

# *Cuscuta tasmanica*



Image by Geoff Carle

**FAMILY:** CUSCUTACEAE

**BOTANICAL NAME:** *Cuscuta tasmanica*  
Engelm., *Trans. Acad. Sci. St. Louis* 1: 512  
(1859)

**COMMON NAME:** golden dodder

**COMMONWEALTH STATUS (EPBC Act):**  
Not Listed

**TASMANIAN STATUS (TSP Act):** rare

## Description

*Cuscuta tasmanica* is a parasitic plant with pale yellow or orange thread-like twining stems. The leaves are reduced to small scales. Inflorescence a loose few-flowered axillary cluster. Flowers usually 5-merous; pedicels mostly 4 to 8 mm long and stouter than the twining stems; calyx 1.5 to 2.2 mm long, lobes unequal, oblong to ovate-oblong, much longer than the tube; corolla campanulate, 3 to 4 mm long, creamy, lobes ovate-oblong with a rounded apex, equal to or longer than tube. Stamens inserted at the throat of the corolla tube, alternating with the lobes; filaments 0.3 to 0.7 mm long, narrow-triangular, subtended by fimbriate scales; styles 2, free; stigmas capitate, exserted. Ovary two-locular, with two ovules per locule. Fruit a globose capsule c. 3.5 mm in diameter; seeds 4, or less by abortion, 1.6 to 2 mm long. (Description from Curtis 1967, Walsh & Entwisle 1999, Gray 2011) **Confusing species:** Two other species of *Cuscuta* have been recorded in Tasmania: *Cuscuta epithymum* and *Cuscuta suaveolens*. Both are declared weeds under the *Tasmanian Weed Management Act 1999* (de Salas & Baker 2016). They tend to be erect rather than prostrate plants, and are parasitic on leguminous plants.

## Distribution and Habitat

On mainland Australia *Cuscuta tasmanica* occurs in Victoria, South Australia and New South Wales (Walsh & Entwisle 1999). In Tasmania the species is known from several sites in the southeast, one site in the Midlands, one in the far northeast, and one on Flinders Island (Prahald 2014). It occurs in herbfields at the landward margins of saline to brackish lagoons or saltmarsh, parasitising mostly *Wilsonia backhousei*; other observed hosts in Tasmania include *Carpobrotus rossii*, *Selliera radicans*, *Sarcocornia quinqueflora* and *Wilsonia humilis*.

## Key Sites and Populations

The species is known to be locally common at Calverts Lagoon and Primrose Sands in Tasmania's southeast. Other recorded sites include Lauderdale, Sloping Lagoon, Near Lagoon, Cape Portland and 'The Lagoons' (on Flinders Island).

## Known Reserves

Calverts Lagoon Conservation Area, Lime Bay State Reserve, Cape Portland Private Sanctuary, Logan Lagoon Conservation Area (or Sellars Lagoon Game Reserve). The site at Near Lagoon is on private land covered by a conservation covenant under the Tasmanian *Nature Conservation Act 2002*.



**Plates 1–3.** *Cuscuta tasmanica*: saltmarsh habitat (green plants = *Wilsonia backhousei*, claret plants = *Sarcocornia quinqueflora*), habit & fruit (images: Richard Schahinger & Geoff Carle)

## Ecology and Management

Parsons & Cuthbertson (2001) provide information on the ecology of exotic *Cuscuta* species in Australia that may be pertinent to the native *Cuscuta tasmanica*. Seed germinates mainly in spring. Seedlings have no roots and soon die unless they can make contact with a host plant. The thread-like twining stems then grow rapidly as a tangled mass over the host, the stems being attached by small suckers ('haustoria') which absorb nutrients from the host plant. Flowering of *Cuscuta* starts at a young age and in Tasmania has been observed from October to April, with considerable

quantities of seed accumulating on large plants. Seed is likely to remain dormant in the soil for at least several years, enabling the species to survive periods of drought.

The available literature suggests that *Cuscuta tasmanica* is an annual species. However, observations at Tasmanian sites in late winter show that although *Cuscuta tasmanica* substantially dies back it perennates as coils on the host plant, pushing back into growth in the spring (Wood, pers. comm.). After favourable growth conditions returns, the *Cuscuta* may get so dense that it probably weakens the host, and the host may slowly die or thin out. As that happens the *Cuscuta* thins out as well, but may colonise available host plants further away, giving rise to conspicuous ring-like features (Plate 1).

The major threat to a parasitic species like *Cuscuta tasmanica* is loss of its host plants, which essentially means the loss of its saltmarsh habitat. Saltmarsh is at risk from a range of factors (Kirkpatrick & Glasby 1981, Prahalad & Pearson 2013), including drainage and land reclamation, eutrophication, mechanical disturbance (including by stock) and, in the longer term, rising sea levels associated with climate change. The ecological community *Subtropical and Temperate Coastal Saltmarsh* is listed as vulnerable on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

*Cuscuta tasmanica* would benefit from the retention of buffering vegetation surrounding its saltmarsh habitat.

### Conservation Status Assessment

*Cuscuta tasmanica* is known from at least seven sites in Tasmania, four of them in the State's southeast (each with recent sightings). Targeted surveys of the Cape Portland area in February 2017 failed to relocate the species (the only previous record dating to 1993), while the status, and indeed precise location, of the solitary site on Flinders Island (dating to 1970) is unknown. Hooker (1857) cited the species' distribution in Tasmania as 'Near Hobart and at Georgetown'; there are no contemporary records in the latter area. Surveys to determine the status of previously recorded sites, as well as surveys of potential habitat, are required before a meaningful reassessment of the species' conservation status can be undertaken.

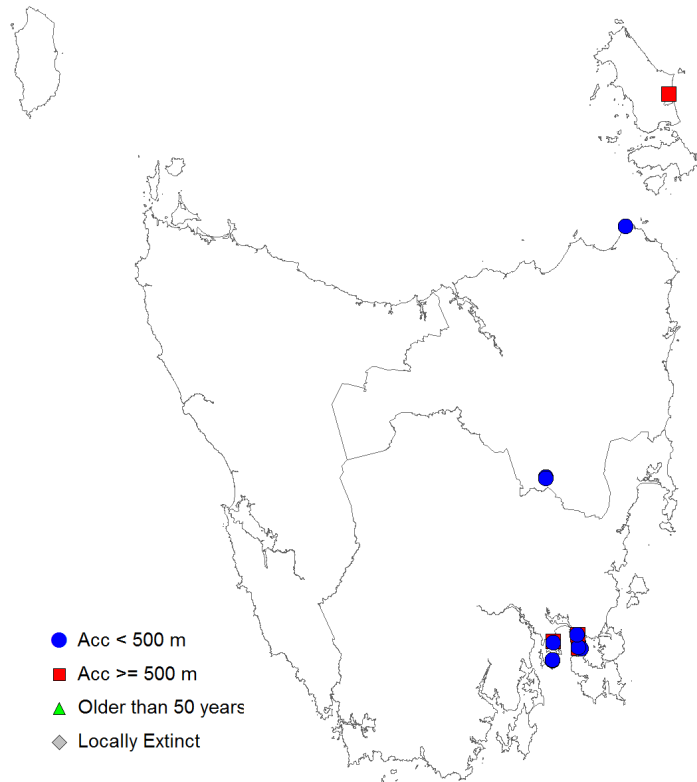
### Further Information

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- Prahalad, V. & Pearson, J. (2013). Southern Tasmanian Coastal Saltmarsh Futures: A Preliminary Strategic Assessment. NRM South, South Hobart.
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## Tasmanian Distribution

(As per Threatened Species Section records, May 2017)



### 1:25 000 Map sheets

Blackmans Bay, Carlton, Communications, Cremorne, Ellinthorp, Lyme Regis, Sellars.

Date last modified: 9/05/2017

### View

[www.dpipwe.tas.gov.au/threatenedspecieslists](http://www.dpipwe.tas.gov.au/threatenedspecieslists)

### Contact details

Threatened Species Section, Department of Primary Industries, Parks, Water and Environment, GPO Box 44, Hobart, Tasmania, Australia, 7001. Phone (03) 6165 4340.

### Permit

It is an offence to collect, disturb, damage or destroy this species unless under permit.