OV35
Lythrum portula-Ranunculus flammula community

Constant species
Lythrum portula, *Ranunculus flammula*.

Rare species
Alopecurus aequalis, *Pilularia globulifera*.

Physiognomy
The *Lythrum portula-Ranunculus flammula* community comprises generally open vegetation in which *L. portula* and *R. flammula* are the only constants, the former sometimes occurring with abundance, occasionally in locally monodominant stands. Apart from *Eleocharis palustris*, other associates are recorded rather sporadically and only rarely with high cover values, but can be quite varied: *Agrostis stolonifera*, *Juncus bufonius*, *J. effusus*, *J. articulatus*, *Galium palustre*, *Callitriche stagnalis*, *Littorella uniflora*, *Mentha aquatica*, *Alisma plantago-aquatica*, *Myosotis scorpioides* and *Apium inundatum* have all been found here. The community also provides a locus for the nationally rare *Pilularia globulifera*, a perennial plant but one quick to colonise the damp open muds characteristic of this vegetation (Jermy in Stewart *et al.* 1994), *Limosella aquatica*, an ephemeral herb, and *Alopecurus aequalis*, an annual grass which invades here as water levels drop (Hubbard 1984, Twist in Stewart *et al.* 1994).

Habitat
The *Lythrum-Ranunculus* community is typical of silty or peaty soils, wetted and exposed by fluctuating or temporary waters around pool, lake and reservoir margins and in flooded gravel and brick-earth workings.

Compared with the habitats of Bidention assemblages, the situations colonised by this vegetation are not nutrient-rich and, though the cover of the sward can be extensive, the herbage does not have the lush character of those nitrophilous ephemeral communities. Indeed, the *Lythrum-Ranunculus* community is not dominated by annuals at all nor does it show the striking diversity of dominance typical there. Its cover of perennials is maintained in a somewhat attenuated form by shallow inundation and forms an open matrix in which the more short-lived species can obtain a hold. Most of the plants are diminutive and do not exert a shading effect on their neighbours.

The other important element in helping maintain an open habitat is a modest amount of trampling, sufficient to keep the surface scuffed but not too broken up. Animals may also be important in transporting seed of the species in the community widely across areas where suitable conditions are likely to prevail locally in subsequent years (Ellenberg 1988).

For both *Alopecurus aequalis* and *Pilularia*, both of them declining species (Stewart *et al.* 1994), the habitat characteristic of this community provides widely scattered surviving situations which they can colonise from time to time.

Zonation and succession
The *Lythrum-Ranunculus* community is sometimes found with inundation communities like the *Agrostio-Ranunculetum* or *Polygono-Bidentetum* on periodically-flooded silts around pools and lakes or among the *Holco-Juncetum* in wet pastures on impeded soils. Towards shallow open waters, it can give way to the *Eleocharitetum palustris* or *Callitriche* vegetation. Repeated flooding helps maintain suitable habitats for the community and drainage leads to succession to wet grassland or rush pasture.

Distribution
This is a very local community occurring at scattered sites through the warmer south of Britain.

Affinities
Although the *Lythrum-Ranunculus* community shows some affinities with both Bidention and Littorellion assemblages characterised from Britain, it is probably best accommodated in the Nanocyperion.

https://doi.org/10.1017/CBO9780511541834.104 Published online by Cambridge University Press

Floristic table OV35

Lythrum portula	V (1–8)
Ranunculus flammula	V (1–4)
Eleocharis palustris	III (2–9)
Agrostis stolonifera	II (1–4)
Galium palustre	II (1–3)
Alisma plantago-aquatica	II (2–3)
Callitriche stagnalis	II (3–7)
Juncus bufonius	II (3–5)
Littorella uniflora	II (1–8)
Polygonum hydropiper	II (2–4)
Hydrocotyle vulgaris	II (3–4)
Mentha aquatica	II (2–4)
Juncus effusus	II (3–5)
Myosotis scorpioides	II (1–4)
Poa annua	II (1–4)
Calliergon cuspidatum	II (1–3)
Callitriche hamulata	II (3–4)
Filaginella uliginosa	II (3–5)
Alopecurus aequalis	II (2–5)
Apium inundatum	II (2–5)
Cardamine pratensis	II (2–3)
Juncus articulatus	II (1–2)
Pilularia globulifera	I (4–6)
Rorippa islandica	I (3–5)
Ranunculus hederaceus	I (1–4)
Alopecurus geniculatus	I (1–4)
Ranunculus trichophyllus	I (2–3)
Drepanocladus fluitans	I (2)
Agrostis canina	I (4–5)
Prunella vulgaris	I (1)
Limosella aquatica	I (2–5)
Riccia sp.	I (2)
Salix cinerea seedling	I (1)
Bryum klinggraeffii	I (1)
Number of samples	16
Number of species/sample	11 (4–23)

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