

Reintroduction of perennial knawel *Scleranthus perennis prostratus* along a conservation path at Santon Downham, Suffolk, England

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SUMMARY

The endemic subspecies of perennial knawel *Scleranthus perennis* ssp. *prostratus*, is found only in the Breckland area of eastern England. Due to marked recent declines, an attempt was made to reintroduce it to a 'conservation path' in the county of Suffolk. Plants were introduced and seeds sown in what appeared suitable areas. Members of the public visiting the site have provide sufficient soil disturbance to ensure the ground is suitably bare for establishment of new seedlings with little additional management required except occasional removal of encroaching heather *Calluna vulgaris*. To date, the reintroduction has been successful.

BACKGROUND

In the UK the endemic subspecies of perennial knawel *Scleranthus perennis* ssp. *prostratus* is found only in the Breckland area of East Anglia, eastern England. The Brecklands, one of the driest regions of Britain, cover 940 sq. km within the counties of Norfolk and Suffolk.

Perennial knawel is classified as 'endangered' and is given special protection under the Wildlife and Countryside Act 1981. It is a small woody herb flowering between June and September. It is a biennial or short-lived perennial of very short grassy heaths, compacted tracks and abandoned arable land, and is generally found on well-drained acidic (pH 4.9-6.8) sandy soil. It is a poor competitor, and requires open soil for seedling establishment.

Perennial knawel has never been a widespread and within its restricted range it has suffered a marked decline over the last 50 years for several reasons including: the increased use of herbicides and fertilisers; the destruction of field-margin refuges; the abandonment of marginal arable land and heathland; afforestation of former sites and potential sites for colonisation; deterioration of former and potential sites due to inappropriate grazing; and loss of sites to building developments. It is now restricted to the southern part of Breckland, in north Suffolk, and has been

extirpated from Norfolk (where recently reintroduced - Leonard 2006).

This case study describes a perennial knawel reintroduction attempt at Santon Downham in Suffolk.

ACTION

Reintroduction site: In 1995, a suitable site for the reintroduction of perennial knawel *Scleranthus perennis prostratus* was identified at Santon Downham in Suffolk. The site is a 100 m long stretch of a Forest Enterprise 'conservation path'. It is open to the public and is a popular spot for walkers. The soil was tested at the site and was within the required 4.9-6.8 pH range known to be preferred by perennial knawel. There was also 35-50% bare ground, providing optimal conditions for seedling establishment.

Introduction of perennial knawel: The conservation path is roughly subdivided equally into three sub-areas. Initially 12 mature flowering individuals were planted in the spring of 1995 in two of the sub-areas, and 50-100 seeds were planted in the third sub-area. Gaps were left between the three sub-areas over which people could walk, the intention being that disturbance caused by walkers would disperse new seeds along the full length of the site and help suppress competitive plant species.

CONSEQUENCES

Due to the popularity of conservation path, it is walked regularly. This has provided sufficient ground disturbance to create the required amount of bare earth to enable perennial knawel seed germination and seedling establishment both within and between the three sub-areas. As a result of this disturbance, there has been little active management necessary, except for the occasional removal of encroaching heather *Calluna vulgaris*.

In 2005, the site was surveyed. No perennial knawel plants were recorded in the sub-area which was seeded. However, in the other two sub-areas which were planted with mature flowering plants, there were over 305 individuals. There are plans to extend the site further along the conservation path.

Conclusions: To date, the reintroduction of perennial knawel to Santon Downham appears successful. Ensuring that the ground is disturbed and thus suitably bare is essential for the success of this species. The fact that walkers have proved to sufficiently disturb the ground has meant that little management except the occasional removal of encroaching heather *Calluna vulgaris*, has been necessary.

REFERENCES

Leonard Y. (2006) Reintroduction of perennial knawel *Scleranthus perennis prostratus* to Thetford National Nature Reserve, Norfolk, England. *Conservation Evidence*, 3, 9-10.

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