OV5
Digitaria ischaemum-Erodium cicutarium community

Synonymy
Echinochloo-Setarietum (Kruseman & Vlieger 1939) *emend.* Kruseman & Vlieger *apud* Sissingh, Vlieger & Westhoff 1940 *sensu* Silverdale 1977

Constant species
Crepis capillaris, *Digitaria ischaemum*, *Elymus repens*, *Erodium cicutarium*, *Geranium molle*, *Poa annua*, *Senecio vulgaris*, *Spergula arvensis*, *Stellaria media.*

Rare species
Apera spica-venti.

Physiognomy
The rare annual introduced grass *Digitaria ischaemum*, together with *Erodium cicutarium* and *Spergula arvensis*, provide a distinctive group of constants in this *Digitaria-Erodium* annual weed community. Also very frequent are *Stellaria media*, *Poa annua*, *Senecio vulgaris*, *Geranium molle*, *Crepis capillaris* and *Elymus repens*.

Other common associates are *Bilderdykia convolvulus*, *Capsella bursa-pastoris*, *Rumex acetosella*, *Papaver dubium*, *Chenopodium album* and *Taraxacum officinale* agg. Occasionals of the community include *Polygonum aviculare*, *Medicago sativa*, *Ornithopus perpusillus*, *Scleranthus annuus*, *Raphanus raphanistrum* and *Urtica urens* with *Holcus mollis* and *Achillea millefolium* sometimes figuring. Bryophytes are occasionally found with *Bryum rubens* and *Pleuridium subulatum* most common.

Habitat
The *Digitaria-Erodium* community is confined to fertilised sandy soils disturbed by the cultivation of root crops and cereals in a very localised part of south-east England.

D. ischaemum is a native of warm-temperate parts of Europe and Asia first recorded in East Anglia in about 1805 and since then locally established among arable crops in sandy fields in southern and south-east England (Hubbard 1984), having probably spread in contaminated seed (Salisbury 1964). It has declined markedly in its occurrences with the shift to more intensive kinds of arable agriculture, although it can persist in situations with quite considerable soil enrichment. In this community, it survives with some species characteristic of sandy soils like *Erodium cicutarium*, *Scleranthus annuus* and *Ornithopus perpusillus*, as well as with more widely distributed weeds of more fertilised soils.

Although no samples were available with such plants, it seems clear that a number of other introduced grasses like *Echinochloa crus-galli*, a warm-temperate and tropical species which became especially frequent as a weed during World War II when contaminated seed came from North America, and *Setaria viridis*, a Eurasian warm-temperate plant, have often been recorded in this kind of vegetation among root crops like carrots, turnips and mangolds on sandy soils in southern England (Salisbury 1964, Hubbard 1984). These plants, too, have greatly declined in frequency in recent decades (Perring & Walters 1962). Silverside (1977) noted that *Echinochloa* does not germinate until the soil temperature rises to 15 °C with an optimum at 20–30 °C, so is likely to persist only sporadically, even if suitable soils were available.

Zonation and succession
The *Digitaria-Erodium* community has been found within a variety of crops in its single location. Cultivation repeatedly sets back any successional development and encourages a return of the assemblage.

Distribution
This vegetation has been recorded only from one locality on the Bagshot Sands of Surrey.

Affinities
Silverside (1977), from whose study these samples originate, grouped them in the *Echinochloa-Setarietum* (Kruseman & Vlieger 1939) *emend.* Kruseman & Vlieger *apud* Sissingh, Vlieger & Westhoff 1940, an association

characterised by *Echinochloa*, *S. viridis*, *S. glauca*, *Digitaria ischaemum*, *Galinsoga parviflora* and *G. ciliata* and widely described from The Netherlands (Westhoff & den Held 1969), through Germany (Oberdorfer 1985) and Austria (Mucina *et al.* 1993) to Poland (Matuszkiewicz 1984). It is seen by most authorities as subsuming a *Digitarietum ischaemum* R.Tx. & Preising (1942) 1950. British stands are clearly towards the geographical limit of such a range and with us the syntaxon lacks any real integrity.

Floristic table OV5

Digitaria ischaemum	V (1–4)
Stellaria media	V (1–8)
Elymus repens	V (1–6)
Poa annua	V (1–6)
Erodium cicutarium	V (1–5)
Senecio vulgaris	V (1–4)
Spergula arvensis	V (1–6)
Crepis capillaris	IV (1–3)
Geranium molle	IV (1–3)
Bilderdykia convolvulus	III (1–3)
Capsella bursa-pastoris	III (1–4)
Rumex acetosella	III (1–3)
Chenopodium album	III (1–3)
Papaver dubium	III (1–3)
Bryum rubens	III (1–3)
Taraxacum officinale agg.	III (1–3)
Holcus mollis	II (1–4)
Polygonum aviculare	II (1–3)
Achillea millefolium	II (1–3)
Medicago sativa	II (1–3)
Ornithopus perpusillus	II (1–3)
Scleranthus annuus	II (1–3)
Raphanus raphanistrum	II (1–3)
Equisetum arvense	II (1–3)
Pleuridium subulatum	II (1–3)
Urtica urens	II (1–3)
Solanum nigrum	II (1–3)
Viola arvensis	II (1–3)
Anagallis arvensis	II (1–3)
Anchusa arvensis	II (1–3)
Digitaria sanguinalis	I (1)
Phascum cuspidatum	I (1)
Bryum microerythrocarpum	I (1)
Zygogonium ericetorum	I (1)
Ranunculus repens	I (1)
Brachythecium rutabulum	I (1)
Dicranella staphylina	I (1)
Amaranthus retroflexus	I (1)
Polygonum persicaria	I (1)
Chenopodium ficifolium	I (1)
Apera spica-venti	I (1)
Matricaria perforata	I (1)
Trifolium repens	I (1)
Plantago lanceolata	I (1)
Rumex crispus	I (1)
Rumex obtusifolius	I (1)
Cirsium arvense	I (1)
Aphanes microcarpa	I (1)
Dactylis glomerata	I (1)
Number of samples	6
Number of species/sample	16 (9–23)
Vegetation cover (%)	68 (30–90)

https://doi.org/10.1017/CBO9780511541834.074 Published online by Cambridge University Press