

Rumex rupestris Le Gall Shore Dock

GB Red List Status: Endangered

Rumex rupestris (family Polygonaceae) is a perennial plant with its stronghold of distribution in the UK. It grows on beaches, shore platforms and cliff bases, however, it is Red Listed in Great Britain as Endangered due to threats to this habitat including sea defence works and disturbance by both winter storms and people.

Rumex rupestris is listed under Schedule 8 of the Wildlife and Countryside Act and requires a licence to harvest any part of the plant.



R. rupestris specimen

Seed harvest

R. rupestris flowers June to August and seeds develop and disperse July to October. Seeds are approximately 0.9mm x 0.6mm and are encased in distinctive 3-4mm inner tepals with warts 2/3 of the length. The approximate dry weight of 1000 seed is 1.77g. Collections conserved at the Millennium Seed Bank were harvested between August and October.

Propagation

In nursery trials seeds were either sown in autumn and placed in a cold frame outside or sown in spring and placed in a glasshouse. Germination was higher and faster for seed trays placed in a glasshouse (79%) as opposed to outside (55%) with most seeds germinating three weeks after sowing in the glasshouse.

Seeds were sown into a 2:1 mix of Petersfield Peat-Free Supreme compost and Sinclair Special Seed perlite with a covering layer of Sinclair Medium vermiculite. Seeds were pre-soaked in this trial, but this is not advised as the benefits are unclear. Seedlings were pricked out and grown outside approximately two months after germination. Plants are expected to flower in the second year.



R. rupestris inner tepals and nut

Ex situ conservation

As of March 2023, the Millennium Seed Bank conserves six wild collections of *R. rupestris* from five hectads. Seed numbers have also been increased through regeneration on seven occasions. These collections together hold more than 53,000 seed. Seeds are maintaining viability in conventional seed bank conditions (15%RH/ -20°C) with one collection achieving 100% germination after 35 years of storage.

The map (right) shows the distribution of *R. rupestris* records since 2000 (BSBI) in yellow and MSB conserved wild collections in black. Additional collections are being made as part of the UK Threatened Flora Project (2020-2023).

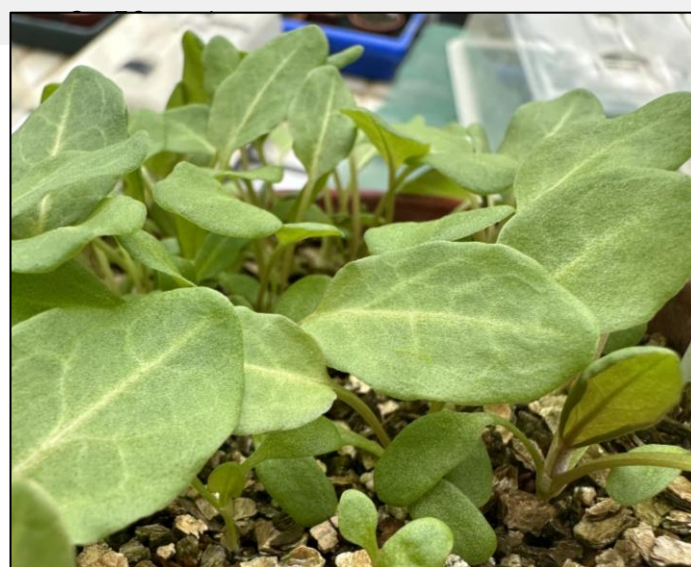
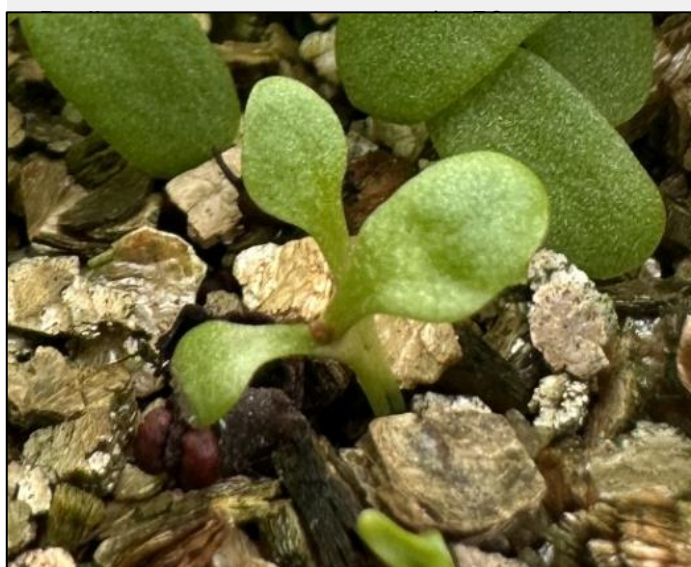
Propagation trials for *R. rupestris* took place at Wakehurst, West Sussex in spring 2023 as part of the UK Threatened Flora Project (2020-2023). A maximum conversion rate of 75% (seed sown to adult plant) was achieved with a spring sow in a glasshouse. See reverse for methodology and results of the 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 Gwynedd in 1995

	Laboratory method	Nursery method
Date sown:	March 2007	May 2023
Pre-treatments:	None	Water bath for 24hrs
Germination media:	1% Agar	Petersfield Peat-Free Supreme compost and Sinclair Special Seed perlite (2:1) covered with vermiculite
Germination conditions:	25°C (8hrs light) / 10°C (16hrs dark)	Germinated in glasshouse (>6°C) with grow lights
Days until germination:	21 days	21 days
Germination duration:	21 days	3 months (peak 21 days)
Germination percentage:	100% (100% viable)	79%
Growing conditions:	N/A	Pricked out approx. 2 months after germination and grown outside on a west facing balcony
Growing media:	N/A	Petersfield Peat-Free Supreme compost and Sinclair Standard perlite (1:1)
Seedling survival:	N/A	75% of seeds sown (95% of seeds germinated)



Images show *R. rupestris* seedlings at different stages 21 days after sowing.

References and Resources

- The Vascular Plant Red Data List for Great Britain. Species Status 7: 1-116. Joint Nature Conservation Committee, Peterborough (Revised 2021)
- *Rumex rupestris* Le Gall 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.1rn> [Accessed 13/12/2023]

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

Follow the UK Team on Twitter: @Kew_MSBUK