OV7
Veronica persica-Veronica polita community
Veronico-Lamietum hybridi Kruseman & Vlieger 1939

Synonymy
Setario-Veronicetum politae Oberdorfer 1957 *sensu* Silverside 1977; *Tripleurospermum maritimum* stands Kay 1994 *p.p.*

Constant species
Bilderdykia convolvulus, *Chenopodium album*, *Matricaria perforata*, *Polygonum aviculare*, *Stellaria media*, *Veronica persica*, *Veronica polita.*

Physiognomy
In the *Veronico-Lamietum*, both *Veronica persica* and the more geographically restricted *V. polita* are constant, the former often in some abundance by summer. *Polygonum aviculare* also frequently has high cover and *Stellaria media* and *Bilderdykia convolvulus* are constant contributors among the smaller herbs. Often more conspicuous, however, are the mealy shoots of *Chenopodium album* and the big daisy-like inflorescences of *Matricaria perforata*, especially where this shows a second flush of flowering in unploughed stubble remaining after harvest into the autumn.

Lamium hybridum is a particularly diagnostic associate of the above constants but it is not universally present in this community. More frequent are *Poa annua*, *Elymus repens*, *Senecio vulgaris*, *Capsella bursa-pastoris* and *Chamomilla suaveolens* with *Euphorbia helioscopia*, *Sonchus oleraceus*, *Solanum nigrum* and *Urtica urens* among the occasionals.

Habitat
The *Veronico-Lamietum* is characteristically a weed community of cereals and other annual field crops on lighter, well-drained, highly fertile circumneutral soils in the warmer and drier lowlands of southern and eastern Britain.

Suitable soil conditions for most of the common species of this assemblage are very widespread through the lowland agricultural landscape of this country but both *Veronica polita* and, more strikingly, *Lamium hybridum* are more restricted to areas with a Continental climate (Perring & Walters 1962). Within this zone, it is the better-draining soils of the east Midlands, East Anglia and southern England, widely cultivated for cereals, roots and vegetable crops, that regularly provide the kind of disturbance and enrichment that favours the rapid establishment of this community.

Most of the cover of *M. perforata* establishes in spring, though, having frost-hardy seedlings (Kay 1994), this species may get a head start in the vegetation among autumn-sown crops. Being able to produce vigorous laterals from undamaged lower parts after upper shoots have been cut when cereals are harvested, it is also one of the more long-lasting species in this assemblage, sometimes flowering on into October where there is no early autumn cultivation. This is, in fact, one of the major assemblages for this troublesome weed (Kay 1994), a plant that has been shown in field trials to be more competitive in winter wheat than many of its usual companions (Wilson & Wright 1990). Efficient ploughing with complete sod reversal kills existing plants, but it is a prolific seeder with a long potential for dormancy (Kay 1994).

Like most of the common species here, *M. perforata* has no particular method of seed dispersal but long local survival in the soil, and dispersal in mud and through dung, is enough to ensure the reappearance of the assemblage from year to year. For *M. perforata* a requirement for diurnal temperature fluctuations, for *Chenopodium album* (Williams 1963) low temperatures, and for many of the other species the need for light and high nutrient content, are readily met in the disturbance provided by autumn or spring cultivation for arable crops. Occasionally, vegetable gardens, farmyards and disturbed waysides provide suitable habitat conditions for the *Veronicio-Lamietum* within its general geographical range.

It should be noted that one of the most frequent plants of this assemblage, *Veronica persica*, is not a native species. It originates from western Asia (Salisbury

1964) but spread rapidly through much of England, probably through contaminated seed and dung, in the decades after its first appearance in Berkshire in 1825 in the kind of situations increasingly provided by intensifying arable cultivation.

Zonation and succession

Typically, the community occurs patchily within or around the margins of arable fields sown with cereals, roots of other crops. Where banks or hedgerows remain, it can pass to weedy *Arrhenatheretum* or in gateways to some kind of Polygonion or Lolio-Plantaginion vegetation. Renewed cultivation effectively prevents any succession.

Distribution

The *Veronico-Lamietum* occurs widely on suitable soils through the southern and eastern parts of Britain and scattered on arable land around coasts elsewhere (Silverside 1977).

Affinities

Although *Lamium hybridum* is less characteristic of this kind of vegetation with us than in other parts of Europe, this community is essentially the same as the *Veronico-Lamietum* first described from The Netherlands by Kruseman & Vlieger (1939). Similar vegetation has been noted in Ireland under this association name (White & Doyle 1982), though Lambe (1971) considered *Veronica persica* assemblages of this general kind in to be part of what here is called the *Stellaria-Capsella* community. Silverside (1977) also characterised a syntaxon equivalent to the *Setario-Veronicetum politae* of Oberdorfer (1957) from a single locality in Breckland but this South Germany and Swiss association, with its distinct continental character, cannot really be separated among the available data from the *Veronico-Lamietum*. Silverside (1977) also placed both syntaxa in the Fumario-Euphorbion whereas Westhoff & den Held (1969) located the *Veronico-Lamietum* in the Polygono-Chenopodion.

Floristic table OV7

Veronica persica	IV (1–3)
Veronica polita	IV (1–3)
Polygonum aviculare	IV (1–8)
Bilderdykia convolvulus	IV (1–5)
Stellaria media	IV (1–6)
Matricaria perforata	IV (1–3)
Chenopodium album	IV (1–3)
Poa annua	III (1–3)
Elymus repens	III (1–3)
Senecio vulgaris	III (1–3)
Capsella bursa-pastoris	III (1–4)
Chamomilla suaveolens	III (1–3)
Euphorbia helioscopa	II (1–3)
Sonchus oleraceus	II (1–3)
Lamium hybridum	II (1–4)
Solanum nigrum	II (1–8)
Urtica urens	II (1–3)
Lamium purpureum	II (1–4)
Anagallis arvensis	II (1–3)
Viola arvensis	II (1–3)
Atriplex patula	II (1–3)
Avena fatua	II (1–3)
Papaver rhoeas	II (1–3)
Diplotaxis muralis	II (1–3)
Sonchus asper	II (1–3)
Plantago major	II (1–3)
Galium aparine	II (1–3)
Ranunculus repens	II (1–4)
Agrostis stolonifera	II (1–6)
Sisymbrium officinale	II (1–3)
Coronopus squamatus	I (1–5)
Euphorbia peplus	I (1–3)
Thlaspi arvense	I (1–3)
Lamium amplexicaule	I (1–4)
Polygonum lapathifolium	I (1–3)
Erucastrum gallicum	I (1)
Aethusa cynapium	I (1)
Atriplex prostrata	I (1)
Plantago lanceolata	I (1–3)
Cirsium arvense	I (1–3)
Conyza candensis	I (1)
Aphanes arvensis	I (1)
Number of samples	22
Number of species/sample	18 (10–34)
Vegetation cover (%)	19 (5–90)

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