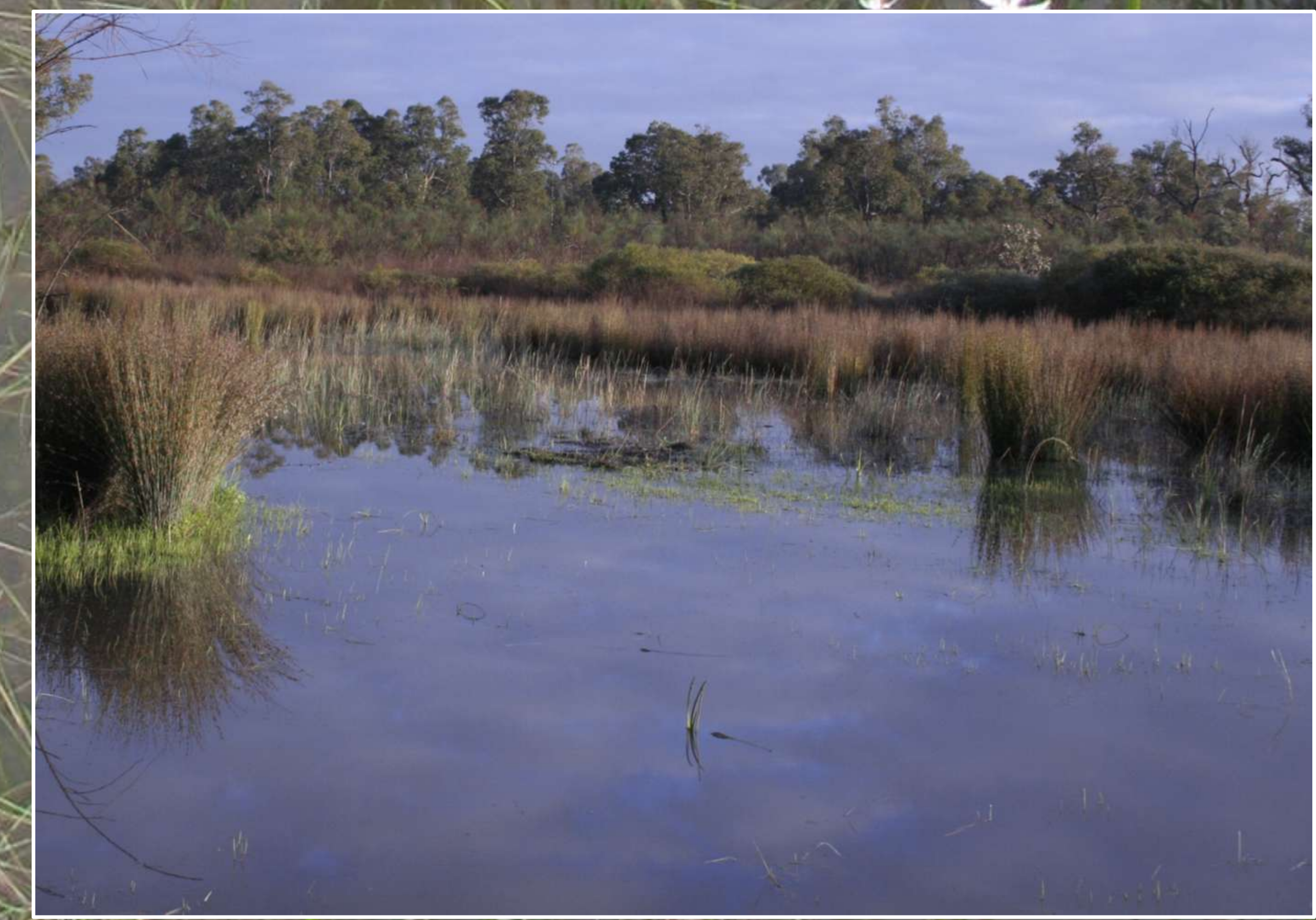
The bar indicates the general location of the collection in vegetation and position in the landscape.

Tribesmanthus brachypetalus
Family: Haemodorraceae

The project involves monthly site visits to the wetlands throughout the year to document, collect and photograph flowering specimens (a & b). For each collection, details of location, including habitat condition, associated species, soils and floristic communities as well as recent fires are recorded (c). Fresh material is scanned using flatbed scanner within few hours of collection (d).



Summer Swamp Wallaby Grass (*Amphibromus neesii*) flowers in late spring early summer before the clay soils dry to impervious pans



Autumn The deeper clay pans begin to fill with the first Autumn rains

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