

## *Ervum gracile* DC. (*Vicia parviflora* Cav.) Slender Tare

GB Red List Status: Vulnerable

*Ervum gracile* (family Fabaceae) is a scrambling annual herb with a distribution spanning Europe, Northern Africa and Western Asia. In the UK, it is found in the southern half of England growing in calcareous clay soils which experience wet winters and dry summers, the extremes of moisture and temperature likely helping to break down the seed coat and enabling germination of the physically dormant seeds.

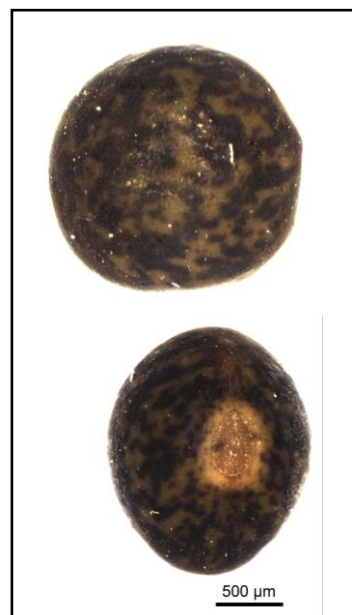


Photo: J. Peach

*E. gracile* in flower

### Seed harvest

*E. gracile* flowers June to August and seeds develop and disperse from August onwards. Each hairless pod usually contains 4-6 seeds approximately 1-1.5mm in diameter. The approximate dry weight of 1000 seed is 3.667g. Collections conserved at the Millennium Seed Bank were harvested in late July/ early August but it is expected that seeds can be harvested into early autumn.



*E. gracile* seed

### Propagation

Germination is thought to naturally occur in the autumn. However, as *E. gracile*'s physically dormant seeds respond well to scarification, a high conversion rate was achieved in trials with scarified seed sown in both autumn and spring (>85%). If sowing seed directly on site, scarify and sow in spring or autumn.

To produce plug plants, sow scarified seed directly into a free-draining peat-free mix and place outdoors in a cold frame in autumn or spring. We recommend sowing seed in September and planting plugs out the same autumn. If planted out in spring, irrigation may be required in dry weather. Germination was observed within two weeks for both the spring and autumn sows. Seedlings appear to be frost tolerant (to at least -6°C).

Prick out seedlings into plug trays/5cm individual pots when several true leaves are present. Young plants are prone to slug predation and should be protected. Keep plants in a sunny position and don't overwater.

### Ex situ conservation

As of December 2023, the Millennium Seed Bank conserves over 30,000 *E. gracile* seeds across three collections from one hectad. Collections are maintaining viability in conventional seed bank conditions (15%RH/-20°C) with one collection achieving 100% germination after 11 years in storage.

This map shows the distribution of *E. gracile* records since 2000 (BSBI) in yellow and MSB conserved collections in black.



*Propagation trials for E. gracile took place at Wakehurst, West Sussex to investigate the effects of seed scarification and spring/ autumn sows. A maximum conversion rate of 92% (seed sown to adult plant) was achieved with scarified seeds and an autumn sow. See reverse for methodology and results of the best tests in the laboratory and nursery.*

# Germination and Propagation: best tests in laboratory and nursery

The seeds tested were stored in the Millennium Seed Bank since collection in Somerset in August 1997

	Laboratory method	Nursery method
Date sown:	February 2008	October 2020
Pre-treatments:	Seed coat chipped with scalpel	Gentle scarification with sandpaper (seed coats are removed easily)
Germination media:	1% agar gel	Petersfield Peat-Free Supreme compost and Sinclair Standard perlite (50:50) with layer of Sinclair Medium vermiculite over seeds
Germination conditions:	10°C (8 hours light / 16 hours dark)	Outside in a cold frame
Days until germination:	<7 days	12 days (peak germination: 12 days)
Germination duration:	7 days	2.5 months
Germination percentage:	100%	94%
Growing conditions:	N/A	Seedlings pricked out into plug trays/5cm individual pots when several true leaves present and grown on in a cold frame (between -6°C / +15°C over winter). Susceptible to predation from slugs
Growing media:	N/A	Petersfield Peat-Free Supreme compost
Seedling survival:	N/A	97% of total germinated (92% of total sown)
Replicates:	1 x 50 seed	3 x 40 seed



Images from l-r: first two images are both *E. gracile* seedlings 18 days after sowing with a toothpick marker for scale. Third image ~2 months after sow date.

## References and Resources

- Stroh, P.A. 2015. *Vicia parviflora* Cav. Slender Tare. Species Account. Botanical Society of Britain and Ireland.
- RBG, Kew. *Plants of the World Online*. Available at: <http://www.plantsoftheworldonline.org/> [Accessed April 12, 2022].
- The Vascular Plant Red Data List for Great Britain. Species Status 7: 1-116. Joint Nature Conservation Committee, Peterborough (Revised 2021).
- Ervum gracile DC. in BSBI Online Plant Atlas 2020, eds P.A. Stroh, T. A. Humphrey, R.J. Burkmar, O.L. Pescott, D.B. Roy, & K.J. Walker. <https://plantatlas2020.org/atlas/2cd4p9h.va1yw1> [Accessed 12/01/2024]

**Please note:** Anyone collecting seeds must do so legally and sustainably. Site conditions and management should be suitable for the sustainability of the population prior to any (re)introduction of seed or plants.

For more information on data, protocols and standards at the Millennium Seed Bank, see our website: [www.brahmsonline.kew.org/msbp](http://www.brahmsonline.kew.org/msbp)

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