

SPECIES HANDBOOK

Kentish Milkwort
(*Polygala amarella*
ssp. austriaca)

Ecology, conservation, survey
and management



Conservation Status

ENDANGERED

- Facing a high risk of extinction in the wild
- Potentially only two native sites remaining
- Reliant on the maintenance of short sward grassland and areas of open ground

Recent re-working of the taxonomy of this species has placed Kentish Milkwort in its own distinct sub-species, separating it from the other Dwarf Milkwort populations in the Yorkshire Dales.

This means, what was already a rare species, has now become critically endangered, and we are fighting to try and conserve plants in just three remaining sites in Kent.

Monitoring this species is a considerable challenge due to the diminutive size of plants, and as the populations become smaller and more isolated within their sites, it is extremely difficult both to monitor and manage the conservation of the remaining plants.



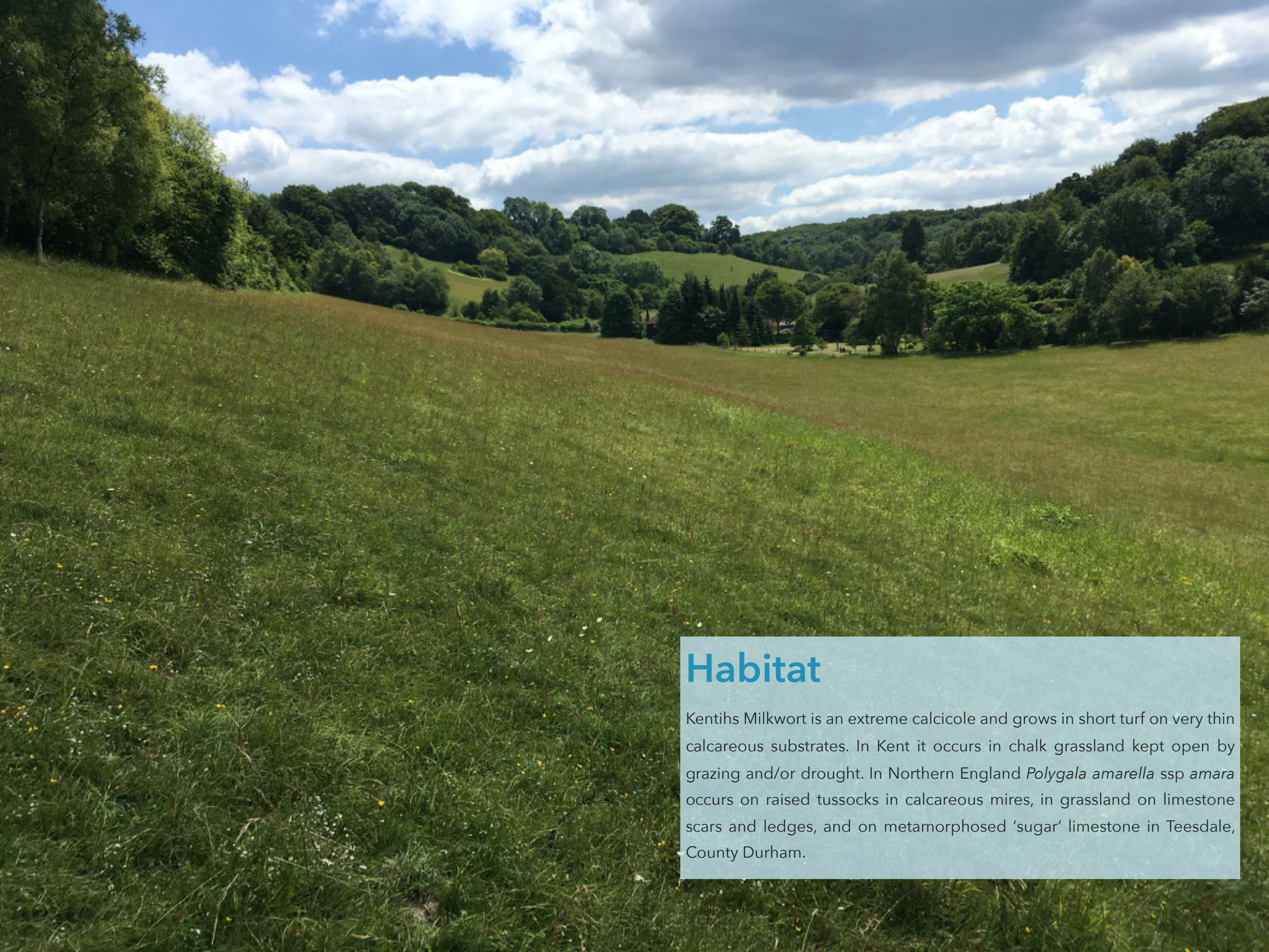
Description

A small herb with erect to ascending stems to 12 cm long but often only 1.5 - 5 cm. Leaves are spoon-shaped at base, forming a distinct rosette; stem leaves are usually smaller and narrower. Inflorescence a raceme of 6 - 30 very small flowers, each 2.5 - 5 mm long, with non-anastomosing veins on the inner sepals. Flowers are sky blue to pink in northern populations, pale mauve to white with hints of green in Kent populations. Flowering from May to July.



Lifecycle

Thought to be a short-lived perennial that relies upon regular flowering and seed set to maintain populations. North Downs populations may have shorter life cycles than northern limestone populations.



Habitat

Kentish Milkwort is an extreme calcicole and grows in short turf on very thin calcareous substrates. In Kent it occurs in chalk grassland kept open by grazing and/or drought. In Northern England *Polygala amarella* ssp *amara* occurs on raised tussocks in calcareous mires, in grassland on limestone scars and ledges, and on metamorphosed 'sugar' limestone in Teesdale, County Durham.



Distribution

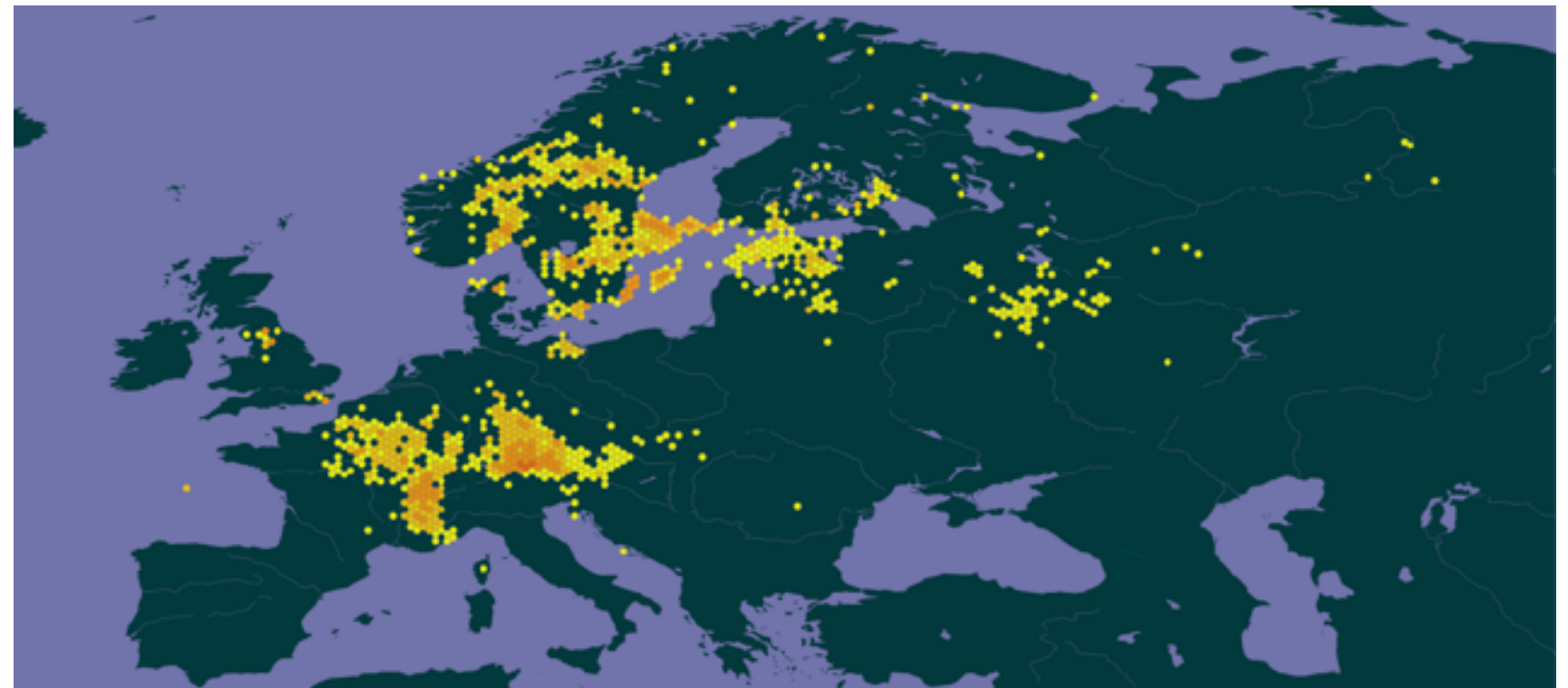
UK

Very disjunct - *Polygala amarella* ssp. *austriaca* only occurs in the North Downs in Kent, where it has recently declined to just 3 populations.

Polygala amarella ssp. *amara* occurs in three areas in the north - the Craven district of Yorkshire, the limestone districts near Orton, Cumbria, and the limestones of Upper Teesdale.

Global

Dwarf Milkwort has a wide distribution in Europe, encompassing discrete populations in the Pyrenees, northern France, the French and Swiss Alps, central and eastern Europe and Scandinavia, with further populations found further east into Russia.



Reasons for decline

Habitat loss and changes in habitat management. Sites have been lost to the historical ploughing and improvement of chalk grassland, and also cessation of grazing resulting in the encroachment of grasses and scrub. In northern England overgrazing has been implicated in the Milkwort's loss from some sites.

As a species which grows in thin exposed soils it is more vulnerable to summer droughts, and climate change is likely to have an adverse impact on populations which are already at perilously low numbers.

Protection under the law

Listed as a species of Principal Importance in England and Wales under the NERC Act 2006 and is a UK Biodiversity Action Plan priority species.

Status

Endangered, meaning it is facing a high risk of extinction in the wild.

Pending confirmation of its taxonomy Kentish Milkwort has currently been closed as **Critically Endangered**.



Unmanaged and extinct Woodland Trust site at Blackbush Shaw, Kent.



SURVEY

Habitat

Short turf grassland. Plants will only be found in open ground, but often lurk on the edge of more tussocky vegetation rather than being out in the open.

When to survey

Best surveyed May-July when plants are in flower due to the difficulty of finding vegetative rosettes. Plants will persist into early September but may be harder to spot.

What to record

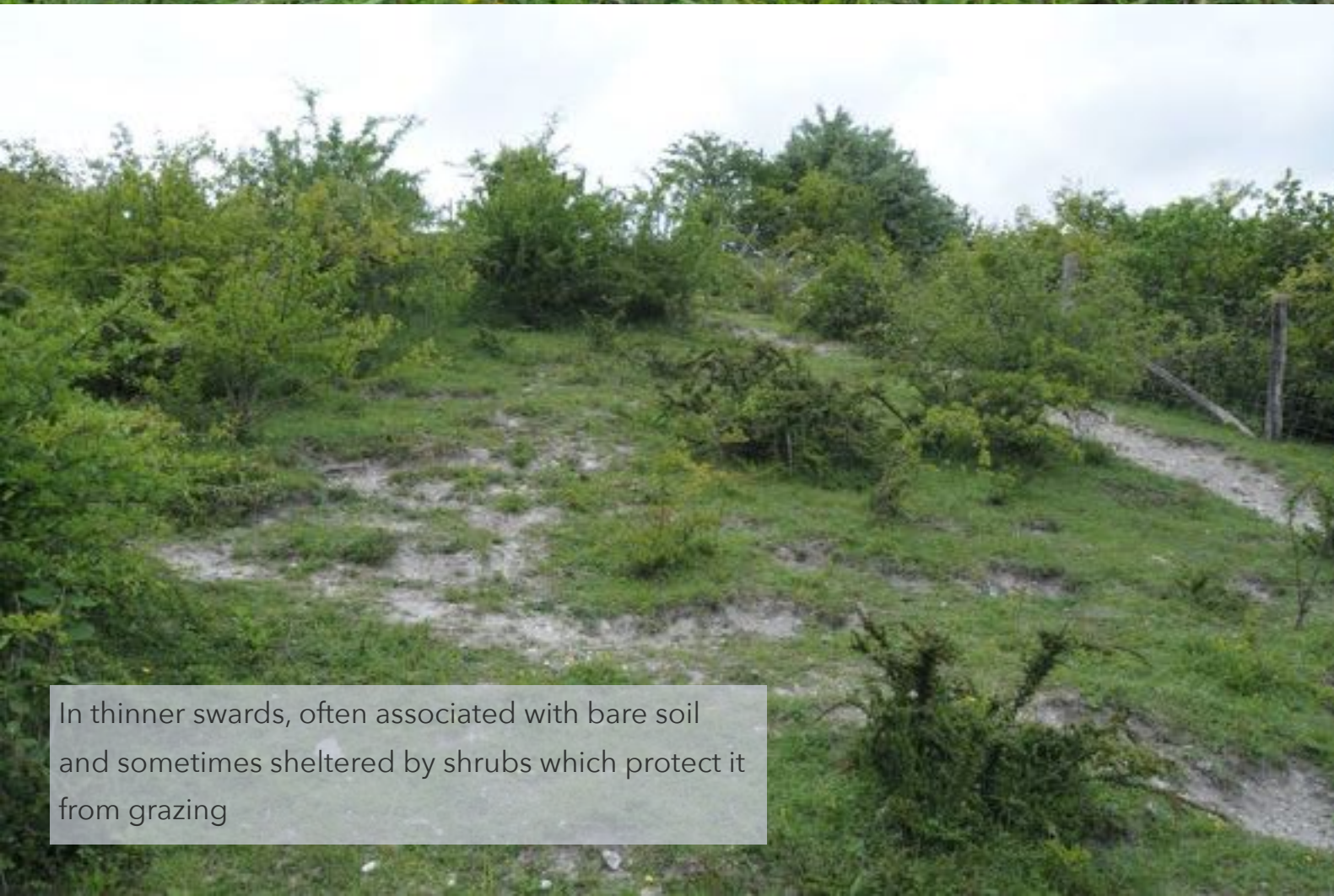
- Numbers of plants (if over 100 count to the nearest 10, if over 100 to the nearest hundred)
- Area of patch (there may be multiple patches, but don't overcomplicate things!)
- Exact location of plants, with combination of GPS and sketch map
- Mark plants with red pegs or similar and photograph, as they are extremely hard to relocate

SURVEY

Habitat



In chalk grassland, nestling at the edge of Tor-grass tussocks



In thinner swards, often associated with bare soil and sometimes sheltered by shrubs which protect it from grazing



Short sward with some bare soil

SURVEY

Confusable species

Chalk Milkwort, which often grows with it, has a short stem below the basal rosette and larger, more vividly coloured flowers.

Common Milkwort and Dwarf Milkwort both have basal rosettes but the leaves of Dwarf are obovate, rather than elliptical in Common. The leaves of Dwarf are also bitter tasting and the stems are rarely branched, as in found in Common.

The sepals have non-anastomosing veins in Dwarf Milkwort, as opposed to the anastomosing veins of Common (Chalk and Dwarf cannot be divided this way)

Ultimately the very small size of Dwarf Milkwort (below 10cm) sets it apart.

Associated species:

Upright Brome (*Bromopsis erecta*), Tor-grass (*Brachypodium pinnatum*), Quaking Grass (*Briza media*), Glaucous sedge (*Carex flacca*), Sheep's Fescue (*Festuca ovina*), Horseshoe Vetch (*Hippocrepis comosa*), Salad Burnet (*Poterium sanguisorba*), Mouse-ear Hawkweed (*Pilosella officinalis*), Fairy Flax (*Linum catharticum*), Dwarf Thistle (*Cirsium acaule*), Common Rock-rose (*Helianthemum nummularium*), and, in the north of England, Blue Moor-grass (*Sesleria caerulea*)



Chalk Milkwort (*Polygala calcarea*) By Isidre blanc - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=37558574>



Common Milkwort (*Polygala vulgaris*)



Dwarf Thistle
(*Cirsium acaule*)

Fairy Flax
(*Linum catharticum*)

Mouse-ear Hawkweed
(*Pilosella officinalis*)

Horseshoe Vetch
(*Hippocrepis comosa*)

Salad Burnet
(*Poterium sanguisorba*)

Common Rock-rose
(*Helianthemum nummularium*)

Tor-grass
(*Brachypodium pinnatum*)

Upright Brome
(*Bromopsis erecta*)

Quaking Grass
(*Briza media*)

Glaucous Sedge
(*Carex flacca*)

Sheep's Fescue
(*Festuca ovina*)

MANAGEMENT



Scrub removal at Purple Hill



Ground rotovation and turf removal at Godmersham Down

The key to the survival of this species is the creation of small areas of short sward grassland, with some small areas of bare ground. These should ideally be interspersed by taller tussocky vegetation and possibly low amounts of scrub, giving the Milkwort 'nursery plants' which they seem to favour growing next to. Excessively scrubby sites will require regular clearance.

The complexity of this micro-habitat makes this a difficult habitat to maintain, and this is most likely to be achieved through a pattern of mixed grazing with alternating periods of heavier cattle grazing with either sheep grazing or cessation of grazing.

At Godmersham Down, where only sheep grazing is available, we have created small areas of hand-rotovated bare ground and short sward, especially in areas where Upright Brome and Tor-grass has become dominant.

In the North of England lower nutrient leaves (in both soils and the air) make the maintenance of short swards easier, but many populations have still been lost due to changes in grazing patterns. The plants seem to co-exist well with livestock (possibly due to their bitter taste)

OUR WORK

- Annually monitoring the last three colonies in the North Downs in Kent.
- Undertaking habitat management at the most vulnerable sites.
- Creating ex-situ populations for ecological research and eventual re-introduction in the wild.



Kentish Milkwort is facing an extremely uncertain future, with the combined pressure of difficulties procuring correct grazing regimes, and intense climatic fluctuations having severe impacts on grasslands in the south of England.

In 2019 plants could only be found on one site, and whether the species can recover from this low-level is a massive challenge in the years ahead.



Steering group members discussing the feasibility of a new site introduction

The Species Recovery Trust is a charity set up to tackle the loss of some of the rarest species in the UK.

There are over nine hundred native species in the UK that are classed as under threat, with several hundreds more currently widespread but known to be in significant decline. The countryside is now bereft of many species that were a familiar sight a mere generation ago.

A small number of these species are on the absolute brink of existence, poised to become extinct in our lifetimes; our goal is to stop them vanishing.

Our aim is to remove 50 species from the edge of extinction in the UK by the year 2050. In addition we are reconnecting people with wildlife and the natural world through training programmes and awareness raising.



A photograph of a forest floor in spring. The ground is covered with a dense carpet of small, purple-blue flowers, likely bluebells. In the foreground, a large, moss-covered tree stump lies horizontally. The background is filled with tall, slender trees with green foliage, and sunlight filters through the canopy, creating dappled light on the forest floor.

the
species
recovery
trust

www.speciesrecoverytrust.org.uk
Registered Charity 1146387