

The biology and non-chemical control of Smooth Hawk's-beard (*Crepis capllaris* (L.) Wallr.)

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Smooth Hawk's-beard

(smooth crepis)

Crepis capllaris (L.) Wallr.

Occurrence

Smooth hawk's-beard is a common winter or summer annual, native in grassy places, rough and waste ground throughout Britain (Stace, 1997). It is a rapid colonist of dry, disturbed habitats (Grime *et al.*, 1988).

Plants are variable in robustness and the degree of glandulosity of the peduncles and of the involucre bracts (Clapham *et al.*, 1987). Var. *glandulosa* is commoner in northern Britain (Stace, 1997).

Biology

Smooth hawk's-beard flowers from June to September (Clapham *et al.*, 1987), June to July but some populations flower again in August-September (Grime *et al.*, 1988). Damaged plants may flower in the autumn. The flowers are self-incompatible and are insect pollinated. Seed is set from July to August. There are 40 seeds per flower head.

When seeds were sown in a 75 mm layer of soil in cylinders sunk in the field, many seedlings emerged soon after sowing in autumn (Roberts, 1986). In the following and subsequent years, the main period of emergence was from March to September. A rapidly decreasing number of seedlings emerged over the 5 years of the study.

Smooth hawk's-beard germinates in the autumn and overwinters as a leaf rosette (Grime *et al.*, 1988).

Persistence and Spread

The seeds have a pappus of hairs and are wind dispersed (Grime *et al.*, 1988).

In samples of perennial and Italian ryegrass seed of Irish origin tested in 1960-61, smooth hawk's-beard seed was found as a contaminant in over 4% of samples tested (Gooch, 1963). In Timothy grass seed of English origin it was found in 1.4% of samples tested.

Management

In pasture and meadows it should be spudded out to prevent seeding (Morse & Palmer, 1925). The growth of the other vegetation should be encouraged.

When rabbits are excluded from grassland, smooth hawk's-beard flowers freely and increases in number (Watt, 1981).

References

- Clapham A R, Tutin T G, Moore D M** (1987). *Flora of the British Isles*, 3rd edition, Cambridge University Press, Cambridge, UK.
- Gooch S M S** (1963). The occurrence of weed seeds in samples tested by the official seed testing station, 1960-1. *The Journal of the National Institute of Agricultural Botany* **9** (3), 353-371.
- Grime J P, Hodgson J G, Hunt R** (1988). *Comparative Plant Ecology*, Unwin Hyman Ltd, London, UK.
- Morse R & Palmer R** (1925). *British weeds their identification and control*. Ernest Benn Ltd, London.
- Roberts H A** (1986). Seed persistence in soil and seasonal emergence in plant species from different habitats. *Journal of Applied Ecology* **23**, 639-656.
- Stace C** (1997). *New Flora of the British Isles*. 2nd edition. Cambridge University Press, Cambridge, UK.
- Watt A S** (1981). Further observations on the effects of excluding rabbits from grassland A in East Anglian Breckland: the pattern of change and factors affecting it (1936-73). *Journal of Ecology* **69**, 509-536.