OV24
Urtica dioica-Galium aparine community

Constant species
Galium aparine, *Urtica dioica.*

Rare species
Allium triquetrum.

Physiognomy
The *Urtica dioica-Galium aparine* community comprises generally species-poor tall-herb vegetation dominated by often densely abundant *U. dioica*, frequently growing over 1 m high by mid-summer. *G. aparine* is the only other constant throughout and it typically forms sprawls among the nettles. *Poa trivialis* is also common and locally quite extensive as a thin carpet of shoots over the ground and among the nettle stools. Through the community as a whole, no other species occurs with any frequency and, by late autumn, the bulk of the herbage collapses and is rapidly incorporated through the winter to leave ground that can be virtually bare.

Sub-communities

Typical sub-community. Here, the usual very dense nettle and goosegrass cover has scattered plants of *Cirsium arvense* and occasional *Bromus sterilis*. Seaside stands often have *Smyrnium olusatrum*, sometimes in local abundance.

***Arrhenatherum elatius-Rubus fruticosus* agg. sub-community.** In this vegetation, the cover of nettle is not usually so thick and there are scattered tussocks of *Arrhenatherum elatius*, patches of *Rubus fruticosus* agg. and, by early summer, emergent flowering shoots of first, *Anthriscus sylvestris*, and then *Heracleum sphondylium*. In somewhat more open places, there can be seen *Taraxacum officinale* agg., *Lolium perenne*, *Dactylis glomerata*, *Bromus mollis*, *Achillea millefolium* and *Potentilla reptans* while *Hedera helix* can form a patchy ground carpet. Locally, occasionals such as *Conium maculatum*, *Artemisia vulgaris*, *Chenopodium album* or *Malva sylvestris* can give a distinctive stamp.

Habitat
The *Urtica-Galium* community is typical of nutrient-rich, moist but well-aerated soils throughout the lowlands, usually where there has been some kind of disturbance. It occurs very widely around dumps of soil and dung, among rubbish on farmland, in gardens and on suburban or industrial wasteland, on disturbed verges and trackways, along wall-bottoms, around abandoned dwellings, rabbit burrows and rotting carcases and on strandline detritus on beaches and salt-marshes.

U. dioica is a perennial that establishes initially from seed that is dispersed by adhesion to animal fur, skin and clothes, by wind, and in dung (Greig-Smith 1948). Germination, which is mostly in spring, needs light and moisture, so establishment among existing vegetation or on compacted soil requires disturbance to open up or loosen bare ground or the dumping of leaf litter, clippings, brashings, dung or rubbish to smother the existing herbage. Subsequent growth is by vegetative spread, sympodial rhizomes extending out beneath the soil surface, stolons growing and rooting at their nodes above ground and both producing aerial shoots. In loose soil, the rhizomes can ramify down to 30 cm or more but compacted substrates greatly hinder establishment and spread.

The luxuriance of the developing clump is affected by light and nutrients. In full sun, or on dry ground, growth is rather stunted; in deep shade, the shoots can grow tall but produce few flowers. In partial shade and with some shelter from drying winds, they often attain 1 m or more, packed densely and flowering profusely. Growth is more pronounced in nutrient-rich habitats, whether this eutrophic aspect is a natural feature of the soil or is related to disturbance of the substrate and nitrification of organic matter or inputs in ground water or rubbish.

In late summer and autumn, a new generation of rhizomes is produced from the base of the aerial shoots and these continue growing until the aerial shoots die. They then turn up and form a new aerial shoots of their own which grow to 15 cm or so and survive the winter before

resuming growth in spring. Meanwhile, the foliage and old shoots disintegrate and are often rapidly incorporated into the soil so just sparse dead shoots survive above the new herbage.

In the relatively dense shade of the nettle clumps, and among the closely-packed mass of shoot bases, stolons and rhizomes, there can sometimes be little opportunity for other plants to gain a hold. The puny shoots of the shade-tolerant *Poa trivialis* and trails of *Galium aparine* are thus the only consistent feature here. Where stands are a little more open or where other species have established coincidentally, there can be more diversity. The Typical sub-community includes various more impoverished nettle beds, the *Arrhenatherum-Rubus* type somewhat richer stands where *Arrhenathum*, *R. fruticosus* and *H. sphondylium* occur in situations where disturbance coincides with reduction in grazing or among established rank swards and sub-scrub on verges and waysides.

Zonation and succession

The *Urtica-Galium* community is found in very diverse patchworks and zonations with weed vegetation, mesotrophic grasslands, fens, scrub and woodland. It may give way to woody vegetation in time but invasion of shrubs and trees can be greatly hindered by the dense habit of the dominant nettle.

A common pattern seen on verges, waysides, neglected pastures and ill-managed recreational areas is for the *Urtica-Galium* community to occur patchily around disturbed places in stretches of *Lolium-Dactylis* grassland or among the *Arrhenatheretum* with stretches of *Rubus-Holcus* underscrub marking the progression to woody vegetation. In such situations, the more open *Urtica-Cirsium* community can also occur and there may be whole suites of weedy assemblages along pathways and around gateways.

In wetter habitats, where the *Urtica-Galium* community has developed along streamsides or around ponds, lakes and fen systems, it can give way on drier ground to the *Arrhenatheretum* and towards open water to the *Phragmites-Urtica* fen with its characteristic patchy dominance of *Urtica*, *Phragmites* and *Epilobium hirsutum*. Stands of the *Epilobium* community or eutrophic swamps like the *Typhetum latifoliae* or *Glycerietum maximae* can also figure in such zonations, or on drier ground, the *Alnus-Urtica* woodland. This kind of forest is probably the ultimate successor of the *Urtica-Galium* community in this sort of habitat.

Disturbance

The *Urtica-Galium* community is ubiquitous through the lowlands, extending into the upland fringes wherever disturbance creates suitable conditions.

Affinities

More species-poor stands of tall-herb vegetation have sometimes created problems for adequate description and integration into phytosociological schemes, so certain authorities recognise so-called 'basal' syntaxa like the *Urtica dioica*-Gesellschaft of Mucina *et al.* (1993) which are allocated, not to any particular alliances, but more generally to a class. Of more precisely defined assemblages, the *Urtica-Galium* community comes closest, in the *Arrhenatherum-Rubus* sub-community, to the *Urtico-Cruciatetum laevipedis* Dierschke 1973 described from Germany (Oberdorfer 1983, Pott 1992) and Austria (Mucina *et al.* 1993). Authorities differ as to whether this is better placed in the Galio-Alliarion (Oberdorfer 1957) Lohmeyer & Oberdorfer in Oberdorfer *et al.* 1967 or the Aegopodion podagrariae R.Tx. 1967. Certainly, with us, this is not usually a woodland fringe community, vegetation types from which are grouped in the latter alliance. Whatever the choice, these two alliances are now separated off from the Artemisietea into a new class, the Galio-Urticetea Passarge & Kopecký 1967 which contains more eutrophic tall-herb and woodland fringe vegetation.

Floristic table OV24

	a	b	24
Urtica dioica	V (1–10)	V (2–9)	V (1–10)
Galium aparine	IV (2–4)	IV (2–5)	IV (2–5)
Cirsium arvense	III (1–4)	II (2–4)	II (1–4)
Bromus sterilis	II (1–7)	I (3–6)	I (1–7)
Smyrnium olusatrum	II (2–7)		I (2–7)
Veronica hederifolia	I (2–3)		I (2–3)
Fumaria officinalis	I (3–4)		I (3–4)
Allium triquetrum	I (3–4)		I (3–4)
Myosotis arvensis	I (1–4)		I (1–4)
Rumex conglomeratus	I (1–3)		I (1–3)
Heracleum sphondylium	II (1–4)	IV (2–7)	III (1–7)
Arrhenatherum elatius	I (1)	IV (2–8)	III (1–8)
Taraxacum officinale agg.	I (3)	III (1–3)	II (1–3)
Rubus fruticosus agg.	I (2–3)	III (1–5)	II (1–5)
Anthriscus sylvestris	I (3–5)	II (4–6)	II (3–6)
Hedera helix	I (7)	II (3–4)	II (3–7)
Lolium perenne	I (2–7)	II (1–5)	II (1–7)
Dactylis glomerata	I (1)	II (1–4)	II (1–4)
Achillea millefolium		II (1–4)	I (1–4)
Potentilla reptans		II (3–5)	I (3–5)
Bromus hordeaceus hordeaceus		II (3–9)	I (3–9)
Artemisia vulgaris		I (4–7)	I (4–7)
Conium maculatum		I (3–4)	I (3–4)
Glechoma hederacea		I (1–3)	I (1–3)
Trifolium pratense		I (2–3)	I (2–3)
Centaurea nigra		I (1–4)	I (1–4)
Chenopodium album		I (2–4)	I (2–4)
Papaver rhoeas		I (3–5)	I (3–5)
Bromus mollis		I (2–4)	I (2–4)
Hordeum murinum		I (3–8)	I (3–8)
Malva sylvestris		I (3–4)	I (3–4)
Veronica chamaedrys		I (2–3)	I (2–3)
Bilderdykia convolvulus		I (3–6)	I (3–6)
Poa trivialis	III (2–3)	III (1–5)	III (1–5)
Convolvulus arvensis	I (3–7)	I (3–4)	I (3–7)
Holcus lanatus	I (3–5)	I (2–3)	I (2–5)
Geranium robertianum	I (1)	I (3)	I (1–3)
Lamium album	I (2–4)	I (3–4)	I (2–4)
Tussilago farfara	I (2)	I (1–4)	I (1–4)
Arctium minus	I (2–4)	I (4–9)	I (2–9)
Phleum pratense	I (5)	I (4)	I (4–5)
Agrostis stolonifera	I (4–7)	I (1)	I (1–7)
Plantago lanceolata	I (3)	I (3–4)	I (3–4)
Plantago major	I (1)	I (1–2)	I (1–2)
Brachythecium rutabulum	I (2–6)	I (8)	I (2–8)

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Stellaria media	I (1–5)	I (3)	I (1–5)
Eurhynchium praelongum	I (5–6)	I (1)	I (1–6)
Geranium dissectum	I (1)	I (4)	I (1–4)
Sisymbrium officinale	I (2)	I (2–3)	I (2–3)
Senecio vulgaris	I (2)	I (3)	I (2–3)
Silene alba	I (8)	I (3–4)	I (3–8)
Lamium purpureum	I (2–3)	I (3)	I (2–3)
Barbarea vulgaris	I (4)	I (3)	I (3–4)
Cerastium fontanum	I (2)	I (3)	I (2–3)
Poa annua	I (2–3)	I (1)	I (1–3)
Veronica arvensis	I (2–3)	I (1)	I (1–3)
Number of samples	15	43	58
Number of species/samples	10 (1–22)	12 (5–38)	11 (1–38)

a Typical sub-community
b *Arrhenatherum elatius-Rubus fruticosus* agg. sub-community
24 *Urtica dioica-Galium aparine* community (total)

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