OV20
Poa annua-Sagina procumbens community
Sagino-Bryetum argentii Diemont, Sissingh & Westhoff 1940

Constant species
Poa annua, *Sagina procumbens.*

Physiognomy
The *Sagino-Bryetum* is a species-poor but highly distinctive community in which cushions of *Bryum argenteum* and small scattered individuals of *Poa annua* and *Sagina procumbens* form the most consistent features, often disposed in striking patterns between cobble stones and pavement cracks. No other species are frequent throughout but *Capsella bursa-pastoris*, *Plantago major* and *Agrostis stolonifera* are occasional and *Stellaria media* and *Medicago lupulina* can sometimes be seen. Mosses like *Bryum bicolor* and *Schistidium apocarpum* occur as scarce associates of *B. argenteum.*

Sub-communities

Typical sub-community. There are no additional consistent features here but *Arenaria serpyllifolia*, *Juncus bufonius* and *Polygonum aviculare* occur occasionally with *Ceratodon purpureus. Sagina apetala* and *S. subulata* can sometimes be found among the *S. procumbens.*

***Lolium perenne-Chamomilla suaveolens* sub-community.** The vegetation in this sub-community is richer and more extensive in cover than above, with *L. perenne* and *C. suaveolens* both constant, *Plantago major* and *Agrostis stolonifera* frequent, *Dactylis glomerata*, *P. major* and *Agrostis stolonifera* frequent,and *Ranunculus repens* occasional.

Habitat
The *Sagino-Bryetum* is a very widespread community of crevices between cobble stones and paving slabs in streets, on pavements and in courtyards in urban and suburban areas and around farm and country dwellings, where there is trampling by pedestrians or light vehicle traffic.

Such crevices provide a demanding habitat which only rather particular plants are able to exploit (Diemont *et al.* 1940, Segal 1969). Soil accumulation is very sparse and treading compacts the material though, because nitrification is slow with the lack of aeration, organic debris tends to accumulate. Indeed, the uppermost layer of soil is often simply the compacted humic remains of the vascular plants and mosses. The moisture regime can also be rather extreme since, after rain, water seeps away only slowly while, in prolonged periods of dry weather, the soils may become baked and dusty in the sun. Small therophytes therefore prevail among the vascular contingent, rapid growers and prostrate and rosette-forming plants being especially successful.

The composition and appearance of the vegetation are determined by the width and configuration of the crevices and the amount of trampling. The Typical sub-community is characteristic of narrower cracks, the *Lolium-Chamomilla* sub-community of wider ones and situations where there is less trampling. The amount of moisture can also be influential with shaded or more frequently wetted situations (as around watered gardens and leaking down-spouts) developing a distinctive appearance. No samples were available, but a form of *Sagino-Bryetum* with *Marchantia polymorpha* is known to occur in such places in this country (cf. also Segal 1969).

Zonation and succession
The *Sagino-Bryetum* often occurs isolated from other vegetation types in urban streets and yards. Among carefully kept stonework, only the *Parietaria* and *Cymbalaria* communities or *Asplenium* vegetation among wall cracks may accompany it to bring some touch of green to the built environment. With less assiduous street maintenance, the *Poa-Taraxacum* community is also often present down pavement edges and gross neglect brings other Polygonion and Lolio-Plantaginion assemblages, as well as tall-herb weed communities. Among urban ruins, for example, or ancient monuments where there is still some trampling, the *Sagino-Bryetum* often gives way to the *Poa-Plantago* and *Polygonum-Chamomilla* communities in places where crevices are

larger and soil accumulation more extensive. On resown areas, the *Lolium-Dactylis* community can also figure.

Some of this patterning represents successional developments from the *Sagino-Bryetum* to more complex herbaceous vegetation, though it is only the *Lolium- Chamomilla* sub-community of larger crevices that is readily colonised by bigger herbs. The Typical sub-community, in its very narrow cracks, is more resistant to such invasion, though trees and shrubs may colonise directly and prise open cobbles and paving as their roots grow. *Sambucus nigra*, *Acer pseudoplatanus* and the garden escape *Buddleja davidii* are commonly seen in such situations.

Distribution

The community occurs ubiquitously through the lowlands and upland fringes.

Affinities

As recognisable in the courtyards of Berlin, Paris, Amsterdam, Dublin and Vienna as in London, the *Sagino-Bryetum* has often figured in accounts of vegetation elsewhere in Europe (Westhoff & den Held 1969, Matuszkiewicz 1981, Brun-Hool & Wilmanns 1982, Oberdorfer 1983, Pott 1992, Mucina *et al.* 1993) and was part of Segal's (1969) compendious review of wall, pavement and street vegetation. With Oberdorfer (1983), we have placed this in the Polygonion, though many authors now recognise a distinct alliance, the Saginion procumbentis R.Tx. & Oberdorfer in Géhu *et al.* 1972. This is usually located in the Polygono-Poetea although Westhoff & den Held (1969) place the Sagino-Bryetum in a Polygono-Coronopion alliance in the Stellarietea.

Floristic table OV20

	a	b	20
Poa annua	V (1–8)	V (3–8)	V (1–8)
Sagina procumbens	IV (1–6)	IV (1–4)	IV (1–6)
Arenaria serpyllifolia	II (2–5)	I (1)	I (1–5)
Polygonum aviculare	II (2–5)		I (2–5)
Ceratodon purpureus	II (1–7)		I (1–7)
Juncus bufonius	II (1–5)		I (1–5)
Cardamine hirsuta	I (1–3)		I (1–3)
Erodium cicutarium	I (5)		I (5)
Rumex obtusifolius	I (2–3)		I (2–3)
Honkenya peploides	I (1)		I (1)
Lythrum portula	I (2–3)		I (2–3)
Rorippa islandica	I (2–4)		I (2–4)
Filaginella uliginosa	I (2–6)		I (2–6)
Sagina apetala	I (2–3)		I (2–3)
Sagina subulata	I (1–6)		I (1–6)
Lolium perenne	II (1)	V (1–5)	III (1–5)
Chamomilla suaveolens	II (1–7)	V (1–4)	III (1–7)
Plantago major	II (1–5)	III (2–4)	II (1–5)
Agrostis stolonifera	II (1–3)	III (1–5)	II (1–5)
Dactylis glomerata	I (2)	II (1–3)	I (1–3)
Plantago lanceolata		II (2–3)	I (2–3)
Taraxacum officinale agg.		II (1–2)	I (1–2)
Ranunculus repens		II (1–4)	I (1–4)
Senecio vulgaris		I (1–3)	I (1–3)
Senecio jacobaea		I (1–3)	I (1–3)
Bryum argenteum	III (2–6)	III (1–4)	III (1–6)
Capsella bursa-pastoris	II (2–3)	II (1–-3)	II (1–3)

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Floristic table OV20 (*cont.*)

	a	b	20
Bryum bicolor	I (1–3)	I (1)	I (1–3)
Stellaria media	I (3)	I (2)	I (2–3)
Medicago lupulina	I (2–3)	I (1–4)	I (1–4)
Atriplex patula	I (3)	I (1)	I (1–3)
Schistidium apocarpum	I (2)	I (2–4)	I (2–4)
Rumex crispus	I (1)	I (2–4)	I (1–4)
Cirsium arvense	I (2)	I (1)	I (1–2)
Holcus lanatus	I (1)	I (2–3)	I (1–3)
Trifolum repens	I (1–2)	I (1)	I (1–2)
Rumex acetosella	I (2)	I (2)	I (2)
Number of samples	24	10	34
Number of species/sample	8 (3–21)	15 (6–42)	10 (3–42)

a Typical sub-community
b *Lolium perenne-Chamomilla suaveolens* sub-community
20 *Sagino-Bryetum argentii* (total)

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