

The biology and non-chemical control of Oxford Ragwort (*Senecio squalidus* L.)

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Oxford Ragwort *Senecio squalidus* L.

Occurrence

Oxford ragwort is an introduced annual to short-lived polycarpic perennial weed of waste ground, walls and waysides (Stace, 1997). It only occurs as a casual on arable land but is absent from grassland (Grime *et al.*, 1988). A native of Sicily where it occurs on volcanic soils it escaped from Oxford Botanic Gardens, hence the common name (Salisbury, 1961). It was first recorded in Oxford in 1794 and was considered plentiful by 1833. Oxford ragwort spread rapidly and is now common in England and Wales. It is not recorded above 300 m in Britain. Winter temperatures are higher in build up areas and this may favour its occurrence in urban areas (Grime *et al.*, 1988).

Biology

Oxford ragwort flowers from May to December (Clapham *et al.*, 1987). Seed is set from June onwards (Grime *et al.*, 1988). The flowers are insect pollinated and self-incompatible. The average seed number per flower head is 79 and the average per plant is 10,000 (Salisbury, 1961).

The seeds have a light requirement for germination due to the retention of chlorophyll by the maternal tissue that surrounds the developing seed (Cresswell & Grime, 1981). The chlorophyll filters the light that reaches the seeds. In Petri-dish tests in low and high light levels and in darkness, seed gave 97% and 70% germination in low and bright light respectively and 45% in darkness (Grime & Jarvis, 1976). Seed germination increases following a period of dry-storage (Grime *et al.*, 1988).

Oxford ragwort seeds germinate in spring and in autumn (Salisbury, 1961). When seeds were sown in a 75 mm layer of soil in cylinders in the field and stirred periodically some emerged soon after sowing in autumn but most seedlings emerged in the following year (Roberts, 1986). Just a few odd seedlings emerged in the subsequent 4 years of the study. The main period of emergence was February to September with peaks in April-May and August-September. Flushes of emergence tended to follow cultivations. Seedlings establish best on bare ground or in gaps in the vegetation (Grime *et al.*, 1988).

The plant remains winter green.

Persistence and Spread

Seeds persist only briefly in soil (Grime *et al.*, 1988).

The plumed seeds are wind dispersed (Salisbury, 1961). Oxford ragwort has spread rapidly via the rail network (Grime *et al.*, 1988).

Management

Oxford ragwort is absent from grazed and mown grassland (Grime *et al.*, 1988). Normal soil cultivations will control the weed.

References

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