MG12
Festuca arundinacea grassland
Potentillo-Festucetum arundinaceae Nordhagen 1940

Synonymy
Lolium perenne-Matricaria suaveolens Ass. R.Tx. 1937 *p.p.*; *Festuca arundinacea-Dactylis glomerata* Ass. R.Tx. 1950; *Festuceto-Dactyletum* Oberdorfer 1957; *Agrostis stolonifera-Festuca arundinacea* nodum Adam 1976; includes *Lolio-Agrostetum stoloniferae festucetosum arundinaceae* Page 1980.

Constant species
Agrostis stolonifera, *Festuca arundinacea*, *F. rubra*.

Physiognomy
The *Potentillo-Festucetum arundinaceae* is a coarse grassland usually dominated by large tussocks of *F. arundinacea* with often abundant *F. rubra* and *A. stolonifera* and generally smaller amounts of *Holcus lanatus*. Apart from *Elymus repens* and *Poa pratensis*, which are occasional throughout, other grasses are rare. Salt-marsh stands in both sub-communities frequently have *Carex distans*, *C. otrubae* and *Juncus gerardi*.

Potentilla anserina and *Trifolium repens* are the most frequent and abundant dicotyledons with occasional *Cirsium arvense*, *Vicia cracca*, *Lotus corniculatus*, *Trifolium pratense* and *Plantago lanceolata*.

Bryophytes are rather infrequent, although *Eurhynchium praelongum* is sometimes abundant.

Sub-communities

***Lolium perenne-Holcus lanatus* sub-community:** *Agrostis stolonifera-Festuca arundinacea* nodum Adam 1976 *p.p.*; *Potentillo-Festucetum arundinaceae* Nordhagen 1940 *sensu* Page 1980 and *Lolio-Agrostetum stoloniferae festucetosum arundinacaea* Page 1980. In this sub-community *H. lanatus* and/or *L. perenne* are abundant among the *F. arundinacea*, *A. stolonifera* and *F. rubra* and sometimes share dominance. *Anthoxanthum odoratum* and *Arrhenatherum elatius* occur occasionally and each may be prominent in particular stands. *Ranunculus acris*, *Lotus corniculatus*, *Trifolium pratense*, *Plantago lanceolata* and *Cerastium fontanum* are preferential here but halophytes are poorly represented, although salt-marsh stands frequently have some *Carex distans*, *C. otrubae* and *Juncus gerardi*.

***Oenanthe lachenalii* sub-community:** *Festuceto-Caricetum distantis* Duvigneaud 1967; *Potentillo-Festucetum arundinaceae ranunculetosum acer* Krisch 1974; *Agrostis stolonifera-Festuca arundinacea* nodum Adam 1976 *p.p.* Although *H. lanatus* and a number of species characteristic of inland mesotrophic grasslands are represented here, this sub-community is strongly distinguished by the frequency of salt-marsh species such as *O. lachenalii*, *J. gerardi*, *Glaux maritima*, *Juncus maritimus* and *Triglochin maritimus*. *Sonchus arvensis*, *Odontites verna*, *Atriplex prostrata*, *Leontodon autumnalis* and *Hypochoeris radicata* are also preferential and there are occasional records for *Phragmites australis*, *Eleocharis uniglumis* and *Triglochin palustris*.

Habitat
The community is characteristic of moist but usually free-draining soils in coastal sites which receive frequent inundation by brackish water, occasional tidal inundation or small amounts of salt-spray. It occurs along the banks of tidal rivers, on the upper salt-marsh and occasionally on slumping clay sea cliffs. It is generally ungrazed.

The differences between the sub-communities are probably related to the amount of sea-salts, particularly sodium chloride, in the flood-waters or spray. The *Lolium-Holcus* sub-community occurs typically alongside brackish streams, rivers and ditches (where it often forms fragmentary strips on the steeply-sloping embankments), towards the upper limit of salt marshes and on sea cliffs which receive relatively small amounts of spray. The *Oenanthe* sub-community is confined to salt-marshes and occasionally forms extensive stands on sites with rare tidal inundation.

Although accessible stands alongside coastal farm-

land are sometimes grazed or included within a hay crop, the community is generally untreated. In some places, growth may be controlled by periodic burning.

Zonation and succession

The *Lolium-Holcus* sub-community generally shows abrupt zonations to other vegetation types, sharpened by treatment where stands abut on to agricultural land or by sudden topographic differences where stands lie on steep banks alongside ditches. Occasionally, there are more gradual zonations to the *Festuca-Agrostis-Potentilla* community with increased grazing pressure or, on the upper salt-marsh, to the *Oenanthe* sub-community on more saline soils. Although this latter sub-community sometimes occurs as extensive pure stands, it is frequently encountered in a mosaic with some form of *Juncus maritimus* salt-marsh which replaces it on more frequently submerged ground.

Distribution

The *Potentillo-Festucetum* is exclusively a coastal community recorded from estuaries and salt-marshes on the south and west coasts of England and Wales and on Arran in Scotland and from clay cliffs in Dorset, Kent and North Yorkshire.

Affinities

The community shows very close affinities with the *Festuca-Agrostis-Potentilla* community and, like that vegetation type, has a good representation of species considered characteristic of the Elymo-Rumicion crispi, into which similar communities described from the Continent have been placed (e.g. Nordhagen 1940, Duvigneaud 1967).

Floristic table MG12

	a	b	12
Festuca arundinacea	V (1–9)	V (1–7)	V (1–9)
Agrostis stolonifera	V (4–7)	V (4–7)	V (4–7)
Festuca rubra	V (3–7)	V (4–8)	V (3–8)
Lolium perenne	IV (2–8)		II (2–8)
Holcus lanatus	IV (1–7)	III (2–4)	III (1–7)
Ranunculus acris	III (2–4)	I (1–3)	II (1–4)
Lotus corniculatus	II (2–4)	I (2–4)	II (2–4)
Trifolium pratense	II (3–5)	I (3)	II (3–5)
Anthoxanthum odoratum	II (3–5)		I (3–5)
Arrhenatherum elatius	II (1–7)		I (1–7)
Plantago lanceolata	II (2–3)	I (1–3)	II (1–3)
Cerastium fontanum	II (2–3)	I (2)	I (2–3)
Lathyrus pratensis	I (2–4)		I (2–4)
Cynosurus cristatus	I (3–4)	I (2)	I (2–4)
Dactylis glomerata	I (2–6)		I (2–6)
Juncus acutiflorus	I (2–4)		I (2–4)
Festuca pratensis	I (2–4)	I (2)	I (2–4)
Torilis japonica	I (2–3)		I (2–3)
Agrostis capillaris	I (4–5)		I (4–5)
Oenanthe lachenalii	I (2–4)	V (1–5)	III (1–5)
Juncus gerardi	II (2–3)	IV (2–5)	III (2–5)
Glaux maritima		IV (2–3)	II (2–3)
Carex otrubae	II (2–3)	IV (2–6)	III (2–6)
Sonchus arvensis		III (2–3)	II (2–3)
Phragmites australis	I (2–6)	III (2–7)	II (2–7)
Eleocharis uniglumis	I (3)	III (2–5)	II (2–5)
Leontodon autumnalis	I (3)	III (2–3)	II (2–3)
Elymus pycnanthus	I (2)	III (2–5)	II (2–5)

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Juncus maritimus		II (3–5)	I (3–5)
Triglochin maritima	I (2)	II (2–3)	I (2–3)
Odontites verna	I (3)	I (2–3)	I (2–3)
Atriplex prostrata		II (1–3)	I (1–3)
Hypochoeris radicata		II (2–3)	I (2–3)
Triglochin palustris	I (2)	II (2–3)	I (2–3)
Iris pseudacorus		I (2–4)	I (2–4)
Halimione portulacoides		I (1)	I (1)
Potentilla anserina	III (4–6)	IV (2–5)	III (2–6)
Trifolium repens	III (1–5)	III (3–7)	III (1–7)
Carex distans	II (2–3)	III (2–4)	II (2–4)
Elymus repens	III (1–5)	II (2–3)	II (1–5)
Cirsium arvense	II (2–4)	II (2–4)	II (2–4)
Vicia cracca	II (2–4)	III (2–3)	II (2–4)
Poa pratensis	II (3–4)	II (2–3)	II (2–4)
Rumex crispus	I (1–5)	I (2–3)	I (1–5)
Eurhynchium praelongum	I (2–4)	I (2–5)	I (2–5)
Carex nigra	I (2–3)	I (2–3)	I (2–3)
Equisetum palustre	I (2–4)	I (2)	I (2–4)
Taraxacum officinale agg.	I (1–3)	I (1–2)	I (1–3)
Juncus articulatus	I (2–3)	I (3–4)	I (2–4)
Juncus inflexus	I (4–7)	I (1)	I (1–7)
Plantago maritima	I (2)	I (2)	I (2)
Oenanthe crocata	I (2)	I (2)	I (2)
Stellaria media	I (3–4)	I (2)	I (2–4)
Matricaria maritima	I (1)	I (1–2)	I (1–2)
Plantago major	I (2)	I (2)	I (2)
Galium palustre	I (2)	I (3)	I (2–3)
Number of samples	20	15	35
Number of species/sample	11 (7–26)	20 (11–29)	16 (7–29)

a *Lolium perenne-Holcus lanatus* sub-community
b *Oenanthe lachenalii* sub-community
12 *Potentillo-Festucetum arundinaceae* (total)

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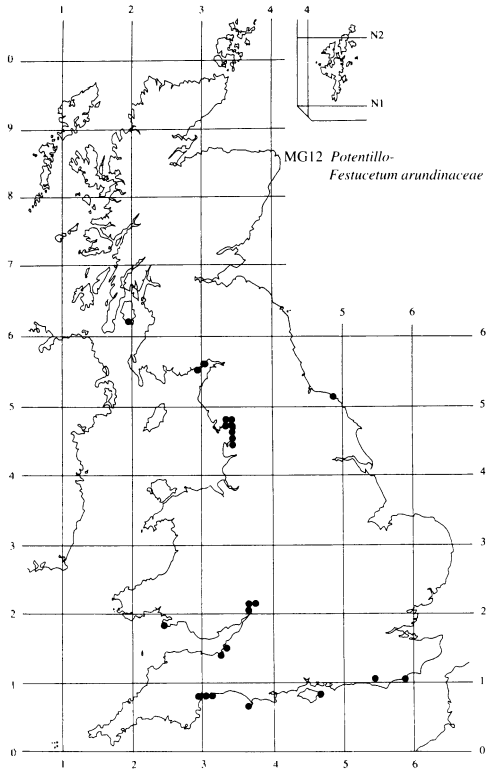

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