

Red Hemp-nettle

Galeopsis angustifolia



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Lifecycle

Red Hemp-nettle is a spring germinating annual herb which flowers from July to October. Plants can re-grow following crop harvest, flowering and producing seeds for a second time. Seeds have a hard coat, which splits or decays through repeated warm-dry and cool-wet conditions through the seasons, allowing germination to occur. Therefore, germination can occur slowly and sporadically over many years. Seeds are thought to be long-lived in the soil seed bank. Red Hemp-nettle can appear up to 20 years after a previous disturbance.

Habitat

This species grows in arable fields, coastal shingle, railway ballast and limestone scree. It has also been recorded growing on Salisbury Plain within tank tracks. On arable land this species is largely associated with spring-sown cereal crop margins.

A relatively low-growing plant with an erect stem growing to 50 cm in height, though it can be much shorter on low nutrient soils. The short-stalked, spear-shaped, narrow leaves are pointed at the tip, toothed on the edges and covered with soft hairs.

Red Hemp-nettle has asymmetrical flowers with pinkish-red petals which have white blotches at the base. The flowers have a long tube and look like they are 'jumping' out of the short green calyx tube.

Red Hemp-nettle is unmistakable when in flower, but it can be confused with Red Bartsia when not in flower. The lower leaves of Red Bartsia have stems that are less than 6 mm long, whilst lower leaves of Red Hemp-nettle have stems over 6 mm long.

When growing in soil Red Hemp-nettle is found on free-draining calcareous soils, particularly those derived from chalk. Red Hemp-nettle prefers very open and sparse habitats however, as the species relies on the overall community of plants to attract pollinating insects, it rarely grows completely alone.

GB status and rarity

Critically Endangered.

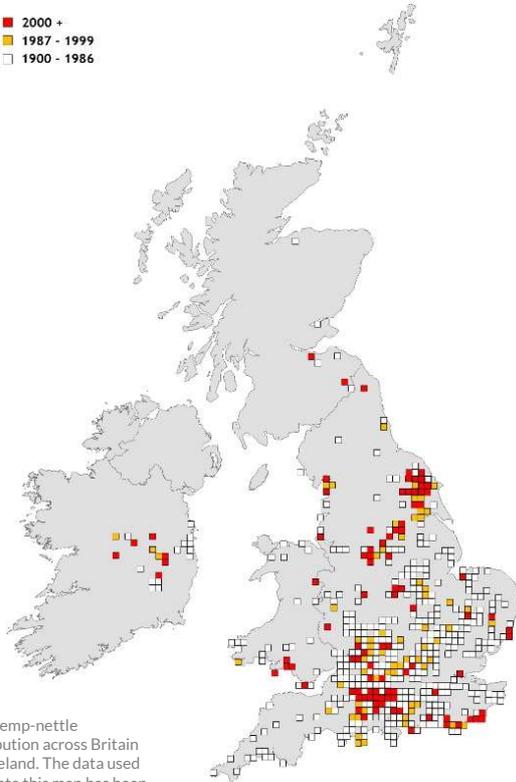
Protection under the law

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.

Survey method

Individual plants should be counted in smaller populations and larger populations should be estimated.

■ 2000 +
■ 1987 - 1999
□ 1900 - 1986



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

Distribution

Once widespread on calcareous soils from Devon to Yorkshire, Red Hemp-nettle is now largely restricted to south and south-east England from Dorset to Cambridgeshire.

Reasons for decline

The main cause of decline is intensification of arable farming. Key factors include the use of more competitive crop varieties, increased use of fertiliser and broad-spectrum herbicides. Red Hemp-nettle is a very poor competitor and is rarely found growing within a crop or under dense cover. Being spring-germinating, this species has suffered from the switch from spring to autumn cropping.

Habitat management

Ideal management on arable land involves annual cultivation in spring (between February and April) without subsequent disturbance until Red Hemp-nettle plants have flowered and set seed. Stubbles should be left as long as possible into autumn as plants can re-grow and set seed for a second time.

Red Hemp-nettle prefers very sparse cover and is often found with few associated species. If there is high cover of other plants, be that a cereal crop or wild plants including problem species, the population size declines and the plants often appear to be smaller. Uncropped cultivated margins or plots are the best management for this plant. However, it will grow within a crop, such as spring sown cereal or cereal headland where herbicide is not used.

This species is very susceptible to broad-spectrum herbicides and their use will reduce population sizes. However, if required, treatment of problematic weed species could be undertaken through targeted herbicide use, combining this with a graminicide if there is a grass weed problem (which is less likely in spring cultivation). For example, this could be undertaken along margins where problem weeds have increased in cover and suppress Red Hemp-nettle.

If growing Red Hemp-nettle within a crop, reduced fertiliser application and lower cereal density can increase light levels for this and other arable species. Reduced sowing density has been shown to increase rare arable species richness in cereal crops. In addition, fertiliser can encourage problem weeds and other vegetation growth. The use of fertiliser should be reduced or avoided entirely on any uncropped areas, cereal headlands or other areas managed for arable plants.

In non-arable situations, populations of Red Hemp-nettle should be restored and maintained through annual soil disturbance during the spring e.g. rotavation. Scrub clearance may be required at coastal shingle, limestone scree and railway ballast sites with Red Hemp-nettle.