

Pheasant's-eye

Adonis annua



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An unlikely looking member of the buttercup family with deep red flowers resembling those of anemones. The central part of the flower has black anthers. Pheasant's-eye can grow up to 50 cm in height and can be much branched. The leaves are deeply divided giving a feathery appearance. Flowers are 15-25 mm wide. Elongated oval seed heads bear approximately 30 olive green seeds, similar in shape to a grape pip.

Pheasant's-eye is unmistakable when flowering however young plants look similar to species of mayweed. They can be separated by the unscented leaves of Pheasant's-eye and hollow stems.

Lifecycle

Pheasant's-eye is an annual herb, flowering from June to July. It mainly germinates in the autumn but can also germinate in spring. Seeds display complex dormancy being underdeveloped when shed in June / July. They ripen on the soil surface in warm dry conditions. The hard seed coat splits or decays through repeated warm-dry and cool-wet conditions through the seasons, allowing germination to occur. The seeds are thought to have intermediate to long-term longevity in the soil. Anecdotal evidence suggests that weather conditions in the summer prior to germination effect germination rate. Seeds that are 'baked' in hot, dry summers have shown increased germination rates in comparison to cool wet summers.

GB status and rarity

Endangered

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.

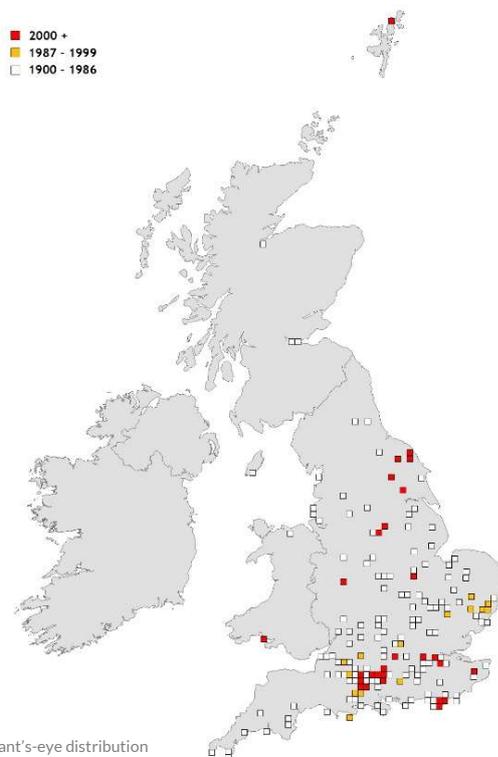
Habitat

An arable species, typically found in the margins and corners of autumn (and sometimes spring) sown cereal fields. There are records of this species at sites in arable fields and at locations with regularly disturbed grassland, such as Salisbury Plain.

Pheasant's-eye is found on calcareous soil, mostly of chalk origin, but can also be found on soils derived from limestone. Soil texture varies from silt to clay loams. It is found within species-rich arable plant communities with Corn Parsley and Rough Poppy. At a small number of sites this species grows alongside Narrow-fruited Cornsalad and Prickly Poppy.

Distribution

This species has always been associated with chalk soils, particularly in southern England and, as such, has never been widespread. However, it was abundant enough during the 18th century to be picked and sold as a cut flower called 'Moroccan Red'. Many of the recent records of this species are confined to southern and central England, though there are records for north-east England, south Wales and Shetland.



Pheasant's-eye distribution across Britain and Ireland. The data used to create this map has been provided under license from the Botanical Society of Britain and Ireland (BSBI) and accessed from the Society's online database.

Survey method

All flowering and non-flowering individuals on a site should be counted or estimated with larger populations. Numbers of plants are highly variable between years.

Reasons for decline

The large seeds of Pheasant's-eye were historically spread within cereal seed and one of the main reasons for decline is seed cleaning. It is a poor competitor preferring open vegetation, low soil nutrient levels and regular cultivation. Threats include the development of competitive cereal crop varieties that grow quickly, closing the cereal sward and preventing light reaching seedlings. Widespread use of broad-spectrum herbicides has also had a negative effect on this species. Anecdotal evidence suggests that the conversion from ploughing to minimum tillage has also had a detrimental effect on this species.

Habitat management

Ideal management on arable land involves annual cultivation in late summer (between August / September), without subsequent disturbance until Pheasant's-eye plants have flowered and set seed the following spring / summer. Pheasant's-eye will grow within a crop, such as an autumn sown cereal or within an uncropped cultivated margin or plot.

It is highly susceptible to broad-spectrum herbicides. However, if required, treatment of problematic weed species, particularly grasses, could be undertaken through targeted herbicide use. Fertiliser can encourage problem weeds that prefer higher nutrient soils. Fertiliser is not usually applied to uncropped areas, and application should be limited on cereal headlands, wildlife cover mixes or low-input cereals where Pheasant's-eye is present.

Using a reduced seed rate and/or a crop variety that has fewer tillers on conservation headlands will also benefit Pheasant's-eye as it is not very competitive. If this species is growing within a crop, the crop should be harvested after Pheasant's-eye has set seed, usually late July - August.

In non-arable situations, populations of Pheasant's-eye should be maintained through regular ground disturbance such as ploughing, harrowing or rotovating. Consideration of other species and habitats of conservation concern may need to be considered, such as the presence of calcareous grassland. As the seed was historically spread in cereal seed, this mechanism of unintentionally collecting and preserving seed in grain and re-sowing it with the cereal seed may have led to the large populations recorded in the 18th century. A method for preserving populations of Pheasant's-eye into the future may be the collection of seed each year and sowing it into the same locations replicating the historical sowing that would have happened alongside cereal seed.