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## OV31

### *Rorippa palustris*-*Filaginella uliginosa* community

#### Synonymy

*Rorippa islandica*-*Gnaphalium uliginosum* community  
Birse 1984.

#### Constant species

*Filaginella uliginosa*, *Rorippa palustris*.

#### Rare species

*Limosella aquatica*.

#### Physiognomy

The *Rorippa palustris*-*Filaginella* community comprises open or closed vegetation in which *R. palustris* and *Filaginella uliginosa* are the most consistent feature and where either can be abundant over patches of damp mud, but which may also be variously dominated by the occasional to frequent annual knotweeds, *Polygonum persicaria*, *P. hydropiper* and *P. aviculare*. *Bidens tripartita* also occurs commonly but not usually with any abundance and there is usually some *Juncus bufonius*. Other plants recorded occasionally are *Plantago major*, *Lythrum portula*, *Littorella uniflora* and the grasses *Agrostis stolonifera*, *Alopecurus geniculatus*, *Poa annua* and *Phalaris arundinacea*. Scattered individuals of *Rumex crispus*, *R. obtusifolius*, *Chenopodium rubrum*, *Cirsium arvense* and *Epilobium obscurum* may catch the eye but such species are never common. This community can provide a locus for the nationally rare *Limosella aquatica*.

#### Habitat

The *Rorippa*-*Filaginella* community is characteristically found in periodically-flooded, eutrophic muds and sands around the margins of fluctuating pools, lakes and reservoirs, on islands and banksides in mature river systems and in ruts along paths and trackways.

The community depends upon the exposure of bare, damp substrates by lowering of water-tables in rivers and lakes after the winter or by evaporation from smaller pools and flooded ruts with the warmth of

spring. The knotweeds which commonly come to dominate this kind of vegetation are especially well adapted to rapid colonisation of congenial situations after a period of cold temperatures and can quickly overwhelm the smaller ephemerals (Justice 1941, Timson 1965, Courtney 1968, Henson 1969).

High levels of nitrogen are also important in permitting the quick growth of the sorts of lush swards characteristic here. The community is thus especially likely to develop where nutrient-rich ground waters or eutrophic substrates like river and lake alluvia occur, or where there is local enrichment of damp ground by watering stock or animal traffic along trackways. Even very limited development of such conditions, as along rutted paths where cattle, sheep or horses defaecate in largely impoverished environments like lowland heaths can permit the temporary development of the community. In fact, for a rarity like *Limosella aquatica*, such habitats may be especially important: it too has seeds which germinate rapidly in summer and completes its life cycle before autumn (Preston in Stewart *et al.* 1994). Typically, like the commoner species of this community, the populations of *Limosella* can vary greatly in size from year to year in any one place. The characteristic habitats here are not only unstable but quite often not precisely congenial for colonisation by a particular species.

#### Zonation and succession

The *Rorippa*-*Filaginella* community can be found in mosaics and zonations with other kinds of inundation communities, wet grasslands and water-margin vegetation according to differences in the extent of inundation, instability of the habitat and amount of nutrients in the waters and substrates.

On ground that emerges later from inundation and is not so unstable, the community can be replaced by amphibious perennial vegetation like the *Polygonum amphibium* community or by a zone of bare wet muds too shortly exposed for colonisation. Above, the community can pass to the *Bidens*-*Phalaris* assemblage or to

the *Polygonum-Poa* community on ground which remains exposed each summer for longer. Where the community marks out periodically-flooded ruts in pasture or heath, it can give way more sharply to Elymo-Rumicion, Lolio-Plantaginion or Cynosurion swards, or to ericoid vegetation.

With an increase in nitrogen enrichment on wetter ground, the *Rorippa-Filaginella* community is replaced by the *Ranunculetum scelerati*.

### Distribution

The community occurs widely in suitable habitats throughout the lowlands of Britain.

### Affinities

In the high frequency of *F. uliginosa* and *J. bufonius*, and in providing a locus for *Limosella aquatica*, the *Rorippa-Filaginella* community shows strong floristic affinities with the Nanocyperion vegetation of fluctuating pools. However, in the equable and moist Atlantic climate of Britain, such vegetation often supports a variety of bulkier plants, like *Polygonum* spp. and *Bidens*, which can get a hold as the muds dry out and release nutrients but are not too parched in the absence of summer drought (Rodwell 1994b). Then the appearance is more of a Bidention assemblage.

### Floristic table OV31

<i>Rorippa palustris</i>	V (1–9)
<i>Filaginella uliginosa</i>	V (2–8)
<i>Polygonum persicaria</i>	III (2–8)
<i>Juncus bufonius</i>	III (2–6)
<i>Polygonum hydropiper</i>	III (3–10)
<i>Polygonum aviculare</i>	III (1–5)
<i>Bidens tripartita</i>	III (1–7)
<i>Plantago major</i>	III (1–8)
<i>Alopecurus geniculatus</i>	II (1–7)
<i>Agrostis stolonifera</i>	II (2–5)
<i>Lythrum portula</i>	II (2–5)
<i>Polygonum amphibium</i>	II (1–5)
<i>Poa annua</i>	II (2–8)
<i>Littorella uniflora</i>	II (1–4)
<i>Phalaris arundinacea</i>	I (2–5)
<i>Polygonum lapathifolium</i>	I (1–5)
<i>Rumex crispus</i>	I (2–4)
<i>Epilobium obscurum</i>	I (2–4)
<i>Ranunculus flammula</i>	I (3–4)
<i>Rumex obtusifolius</i>	I (2–4)
<i>Pohlia carnea</i>	I (3–5)
<i>Ranunculus repens</i>	I (2–4)
<i>Limosella aquatica</i>	I (1–9)
<i>Chenopodium rubrum</i>	I (1–5)
<i>Cirsium arvense</i>	I (2–3)
<i>Glyceria fluitans</i>	I (2–4)
<i>Juncus articulatus</i>	I (2–4)
<i>Callitriche hamulata</i>	I (3–7)
<i>Eleocharis palustris</i>	I (1–4)
<i>Alisma plantago-aquatica</i>	I (2–4)
<i>Callitriche stagnalis</i>	I (3)
<i>Mentha aquatica</i>	I (1–7)
<i>Potentilla anserina</i>	I (1–3)
<i>Physcomitrium pyriforme</i>	I (2–3)
<i>Physcomitriella patens</i>	I (2–4)
Number of samples	49
Number of species/sample	10 (4–18)