
OV16

Papaver rhoeas-*Silene noctiflora* community *Papaveri-Sileneetum noctiflori* Wasscher 1941

Constant species

Bilderdykia convolvulus, *Elymus repens*, *Matricaria perforata*, *Papaver rhoeas*, *Polygonum aviculare*, *Silene noctiflora*, *Stellaria media*, *Veronica persica*.

Rare species

Silene noctiflora.

Physiognomy

The *Papaveri-Sileneetum* is an annual community in which *Stellaria media*, *Matricaria perforata* and *Polygonum aviculare* usually provide the bulk of the herbage, along with small ephemerals like *Veronica persica*, *V. polita*, *Anagallis arvensis*, twines of *Bilderdykia convolvulus* and young shoots of *Elymus repens*. The most striking feature, however, is the constancy of *Papaver rhoeas* and the nationally scarce *Silene noctiflora*, a plant whose peak of flowering is in mid-summer when the distinctive blooms, their yellow-backed petals inrolled until the cool of the evening, are seen most prolifically among cereal stubble or autumn-harvested crops.

Other frequent plants of this kind of vegetation are *Chenopodium album*, *Agrostis stolonifera* and *Galium aparine* with many occasionals including *Fumaria officinalis* ssp. *wirtgenii*, *Viola arvensis*, *Aethusa cynapium* and *Linaria vulgaris*.

Habitat

The *Papaveri-Sileneetum* is confined to light, well-drained calcareous soils, mostly among cereals, across the warmer and drier south-east of England.

The most distinctive plant of this assemblage, *S. noctiflora*, has a more or less Continental distribution in Europe, rare in both the Mediterranean and Scandinavia, preferring better-drained soils and reproducing poorly in wet years (Stewart *et al.* 1994). With us, it has a marked south-easterly range, extending from Dorset to the Scottish border, where the climate is more congenial for its survival and where calcareous bedrocks are especially extensive. There it occurs in this community among arable crops, particularly cereals, occasionally in root crops, not too heavily fertilised nor treated with her-

bicides and seems particularly to favour rotations which include spring-sown crops. It germinates primarily in spring and was found by Wilson (1990) to develop best among crops sown towards late March.

S. noctiflora has declined in its extent quite considerably since the 1950s, though it and this assemblage have benefited more recently from the creation of conservation headlands around arable fields.

Zonation and succession

Other weed assemblages of light, calcareous soils in south-east England where arable crops have not been too heavily fertilised or sprayed with herbicides include the *Kickxietum spuriae* and richer types of *Stellaria-Capsella* vegetation. Where soils are less base-rich, the *Papaveri-Sileneetum* tends to be replaced by the *Papaveretum argemones* and the *Urtica-Lamium* community. With increased intensification of arable agriculture, the *Papaveri-Sileneetum* gives way to the *Veronico-Lamietum* or *Matricaria-Stellaria* community or more species-poor forms of *Stellaria-Capsella* vegetation.

Repeated ploughing for arable crops prevents any prospect of succession.

Distribution

The community occurs on suitable soils from Dorset and Wiltshire, north-east to Lincolnshire.

Affinities

Although this syntaxon, first described from The Netherlands by Wasscher (1941), was regarded as of dubious status by Sissingh (1950), it was recognised by Westhoff & den Held (1969) and similar vegetation has also been described from Germany (Passarge 1964, Oberdorfer 1957, 1983). Pott (1992) in Germany and also Mucina *et al.* (1993) in Austria, characterise a similar assemblage as the *Euphorbio exiguae-Melandrietum* G. Müller 1964. Most authorities agree on placing the syntaxon in the Caucalidion, the alliance of calcicolous assemblages on lime-rich sands and loams in Continental Europe reaching its north-west limit in Britain.

Floristic table OV16

<i>Veronica persica</i>	V (1–4)
<i>Polygonum aviculare</i>	V (1–8)
<i>Elymus repens</i>	V (1–8)
<i>Bilderdykia convolvulus</i>	V (1–4)
<i>Silene noctiflora</i>	V (1–4)
<i>Matricaria perforata</i>	IV (1–6)
<i>Stellaria media</i>	IV (1–5)
<i>Papaver rhoeas</i>	IV (1–6)
<i>Chenopodium album</i>	III (1–4)
<i>Anagallis arvensis</i>	III (1–3)
<i>Veronica polita</i>	III (1–3)
<i>Agrostis stolonifera</i>	III (1–4)
<i>Galium aparine</i>	III (1–4)
<i>Fumaria officinalis wirtgenii</i>	II (1–4)
<i>Viola arvensis</i>	II (1–3)
<i>Lapsana communis</i>	II (1–8)
<i>Capsella bursa-pastoris</i>	II (1–3)
<i>Senecio vulgaris</i>	II (1–3)
<i>Sonchus asper</i>	II (1–3)
<i>Chamomilla suaveolens</i>	II (1–4)
<i>Poa annua</i>	II (1–4)
<i>Cirsium arvense</i>	II (1–4)
<i>Aethusa cynapium</i>	II (1–4)
<i>Linaria vulgaris</i>	II (1–3)
<i>Plantago major</i>	II (1–3)
<i>Trifolium repens</i>	II (1–3)
<i>Lolium perenne</i>	II (1–3)
<i>Sisymbrium officinale</i>	II (1–3)
<i>Bromus sterilis</i>	II (1)
<i>Silene alba</i>	I (1–4)
<i>Nepeta cataria</i>	I (1)
<i>Valerianella dentata</i>	I (1)
<i>Arenaria leptoclados</i>	I (1)
<i>Euphorbia exigua</i>	I (1)
<i>Kickxia spuria</i>	I (1)
<i>Avena fatua</i>	I (1–3)
<i>Sinapis arvensis</i>	I (1)
<i>Sonchus arvensis</i>	I (1)
<i>Silene vulgaris</i>	I (1–4)
<i>Medicago lupulina</i>	I (1–3)
<i>Malva sylvestris</i>	I (1–2)
Number of samples	14
Number of species/sample	21 (14–27)
Vegetation cover (%)	70 (20–95)