OV3
Papaver rhoeas-Viola arvensis community
Papaveretum argemones (Libbert 1933) Kruseman & Vlieger 1939

Constant species
Anagallis arvensis, *Medicago lupulina*, *Papaver rhoeas*, *Poa annua*, *Polygonum aviculare*, *Veronica persica*, *Viola arvensis*.

Rare species
Veronica triphyllos.

Physiognomy
The *Papaveretum argemones* comprises annual weed vegetation in which the most striking feature is the abundance of various species of red poppy. *Papaver rhoeas* is the most frequent and usually the most abundant of these, its bright scarlet flowers appearing from mid-June and continuing intermittently until October, but also common, particularly in the south and east of Britain and beginning to flower earlier, is *P. argemone*. A third species, like *P. argemone* in its smaller and paler scarlet flowers, though more widespread, is *P. dubium*.

Other frequent contributors to the more or less open cover of this vegetation are *Viola arvensis*, *Veronica persica*, *V. arvensis*, *Anagallis arvensis*, *Poa annua*, *Medicago lupulina*, *Polygonum aviculare*, *Bilderdykia convolvulus*, *Capsella bursa-pastoris* and *Trifolium repens*. *Elymus repens* and *Agrostis stolonifera* are common, too, and can be locally abundant.

Occasionals in the *Papaveretum* include *Arenaria serpyllifolia* (with some plants distinguished as ssp. *leptoclados*), *Galium aparine*, *Myosotis arvensis*, *Chenopodium album*, *Matricaria perforata*, *Chamomilla suaveolens*, *Sonchus asper*, *S. oleraceus* and *Senecio vulgaris*. The nationally rare *Veronica triphyllos* has also been recorded in this vegetation.

Habitat
The *Papaveretum* is characteristic of disturbed, light and friable soils that are not too calcareous, throughout the warmer and drier lowlands of Britain and it is especially frequent in cereal fields that have escaped herbicide treatment.

P. rhoeas has a wide distribution on disturbed sands and loams throughout the British lowlands; *P. dubium* extends somewhat further north and is commoner in certain parts of Wales; *P. argemone* is more confined to the Continental south and east (Perring & Walters 1962, McNaughton & Harper 1964). In its full expression, then, with all these represented, this is a community of the warmer and drier parts of the country and is there limited by the distribution of suitable soils and a pattern of repeated disturbance that is not characterised by heavy additions of fertilisers or herbicides. *P. argemone* in particular is susceptible to many weedkillers, including some of the earliest developed and it cannot tolerate much competition from crops on greatly enriched soils. All the species of poppy here also have poor dispersal so, though seed may be viable for some time and produce a stunning display of flowering among highly gregarious offspring (McNaughton & Harper 1964), persistence in any particular location necessitates some relief from the current intensive style of arable agriculture.

Both the more widespread *P. rhoeas* and the more confined *P. argemone* can germinate in autumn and spring but the latter at least seems better represented in autumn-sown crops. The community is most often seen among cereals which usually receive less nitrogenous fertiliser than roots and vegetables.

Zonation and succession
The *Papaveretum* is typically seen as a patchy or marginal assemblage in parts of cereal fields that have escaped herbicide treatment. On more calcareous soils, it is replaced by the *Papaveri-Sileneetum* and it can pass to other weed communities like the *Veronica* or *Stellaria-Capsella* assemblages where crops have been more heavily fertilised or where more herbicide-resistant species prevail. Where the community occurs on disturbed waste ground, it can give way to *Urtica-Cirsium* vegetation or the *Arrhenatheretum* where *Papaver rhoeas* can remain locally frequent.

The community depends on repeated disturbance for

its reappearance and cultivation effectively prevents any further succession in arable fields. On disturbed ground or dumped soil heaps, abandonment may see subsequent colonisation by tall herbs or rank mesotrophic swards.

Distribution

The *Papaveretum* is widespread in the southern part of Britain and was found by Silverside (1977) north to Angus.

Affinities

British stands of this kind of vegetation clearly belong to the *Papaveretum argemones* which occurs throughout Europe, south to Italy and north as far as Scandinavia (Westhoff & den Held 1969, Oberdorfer 1983, Pott 1992, Mucina *et al.* 1993). Early workers tended to include this association in the Aphanion, later ones in the Aperion, an alliance of weed assemblages on loamy soils, often with autumn-sown cereals.

Floristic table OV3

Papaver rhoeas	V (2–7)
Viola arvensis	IV (1–3)
Veronica persica	IV (2–5)
Anagallis arvensis	IV (2–5)
Poa annua	IV (2–5)
Polygonum aviculare	IV (3–5)
Medicago lupulina	IV (1–5)
Papaver argemone	III (2–5)
Veronica arvensis	III (2–3)
Bilderdykia convolvulus	III (2–3)
Capsella bursa-pastoris	III (2–5)
Stellaria media	III (2–7)
Elymus repens	III (1–8)
Agrostis stolonifera	III (2–7)
Trifolium repens	III (1–7)
Papaver dubium	II (1–5)
Arenaria serpyllifolia	II (2–5)
Arenaria leptoclados	II (1–3)
Galium aparine	II (1–2)
Myosotis arvensis	II (2–5)
Chenopodium album	II (1–2)
Matricaria perforata	II (2–5)
Senecio vulgaris	II (2–3)
Sonchus asper	II (1–3)
Sonchus oleraceus	II (1–3)
Silene alba	II (2–5)
Chamomilla suaveolens	II (1–2)
Artemisia vulgaris	II (1–5)
Sisymbrium officinale	II (1–2)
Aphanes microcarpa	II (2)
Geranium dissectum	II (1–3)
Vicia sativa nigra	II (2–3)
Cirsium arvense	II (1–5)
Poa trivialis	II (1–5)
Taraxacum officinale agg.	II (2–3)
Rumex crispus	II (1–2)
Achillea millefolium	II (1–2)
Urtica dioica	II (1–2)
Convolvulus arvensis	II (2–7)
Anchusa arvensis	II (1–3)
Anthemis arvensis	I (1–5)
Arabidopsis thaliana	I (1–3)
Veronica triphyllos	I (1–3)
Pulicaria dysenterica	I (1–3)
Bryum rubens	I (1–3)
Heracleum sphondylium	I (1–3)
Valerianella locusta	I (1–3)
Bryum sauteri	I (1–5)
Phascum cuspidatum	I (1–3)
Eupatorium cannabinum	I (3)
Epilobium hirsutum	I (4)
Spergula arvensis	I (1–3)
Descurainia sophia	I (4)
Number of samples	14
Number of species/sample	30 (13–42)
Herb cover (%)	79 (50–100)

https://doi.org/10.1017/CBO9780511541834.072 Published online by Cambridge University Press