

## OV29

# *Alopecurus geniculatus*-*Rorippa palustris* community *Ranunculo-Alopecuretum geniculati* R.Tx. (1937) 1950

### Constant species

*Alopecurus geniculatus*, *Rorippa palustris*.

### Physiognomy

A mat of *Alopecurus geniculatus*, often extensive and lush, is the most distinctive characteristic of the *Ranunculo-Alopecuretum*, with sometimes a small contribution to the carpet from *Potentilla anserina*, *Poa trivialis* and *Ranunculus repens*. There are frequent scattered plants of *Rorippa palustris* and various annual knotweeds, among which *Polygonum lapathifolium*, *P. aviculare* and *P. hydropiper* are the most common. *Rumex crispus* also occurs often and there can be some *Elymus repens* and *Phalaris arundinacea*, though these are generally not very abundant. A wide range of plants of damp, weedy places occur at low frequency.

### Habitat

The *Ranunculo-Alopecuretum* is typical of periodically-flooded sills and sands on terraces, bars and islands in mature river valleys, on the edges of seasonal pools and small gentle streams in the lowlands and around fluctuating ponds and lakes with more nutrient-rich waters. Modest trampling by people, stock or wildfowl can be important in maintaining open ground for this vegetation and for dispersal of propagules.

Flooding by river or lake waters or the seasonal accumulation of rainwater in shallow depressions can handicap the growth of pasture vegetation or leave deposits of silt and sand around shores and on the terraces of river valleys. Then the species of this community are often able to take rapid advantage of the areas of bare ground thus created, by germination of seed and spread of vegetative propagules. *Alopecurus geniculatus* can benefit in both these ways: it produces large numbers of seeds but also grows rapidly from broken shoot fragments by stolon production. *Rorippa palustris* and the various knotweeds can also germinate and establish quickly while *Potentilla anserina* and *Elymus repens* show ready vegetative spread. The cover of the sward and its partic-

ular character can, however, vary considerably from season to season according to the duration and extent of the inundation.

The flood-waters themselves can be an effective means of transporting seed and shoot fragments but grazing stock or wildfowl can also carry away propagules in mud. Trampling also helps keep such areas open.

### Zonation and succession

On expanses of sediment laid totally bare by flooding and then exposed on river islands and margins, the *Ranunculo-Alopecuretum* can develop patchily, either alone or with other inundation communities, their disposition related in part to the texture and wetness of the sediments, though often with an element of chance about which assemblages colonise where (Figure 26). Such patterns also vary considerably from year to year according to the extent and character of the material once more flooded and exposed: Tüxen (in Ellenberg 1988) very aptly compared this variation to the squeezing and release of an accordion.

Very often, the *Agrostio-Ranunculetum* is also involved in such patterns and each of the communities can pass to the *Polygono-Bidentetum* or *Polygonum-Poa* community with an increase in abundance of *Bidens* and *Polygonum* spp. These latter two assemblages are perhaps more common where silts prevail among the sediments. On muds which remain wetter longer, the *Rorippa-Filago* community can figure and, where the water table stays close to the surface all summer, the *Polygonum amphibium* community. Patchily on river islands, sometimes more extensively along banks and towards the limit of fluctuation around reservoirs, the *Phalaridetum arundinaceae* may occur with the *Ranunculo-Alopecuretum*.

Another very common situation for this community is in low-lying stretches of flood-plain pastures which are inundated in winter. Then, the *Ranunculo-Alopecuretum* usually gives way on less flooded ground where there has not been too much agricultural improvement to the *Festuca-Agrostis-Potentilla* grassland. Splashy places in

such pastures may have the *Agrostis-Alopecurus* grassland, sometimes with the *Agrostio-Ranunculetum* between these areas and drier ground.

### Distribution

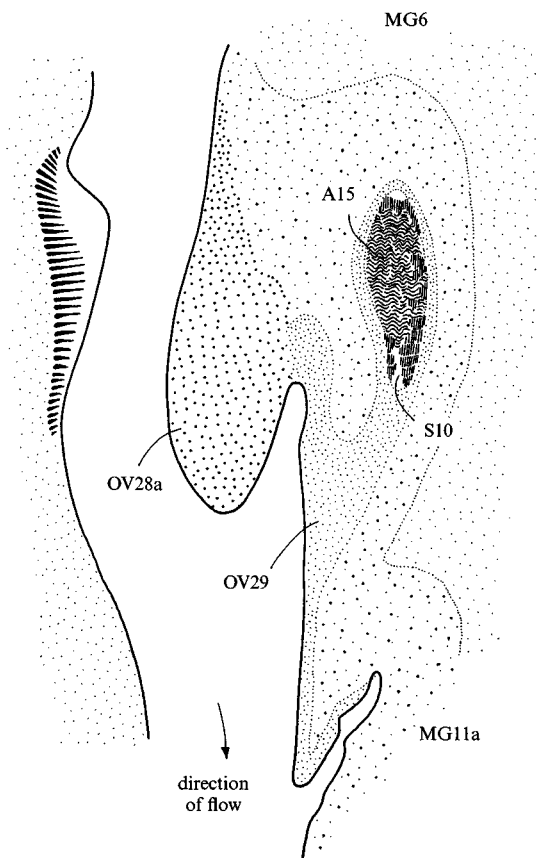
The *Ranunculo-Alopecuretum* occurs widely through the British lowlands in suitable situations.

### Affinities

Vegetation of this type has been previously allocated to a *Rumici-Alopecuretum geniculati* R.Tx. (1937) 1950 in

The Netherlands (Westhoff & den Held 1969) and to the *Ranunculo-Alopecuretum* R.Tx. 1937 in Ireland (Braun-Blanquet & Tüxen 1952) and Germany (Oberdorfer 1983, Pott 1992). In Sykora's (1983) treatment of these inundation communities, he used the latter association for Dutch stands and described a *rorippetosum* which is very similar to the vegetation included here. As explained under the account of the *Agrostio-Ranunculetum*, this assemblage is assigned to the Elymo-Rumicion alliance, rather than its replacements, in many more recent schemes the Lolio-Potentillion or Potentillion.

Figure 26. Inundation communities on the flood banks of the river Lune, north Lancashire. On the low flood banks around a periodically-flooded pool with A15 *Elodea canadensis* vegetation and fragmentary S10 *Equisetum fluviatile*, there is a zone of the OV29 *Ranunculo-Alopecuretum geniculati* which gives way over the slightly drier shoal to the OV28a *Polygonum-Rorippa* sub-community of the *Agrostio-Ranunculetum repens*. This in turn passes to the grazed and periodically-inundated MG11a *Lolium* sub-community of the *Festuca-Agrostis-Potentilla* grassland, then to MG6 *Lolio-Cynosuretum* pastures on the main river terraces.



### Floristic table OV29

<i>Alopecurus geniculatus</i>	IV (3–9)
<i>Rorippa palustris</i>	IV (1–5)
<i>Potentilla anserina</i>	III (1–4)
<i>Rumex crispus</i>	III (1–5)
<i>Elymus repens</i>	III (2–6)
<i>Poa trivialis</i>	II (3–4)
<i>Polygonum lapathifolium</i>	II (4–6)
<i>Ranunculus repens</i>	II (3–5)
<i>Phalaris arundinacea</i>	II (2–4)
<i>Polygonum aviculare</i>	II (2–3)
<i>Polygonum hydropiper</i>	II (3–7)
<i>Agrostis stolonifera</i>	I (3)
<i>Cirsium arvense</i>	I (3–4)
<i>Glyceria fluitans</i>	I (2–4)
<i>Lolium perenne</i>	I (3)
<i>Plantago major</i>	I (1–4)
<i>Caltha palustris</i>	I (3–4)
<i>Eleocharis palustris</i>	I (3–4)
<i>Juncus articulatus</i>	I (2–4)
<i>Myosotis scorpioides</i>	I (1–4)
<i>Rumex obtusifolius</i>	I (3–4)
<i>Stellaria media</i>	I (1–3)
<i>Lemna minor</i>	I (3–4)
<i>Oenanthe fistulosa</i>	I (2–3)
<i>Bidens tripartita</i>	I (2)
<i>Cardamine flexuosa</i>	I (3)
<i>Carex disticha</i>	I (3)
<i>Cochlearia anglica</i>	I (2)
<i>Equisetum fluviatile</i>	I (4)
<i>Poa annua</i>	I (2)
<i>Polygonum persicaria</i>	I (2)
Number of samples	12
Number of species/sample	9 (3–21)