

Crepis mollis (Jacq.) Asch.

Northern Hawk's-beard

Crepis mollis is a tall, yellow-flowered perennial with a pure white pappus and stem leaves that are entire or slightly toothed and semi-amplexicaul. It is associated with shallow, slightly flushed base-rich soils, often on north-facing slopes, and is found in neglected upland hay meadows, bankside and roadside vegetation that is seldom cut, and more rarely in wood pasture. Most populations occur in border counties north of the Tees. It is a rare species in the Scottish Highlands, Cumbria and the Craven Pennines. *C. mollis* is assessed as Endangered in Great Britain, Vulnerable in England, and as Regionally Extinct in Wales



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IDENTIFICATION

Crepis mollis is a rather slender, yellow-flowered composite with distinctive semi-amplexicaul (semi-clasping) leaf-bases on the lower stem leaves that are entire or slightly denticulate, with small marginal teeth. The upper stem-leaves are small, shortly stalked and narrowly oval. The entire, petiolate but narrowly winged basal leaves are distinctly net-veined with the venation on the undersides resembling *Succisa pratensis* (hence the former name *C. succisifolia*).

SIMILAR SPECIES

With experience, *C. mollis* can be readily told from *C. paludosus* by its mid-green untoothed, semi-amplexicaul leaf-bases to the lower stem leaf and by the colour of the pappus, which is white in *C. mollis* and dirty-white to pale-brown in *C. paludosus*.



Crepis mollis habitat in Wharfedale, mid-west Yorkshire. The species is found on the steep grassland slopes above the uppermost dry stone wall. ©Pete Stroh.

However, in its British habitats *C. mollis* is more likely to be confused with some hawkweeds, in particular those with semi-amplexicaul bases to the stem leaves and inconspicuous marginal teeth, and some (e.g. *Hieracium prenanthoides* and several species from Section *Foliosa*) resemble *C. mollis* closely (O'Reilly 2012). *C. mollis* differs in having a white pappus, basal leaves with net-veins and upper stem leaves that are small and oval in shape. Although the involucre bracts of *Crepis* are in two rows, the outer bracts of *C. mollis* vary confusingly in length, making this a difficult character.

HABITATS

In Britain *C. mollis* is typically found in herb-rich grassland or wood pasture on shallow, slightly flushed, base-rich soils, often on north-facing slopes, and more rarely in partial shade under a woodland canopy. By upland streams and rivers it is typically associated with intrusive rocks or limestone, often on banks away from the watercourse, unlike *C. paludosus* which is usually in much wetter habitats closer to the stream itself (Braithwaite 1994).

Most populations are associated with neglected upland hay meadow vegetation (NVC MG3c *Anthoxanthum odoratum*-*Geranium sylvaticum* grassland, *Arrhenatherum elatius* sub-community) but it also occurs in MG1e *Arrhenatherum elatius* grassland, *Centaurea nigra* sub-community or MG5c *Cynosurus cristatus*-*Centaurea nigra* grassland, *Danthonia decumbens* sub-community in the same habitat. Other recorded habitats include MG1b/c (*Urtica dioica* and *Filipendula ulmaria* sub-communities respectively), M27a *Filipendula ulmaria*-*Angelica sylvestris* mire, *Valeriana officinalis*-*Rumex acetosa* sub-community and MG9 *Holcus lanatus*-*Deschampsia cespitosa* grassland in long-neglected road/railway bank and verge vegetation (O'Reilly 2012).

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Its presence in MG2 *Arrhenatherum elatius-Filipendula ulmaria* tall-herb grassland at a few sites possibly indicates a former association with woodland.

BIOGEOGRAPHY

In Britain most populations of *C. mollis* are found in border counties north of the River Tees. It is much rarer in the Scottish Highlands, Cumbria and the Craven Pennines with a few former outlying populations in Lancashire and North Wales (Walker & Robinson 2011). Most sites are between 150 and 400 metres but it ascends to 725 metres in Caenlochan.

In Europe it occurs in sub-montane regions throughout the Temperate zone from the Pyrenees and Northern Italy northwards to Germany and the Baltic states and from Britain to Ukraine and western Russia. It is not known from outside Europe.

ECOLOGY

C. mollis is a tall (up to 1 m) perennial with short rhizomes which replace the parent rosette after flowering, which takes place from late June to mid-August. In some years the leaves over-winter as a rosette.

The large ligulate flowers are produced on a branched inflorescence on a solitary stem. Virtually nothing is known about its reproductive biology although it presumably reproduces primarily by seed given its inability to spread

vegetatively.

The flowers are visited by bees and flies but its mode of fertilization is not known. The seed is a cylindrical achene with a pappus of stiff hairs which presumably aids dispersal. The seed germinates more readily in spring than autumn and the flowers are often eaten by sheep and rabbits.

Most populations are associated with damp, weakly acid or basic soils overlying intrusive rocks (e.g. basalt) or limestone and occur in well-lit places, although *C. mollis* can tolerate some shading under a woodland canopy (e.g. at Wynch Bridge, Teesdale and at Colt Park Wood, Mid-west Yorkshire).

THREATS

The main threat to *C. mollis* is the intensification of hay-meadow management e.g. increased fertilizer applications, more intense spring grazing, earlier cutting dates, and switch from hay- to haylage-making. Eutrophication and inappropriate management may also account for declines on some road verge sites.

MANAGEMENT

Most of the current sites for *C. mollis* only receive infrequent grazing or cutting. These include road verges, riverbanks and banks in meadows which receive less intensive management than the surrounding meadow. It probably only tolerates light grazing or infrequent mowing and consequently it has disappeared from many meadows and is now restricted to less frequently managed areas.

REFERENCES

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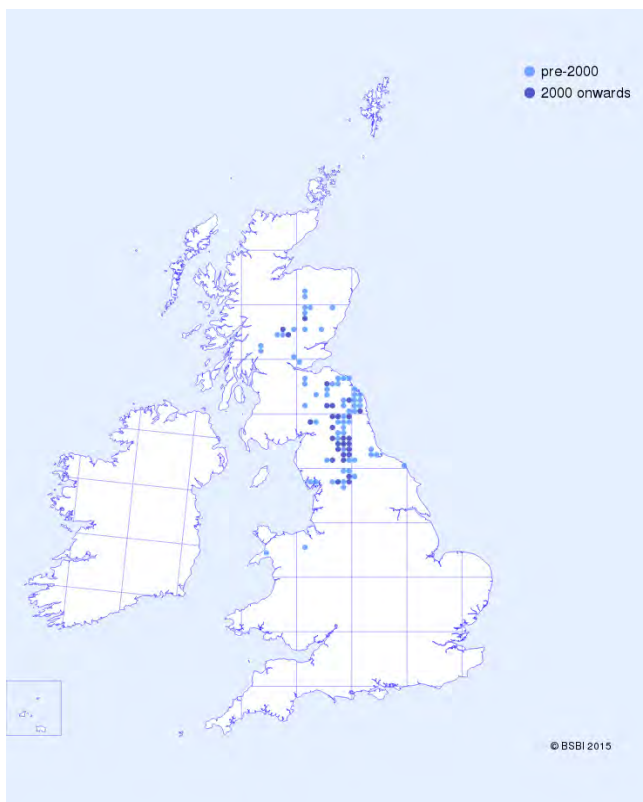
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Distribution of *Crepis mollis* in Great Britain and Ireland.