

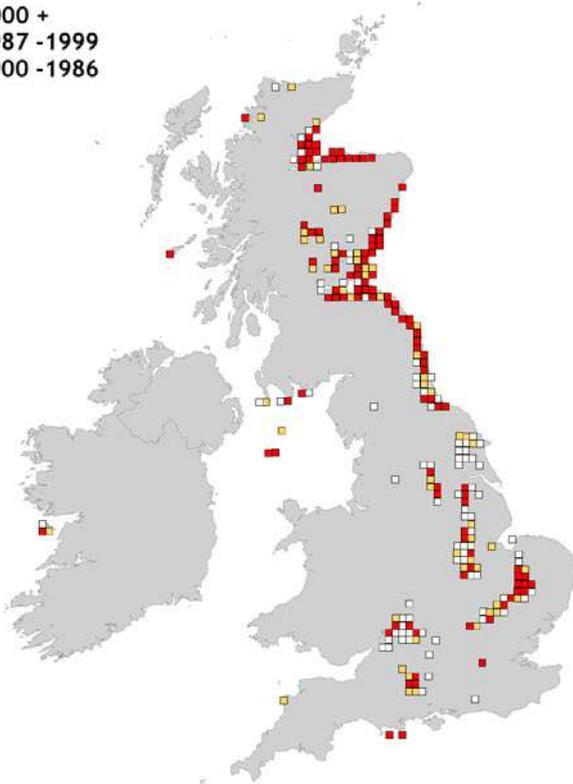
Purple Milk-vetch *Astragalus danicus*

Purple milk-vetch is a low-growing hairy herb of the pea family (*Fabaceae*). The pinnate leaves 3-7 cm in length are typical of the family, with hairy leaflets 5-12 mm in length. Bluish-purple pea-like flowers that are 15 mm long are gathered in short compact racemes that look like a compact flower head with stalks much thicker than the leaf stalk. Swollen seed pods are dark brown with obvious white hairs. Members of the pea family are known to provide a good nectar resource for pollinating insects.



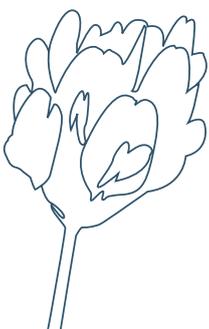
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- 2000 +
- 1987 -1999
- 1900 -1986



Purple milk-vetch distribution across Britain and Ireland

The data used to create these maps has been provided under licence from the Botanical Society of Britain and Ireland (BSBI) and accessed from the Society's online distribution database.



Lifecycle

Purple milk-vetch is a perennial plant flowering mainly in June and July. Very little is known about its seed longevity, but the plant has reappeared on land cleared of coniferous plantation in the Norfolk Brecklands suggesting quite significant seed dormancy capacity.

Habitat

Its main habitats are species-rich short, dry and infertile calcareous grassland, on both limestone and chalk. The plant is also found on coastal sand-dunes and in the Brecks on inland calcareous sands. It appears to be physically rather than chemically restricted to calcareous soils and will grow on moderately acid sands/gravels as long as competition from other species is kept low, primarily by adequate grazing and maintenance of low soil nutrient status. In Scotland purple milk-vetch is also present on old red sandstone sea cliffs and machair grassland.

Distribution

Purple milk-vetch has inland populations in southern England in Gloucestershire, Wiltshire, the Chilterns and on the Brecklands of Norfolk and Suffolk. Further north the populations are mainly towards the eastern side of England, east Midlands, Lincolnshire and Yorkshire Wolds, as well as coastal grasslands in the north-east of England and Scotland. It is absent from Wales and Northern Ireland. An isolated population occurs on Aran Islands off the west coast of Ireland.

Purple Milk-vetch

Astragalus danicus

Species fact sheet

Habitat management for purple milk-vetch

Habitat management for purple milk-vetch should target the maintenance and restoration of traditional grazing management on calcareous and sandy grasslands where this species is present. Examination of any historic management practices should be undertaken to ascertain whether this management has helped the plant to persist on the site. As with any management, the aim is to achieve the right habitat structure. Light to moderate mixed stock grazing should be undertaken in the autumn and winter, outside of the flowering season, to maintain a short sward. Periods of heavier grazing may be required to remove greater vegetation growth in wetter years and maintain the very short turf required by this plant. Moderate spring/summer or year-round grazing would usually be better than no grazing at all as it doesn't have to flower every year, and can persist reasonably well in such situations. Purple milk-vetch is detrimentally affected by fertilisers which increase the grass growth shading-out this low-growing herb.

Seed germination may rely on opening the sward creating bare ground and soil disturbance to bring buried seed to the surface to germinate. Further restoration of historical sites may also be possible from the soil seed bank if scrub and plantation woodland is restored to pasture as the soil disturbance may also bring buried seed to the surface, but populations will only be secure in the long-term through appropriate livestock grazing. Little is also known about the colonisation processes of this species but landscape links between surviving populations of purple milk-vetch in the Brecklands are being created by undertaking traditional stock-droving between grasslands with extant populations.

Traditional stock-droving between grasslands with extant populations of purple milk-vetch can help create landscape links between surviving populations.



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GB Status and rarity

It is classified as 'Endangered' in The Vascular Plant Red Data List for Great Britain 2005 reflecting the fact that purple milk-vetch has suffered substantial decline since 1930 across large parts of its range. The decline had been underway before 1930, exemplified by an 1860 account by the Cambridgeshire botanist Charles Babington noting that 'until recently (within 60 years) most of the chalk district was open and covered with a beautiful coating of turf, profusely decorated with pasqueflower *Pulsatilla vulgaris*, purple milk-vetch and other interesting plants. It is now converted into arable land, and its peculiar plants mostly confined to small waste spots by road-sides, pits, and the very few banks which are too steep for the plough'. The decline has been especially severe in the Cotswolds, Chilterns and the counties of Lincolnshire and Yorkshire.

Reasons for decline

Purple milk-vetch has declined on the chalk grasslands in southern England and limestone in north-east England due to the destruction of habitat through agricultural improvement and discontinuity of suitable grazing management. Additionally, nitrogen from spray drift or atmospheric deposition is also thought to affect this plant.

Protection under the law

This plant is included as a species "of principal importance for the purpose of conserving biodiversity" under Section 41 (England) of the Natural Environment and Rural Communities Act 2006.

Survey method

In some cases individual plants may be easy to identify where they are solitary, but where plants are growing close together surveying should be undertaken by monitoring the size of clumps of plants.



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