

Reintroduction of perennial knawel *Scleranthus perennis prostratus* to sheep-grazed grassheath at West Stow, Suffolk, England

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SUMMARY

The endemic subspecies of perennial knawel *Scleranthus perennis 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 site known to have historically supported the species in the county of Suffolk. A total of 45 flowering perennial knawel plants cultivated locally, were transplanted in spring to this sheep-grazed site. A year after planting all the transplants had died and no seedlings were observed. The following spring a further 84 adult plants were transplanted, but again all had died by the following year and no seedlings were present. It is thought that sheep-grazing was not intensive enough to keep surrounding vegetation short enough and to keep the ground sufficiently bare to enable successful establishment and germination.

BACKGROUND

In the UK the endemic subspecies of perennial knawel *Scleranthus perennis* ssp. *prostratus* is found only in the Breckland area of East Anglia in 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, having been extirpated from Norfolk (but where recently reintroduced to one site – Leonard 2006).

This case study describes a reintroduction of perennial knawel at a former locality where it had become extinct within its Suffolk range.

ACTION

Introduction site: From historical records, a site at West Stow in the Suffolk Brecklands was identified as previously supporting perennial knawel *Scleranthus perennis* ssp. *prostratus*. The soil was within the required 4.9-6.8 pH range known to be preferred by the species, and there was 35-50% bare ground giving potential for seedling establishment.

Site management & perennial knawel introduction: There was low intensity sheep grazing at the site which maintained a short sward (<7 cm) which was deemed suitable habitat for perennial knawel reintroduction. In spring 1995, 45 mature flowering individuals (which had been cultivated locally in pots) were planted. There was no additional active management of this site as it was considered there was a sufficient intensity of sheep

grazing to maintain the site in suitable condition for perennial knawel.

CONSEQUENCES

All the transplanted perennial knawel plants had died by 1996 (a year after planting) and no seedlings were recorded. In spring 1997, an additional 84 mature flowering individuals were therefore planted but all had died by 1998 and again no new seedlings were located.

Conclusions: The reintroduction of perennial knawel at West Stow was not successful. In

hindsight, it is believed that there was not in fact enough sheep grazing to keep the vegetation short enough (< 5-7 cm) and the ground suitably bare. Reintroduction attempts at this site have now been abandoned.

REFERENCES

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