



Photo by M. Fagg (APII, ANBG)

Lepidium ginninderrense



Photo by the ACT Government

Synonyms: None

Common names:
Ginninderra Peppercross

Family: Brassicaceae

Similar species:

Lepidium pseudopapillosum (Erect Peppercross), *Lepidium monolocoides* (Winged Peppercross), *Lepidium hyssopifolium* (Basalt Peppercross)

Conservation status: listed as **Vulnerable** under the Commonwealth Environment Protection and Biodiversity Conservation Act (1999) and as **Endangered** on the ACT Nature Conservation Act (1980).

Description

Lepidium ginninderrense is a small herb, from 10 to 20 cm high.

Stems: one to six branched, moderately papillose stems arising from a rootstock.

Leaves: lower leaves broad-lanceolate, upper leaves linear-lanceolate, fleshy, shiny on the upper surface. The rosette leaves are widely spaced and very narrow (1.5 to 2 mm wide and 15-55 mm long).

Distribution



Map from Australia's Virtual Herbarium: <http://avh.chah.org.au/>

Ecology

Habit	Perennial herb.
Growth period	Mainly during winter and spring. After flowering, the plant dies back to a rootstock.
Life expectancy	Unknown.
Habitat	Grasslands (floodplain of Ginninderra Creek, ACT), in areas with relatively low and sparse perennial grass cover (little competition for light and space), often with indications of past soil disturbance. It occupies sites subject to winter inundation.
Soil tolerance	Shallow red earth, brown clay loam.
Site tolerance	Full sun.
Drought tolerance	Unknown.
Frost tolerance	Unknown.
Fire tolerance	Unknown.
Grazing tolerance	Threatened by trampling and continuous grazing by introduced herbivores.
Pests	Unknown.

Reproduction

Flowers

The inflorescence is an elongating raceme from 5 to 15 cm long. Flowers are 2 mm wide and 1.5 mm long. Sepals are green and petals are absent.

Flowering occurs from winter to spring.

Fruit: capsules

Obovate, 4-5 mm long, 3-3.5 mm broad.

Seeds

Obovoid, orange, 1.5 mm long

Germination requirements

No pre-treatment is required for germination.



Photo by M. Fagg (APII, ANBG)

Genetic seed viability

Possible chromosomal differences are unknown for *Lepidium ginninderrense* at present, but it is thought that the species still contains significant genetic variation.



Photo by J. McAuliffe (ANBG)

How to grow the species in a Seed Production Area (SPA)

Seed collection and storage

Lepidium ginninderrense produces seeds mainly in early summer and the majority of seed is dispersed before the end of winter. Harvest the stalks by hand when the fruit are ripe. Place the stems upside-down inside paper bags and let them dry.

Collect the seeds from a wide range of individuals in order to capture the existing genetic diversity.

The germinability of 4-year-old seeds was tested at the National Seed Bank. 92% of the seeds germinated which indicates that *L. ginninderrense* seeds have a high viability and germinability. More germination tests are needed to verify this hypothesis.

Propagation

L. ginninderrense can be propagated from seed: sow seeds in cell trays then transplant to the SPA site when ready.

Growth at the SPA

To encourage growth, the plants can be fertilised with slow-release fertiliser and seaweed fertiliser in spring. Seaweed fertiliser can also be combined with a water-soluble fertiliser and applied during establishment.



Photo by Greening Australia

Uses

No uses have been registered for *L. ginninderrense*.

Conservation

L. ginninderrense is a relatively recently recognised species, first described in 2001. It was previously confused with *Lepidium pseudopapillosum* and *Lepidium monolocoides*. The species only occurs at two sites in the Australian Capital Territory and it is not known from outside the ACT. There are approximately 2000 plants at the sites located in the north-west corner of Belconnen Naval Transmission Station in the suburb of Lawson and in the suburb of Mitchell. The main threat to the survival of the species is urban infill.

At the Australian National Botanic Gardens over 200 000 seeds were banked from 1500 plants.

More than a thousand plants of *L. ginninderrense* were planted by Greening Australia's volunteers and staff near the Canberra suburbs of

References

Scarlett, N. H. (2001), *Lepidium ginninderrense* (Brassicaceae), a new species from the Australian Capital Territory, *Muelleria* 15: 69–73

Internet links

Recovery Plan for Ginninderra Peppercreess (*Lepidium ginninderrense*): <http://www.environment.gov.au/system/files/resources/2a41b01f-68e4-432f-ad19-9c167ae205ad/files/l-ginninderrense.pdf>

Photo source

Australian Plant Image Index (APII): <http://www.anbg.gov.au/photo/>

