

<b>Scientific name</b>	<i>Littorella uniflora</i> – <i>Ranunculus flammula</i> aquatic community
<b>Common name</b>	Shoreweed – Lesser Spearwort aquatic community
<b>Community code</b>	FW1A

### Vegetation

*Littorella uniflora* is the key character species of this aquatic community and the only constant. It is frequently accompanied by *Juncus bulbosus* and occasionally by *Lobelia dortmanna*, *Baldellia ranunculoides* and *Eriocaulon aquaticum*. *Ranunculus flammula* is frequent, growing in shallower waters, whilst *Myriophyllum alterniflorum* can occur at greater depths. *Juncus articulatus*, *Eleocharis multicaulis*, *Carex viridula*, *Agrostis stolonifera* and *Mentha aquatica* occur occasionally at the terrestrial transition.

### Ecology

This community is typical of the nutrient-poor, clear shallow waters of oligotrophic lakes on acid stony substrates, but may occur in more mesotrophic lakes.

### Sub-communities

No sub-communities are currently described.

### Similar communities

From the closely-related other communities in this group, FW1A differs chiefly by the abundance and frequency of *Littorella uniflora*.

### Records and distribution

#### Number of records (all)

Clearly assigned:	115
Transitional:	8
Total:	123

#### Number of records (mapped)

2001-2020:	30
1986-2000:	19
1971-1985:	29
Pre-1971:	29
Total:	107

#### Number of hectads (by most recent time period)

2001-2020:	7
1986-2000:	11
1971-1985:	5
Pre-1971:	5
Total:	28

#### Number of hectads (records in each time period)

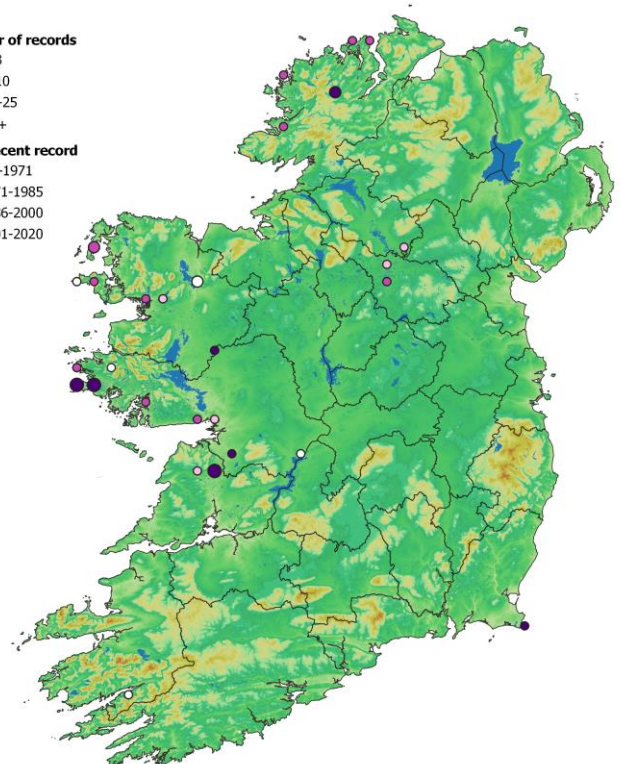
2001-2020:	7
1986-2000:	12
1971-1985:	9
Pre-1971:	6

#### Number of records

- 1-3
- 4-10
- 11-25
- 26+

#### Most recent record

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



**Synoptic table (n = 105)**

Species	Frequency	Cover	Species	Frequency	Cover
	(from I-V)	min (med) max		(from I-V)	min (med) max
<i>Littorella uniflora</i>	V	3-(7)-9	<i>Anagallis tenella</i>	I	2-(2)-3
<i>Juncus bulbosus</i>	III	1-(3)-8	<i>Carex nigra</i>	I	2-(3)-5
<i>Ranunculus flammula</i>	III	1-(3)-7	<i>Carex panicea</i>	I	1-(2)-3
<i>Lobelia dortmanna</i>	II	2-(3)-8	<i>Isolepis fluitans</i>	I	2-(3)-4
<i>Agrostis stolonifera</i>	II	1-(2)-5	<i>Leontodon autumnalis</i>	I	2-(2)-3
<i>Eleocharis multicaulis</i>	II	2-(4)-7	<i>Potamogeton natans</i>	I	2-(3)-5
<i>Juncus articulatus</i>	II	1-(3)-5	<i>Fontinalis antipyretica</i>	I	2-(3)-7
<i>Carex viridula</i>	II	1-(3)-7	<i>Schoenoplectus lacustris</i>	I	1-(2)-5
<i>Baldellia ranunculoides</i>	II	1-(3)-7	<i>Eleocharis acicularis</i>	I	2-(3)-5
<i>Mentha aquatica</i>	II	+(2)-5	<i>Juncus acutiflorus</i>	I	2-(3)-5
<i>Myriophyllum alterniflorum</i>	II	1-(3)-5	<i>Menyanthes trifoliata</i>	I	2-(3)-7
<i>Scorpidium scorpioides</i>	II	2-(6)-8	<i>Ranunculus trichophyllus</i>	I	2-(4)-5
<i>Eriocaulon aquaticum</i>	II	2-(3)-7	<i>Lythrum salicaria</i>	I	2-(2)-3
<i>Potamogeton gramineus</i>	I	1-(3)-7	<i>Molinia caerulea</i>	I	2-(3)-5
<i>Eleocharis palustris</i>	I	2-(3)-6	<i>Persicaria amphibia</i>	I	3-(4)-5
<i>Samolus valerandi</i>	I	1-(2)-3	<i>Potamogeton coloratus</i>	I	2-(3)-7
<i>Hydrocotyle vulgaris</i>	I	1-(2)-5	<i>Potamogeton lucens</i>	I	2-(2)-2
<i>Apium inundatum</i>	I	2-(2)-7	<i>Potentilla erecta</i>	I	2-(2)-2
<i>Galium palustre</i>	I	1-(2)-4	<i>Potentilla palustris</i>	I	2-(2)-3
<i>Phragmites australis</i>	I	2-(3)-5	<i>Ranunculus aquatilis</i>	I	2-(3)-3

**Affinities**

GHI: FL2 Oligotrophic lakes

ZM: OB Littorelletea uniflorae Br.-Bl. et Tx. ex Westhoff et al. 1946 (75.2%)

EUNIS: C3.4111 Shoreweed lawns

NVC: A22a *Littorella uniflora-Lobelia dortmanna* community *Littorella uniflora* sub-community (67.2%)

Annex I:3110 Oligotrophic isoetid lake habitat

**Proxy environmental data**

Light: 7.8 Reaction: 5.2 Wetness: 9.9 Fertility: 2.8 Salinity: 0.1

**Conservation value**

Many examples of this habitat will correspond with EU HD Annex I habitat 3110 Oligotrophic lakes. *Eriocaulon aquaticum* has a distinctly restricted distribution in Ireland. It is an aquatic community of medium species richness (species/4 m<sup>2</sup> = 7.2, n = 52).

**Management**

This community is typically unmanaged. The main threats to the lakes in which it occurs are eutrophication from agriculture and forestry, and inflow of suspended organic sediment from degraded peatlands.

**Key references**

van Groenendael, J., Hochstenbach, S.M.H., van Mansfeld, M., Roozen, A.J.M., Westhoff, V. (1982) The influence of the sea on the vegetation of lakes in southwest Connemara. *Journal of Life Sciences - Royal Dublin Society* 3, 221-242.

Scully, A.C., (1989) Ecological studies of the aquatic species, *Eriocaulon aquaticum* (Hill) Druce and *Lobelia dortmanna* L. (M.Sc.). National University of Ireland Galway.

Ivimey-Cook, R.B., Proctor, M.C.F. (1964) The plant communities of the Burren, Co. Clare. *Proceedings of the Royal Irish Academy. Section B: Biological, Geological, and Chemical Science* 64, 211-302.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin





Photo 1. FW1A *Littorella uniflora* - *Ranunculus flammula* aquatic community, Lough Barfinnihy, Letter, Kerry  
(P. Perrin, July 2019)



Photo 2. FW1A *Littorella uniflora* - *Ranunculus flammula* aquatic community, Lough Barfinnihy, Letter, Kerry  
(P. Perrin, July 2019)



<b>Scientific name</b>	<i>Eriocaulon aquaticum</i> – <i>Lobelia dortmanna</i> aquatic community
<b>Common name</b>	Pipewort – Water Lobelia aquatic community
<b>Community code</b>	FW1B

### Vegetation

*Eriocaulon aquaticum* and *Lobelia dortmanna*, with their emergent flowering shoots, are constant species in this aquatic community and the key indicators. *Juncus bulbosus* is also a constant, typically growing submerged. Alongside this may be found *Littorella uniflora*, which is frequent here. The occasional plants, *Phragmites australis*, *Cladium mariscus*, *Ranunculus flammula* and *Eleocharis multicaulis* may form a swamp-like component.

### Ecology

This community is typical of the very nutrient-poor, clear shallow waters of oligotrophic lakes on acid stony substrates.

### Sub-communities

No sub-communities are currently described.

### Similar communities

From the closely-related other communities in this group, FW1B differs chiefly by the abundance and frequency of *Eriocaulon aquaticum* and *Lobelia dortmanna*.

### Records and distribution

#### Number of records (all)

Clearly assigned:	116
Transitional:	2
Total:	118

#### Number of records (mapped)

2001-2020:	35
1986-2000:	8
1971-1985:	25
Pre-1971:	8
Total:	76

#### Number of hectads (by most recent time period)

2001-2020:	4
1986-2000:	4
1971-1985:	0
Pre-1971:	4
Total:	12

#### Number of hectads (records in each time period)

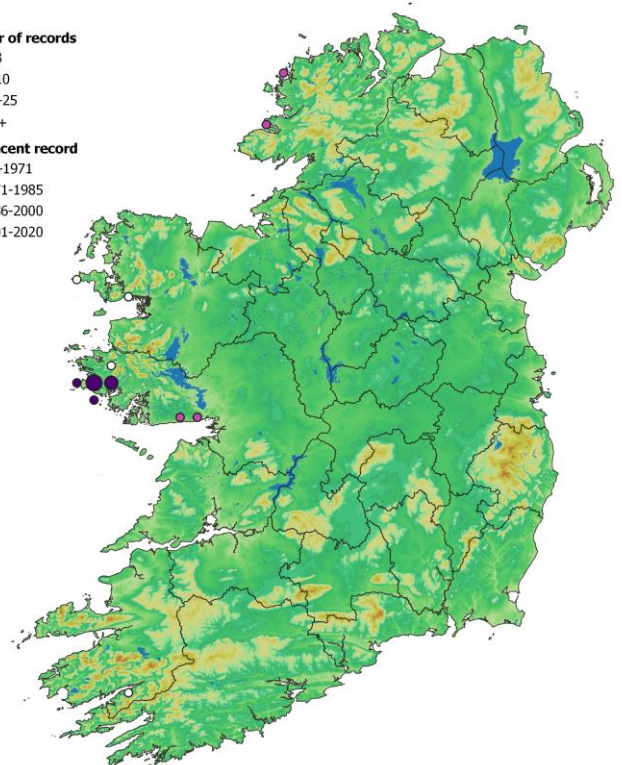
2001-2020:	4
1986-2000:	4
1971-1985:	4
Pre-1971:	5

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020





**Synoptic table (n = 112)**

Species	Frequency		Cover		Species	Frequency		Cover	
	(from I-V)		min	(med) max		(from I-V)		min	(med) max
<i>Eriocaulon aquaticum</i>	V		3-(7)	-9	<i>Baldellia ranunculoides</i>	I		2-(2)	-3
<i>Lobelia dortmanna</i>	V		2-(3)	-7	<i>Nymphaea alba</i>	I		3-(4)	-7
<i>Juncus bulbosus</i>	IV		2-(3)	-8	<i>Anagallis tenella</i>	I		2-(2)	-3
<i>Littorella uniflora</i>	III		2-(3)	-8	<i>Isolepis fluitans</i>	I		2-(3)	-4
<i>Phragmites australis</i>	II		2-(3)	-7	<i>Molinia caerulea</i>	I		2-(3)	-7
<i>Eleocharis multicaulis</i>	II		2-(3)	-7	<i>Myriophyllum alterniflorum</i>	I		2-(3)	-7
<i>Cladium mariscus</i>	II		2-(4)	-7	<i>Scorpidium scorpioides</i>	I		2-(3)	-5
<i>Ranunculus flammula</i>	II		2-(3)	-5	<i>Juncus acutiflorus</i>	I		3-(5)	-7
<i>Potamogeton natans</i>	I		2-(3)	-7	<i>Carex nigra</i>	I		2-(3)	-3
<i>Apium inundatum</i>	I		2-(3)	-7	<i>Carex rostrata</i>	I		2-(5)	-7
<i>Mentha aquatica</i>	I		2-(3)	-5	<i>Equisetum fluviatile</i>	I		2-(3)	-5
<i>Hydrocotyle vulgaris</i>	I		2-(3)	-5	<i>Juncus subnodulosus</i>	I		2-(4)	-4
<i>Menyanthes trifoliata</i>	I		2-(3)	-7	<i>Sphagnum subsecundum</i> agg.	I		2-(5)	-5
<i>Agrostis stolonifera</i>	I		2-(3)	-3	<i>Utricularia australis/vulgaris</i>	I		3-(3)	-3
<i>Juncus articulatus</i>	I		+- (3)	-5	<i>Lythrum salicaria</i>	I		2-(2)	-2
<i>Potamogeton polygonifolius</i>	I		2-(3)	-3	<i>Myrica gale</i>	I		2-(2)	-3
<i>Schoenoplectus lacustris</i>	I		2-(3)	-5	<i>Potentilla palustris</i>	I		2-(3)	-3
<i>Utricularia intermedia</i>	I		2-(2)	-4	<i>Sparganium angustifolium</i>	I		3-(3)	-3
<i>Carex viridula</i>	I		+- (3)	-5	<i>Sparganium natans</i>	I		2-(2)	-3
<i>Eleocharis palustris</i>	I		2-(3)	-7	<i>Sphagnum cuspidatum</i>	I		3-(3)	-5

**Affinities**

GHI: FL2 Oligotrophic lakes

ZM: OB Littorelletea uniflorae Br.-Bl. et Tx. ex Westhoff et al. 1946 (96.4%)

EUNIS: C3.4112 *Lobelia* ponds

NVC: A22a *Littorella uniflora-Lobelia dortmanna* community *Littorella uniflora* sub-community (66.8%)

Annex I:3110 Oligotrophic isoetid lake habitat

**Proxy environmental data**

Light: 7.8 Reaction: 4.6 Wetness: 10.7 Fertility: 1.8 Salinity: 0.1

**Conservation value**

Many examples of this habitat will correspond with EU HD Annex I habitat 3110 Oligotrophic lakes. *Eriocaulon aquaticum* has a distinctly restricted distribution in Ireland. It is an aquatic community of medium species richness (species/4 m<sup>2</sup> = 7.0, n = 85).

**Management**

This community is typically unmanaged. The main threats to the lakes in which it occurs are eutrophication from agriculture and forestry and inflow of suspended organic sediment from degraded peatlands.

**Key references**

van Groenendael, J., Hochstenbach, S.M.H., van Mansfeld, M., Roozen, A.J.M., Westhoff, V. (1982) The influence of the sea on the vegetation of lakes in southwest Connemara. *Journal of Life Sciences - Royal Dublin Society* 3, 221-242.

Scully, A.C., (1989) Ecological studies of the aquatic species, *Eriocaulon aquaticum* (Hill) Druce and *Lobelia dortmanna* L. (M.Sc.). National University of Ireland Galway.

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**Synopsis author(s):** P.M. Perrin

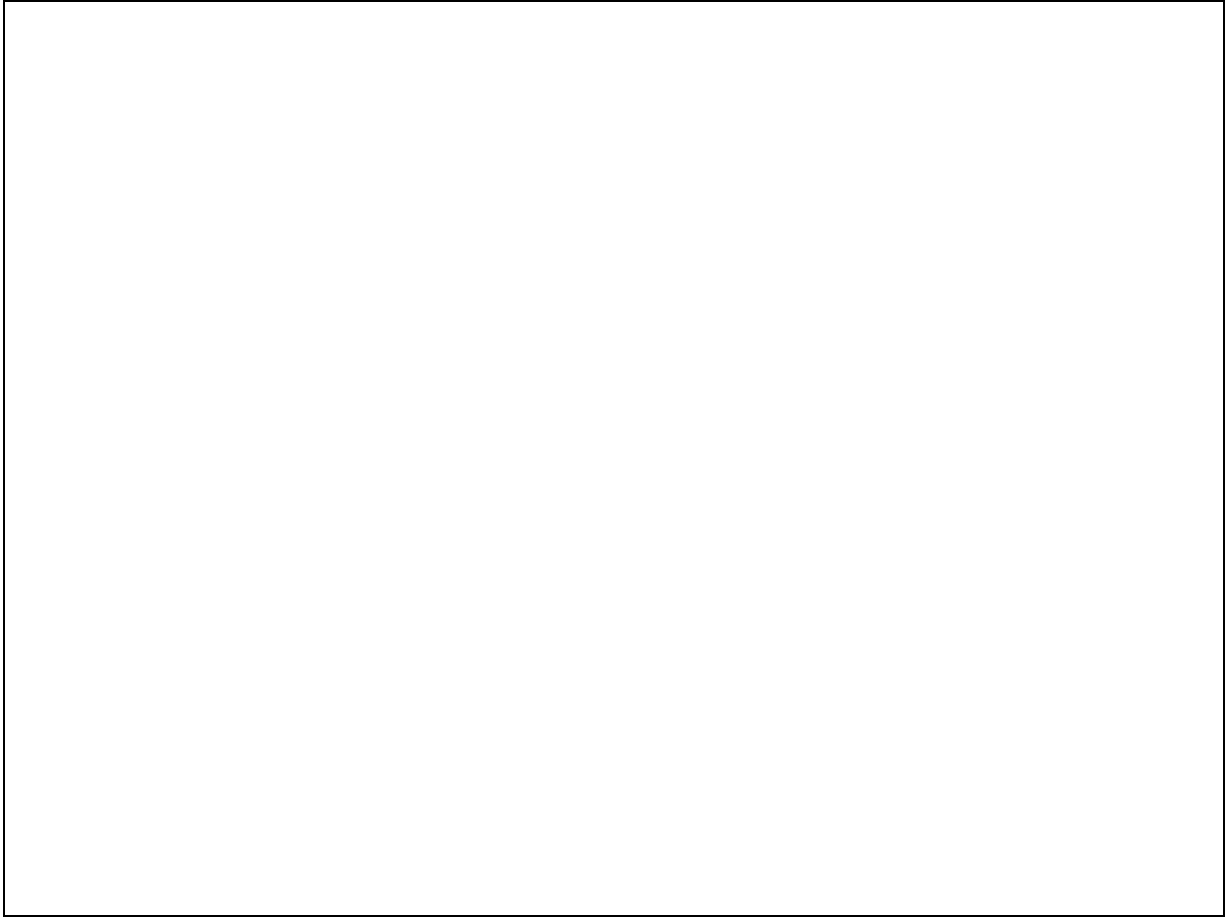


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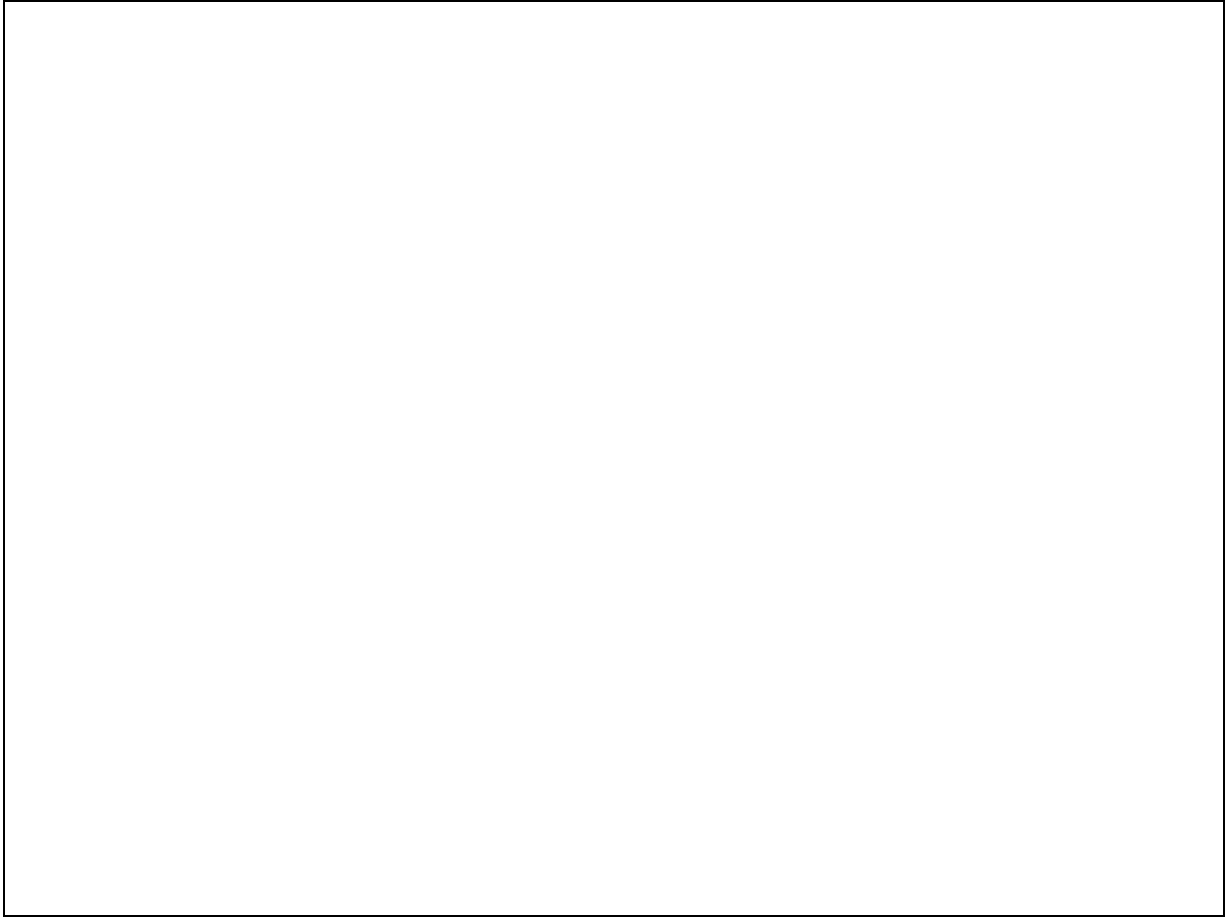


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<b>Scientific name</b>	<i>Juncus bulbosus</i> aquatic community
<b>Common name</b>	Bulbous Rush aquatic community
<b>Community code</b>	FW1C

### Vegetation

This community brings together a variety of vegetation assemblages for which *Juncus bulbosus* is a key indicator. *Juncus bulbosus* is a constant here, but few other species are more than occasional in the community as a whole, therefore further details on the vegetation are described under sub-communities.

### Ecology

*Juncus bulbosus* vegetation is typically associated with nutrient-poor and acidic, aquatic or sub-aquatic conditions. It may be found on the shores of oligotrophic lakes, the margins of peaty dystrophic pools and in shallow rivers. It also occurs in drainage ditches and erosion channels in degraded bog.

### Sub-communities

Two distinct sub-communities are described. The *Potamogeton natans* – *Mentha aquatica* sub-community (FW1Ci) unites the examples from rivers, lakeshores and pool margins. Here, *Juncus bulbosus* is omnipresent and *Potamogeton natans* is fairly common. They are occasionally accompanied by *Mentha aquatica* and *Ranunculus flammula*. In the *Juncus effusus* – *Polytrichum commune* sub-community (FW1Cii) of degraded bogs, *Juncus bulbosus*, *Campylopus introflexus*, *Juncus effusus* and *Polytrichum commune* are constant species, with the bryophytes *Lophocolea bidentata*, *Kindbergia praelonga* and *Aulacomnium palustre* all frequent.

### Similar communities

Sub-community FW1Ci occurs in similar situations to the FW1A *Littorella uniflora* – *Ranunculus flammula* community but *Littorella uniflora* is seldom present in the sub-community and never abundant. Sub-community FW1Cii differs from the degraded bog represented by BG1D *Eriophorum angustifolium* – *Campylopus introflexus* bog by the greater frequency of *Juncus bulbosus* and the absence of bog species such as *Eriophorum angustifolium*, *Calluna vulgaris* or *Molinia caerulea*.

### Records and distribution

#### Number of records (all)

Clearly assigned:	72
Transitional:	22
Total:	94

#### Number of records (mapped)

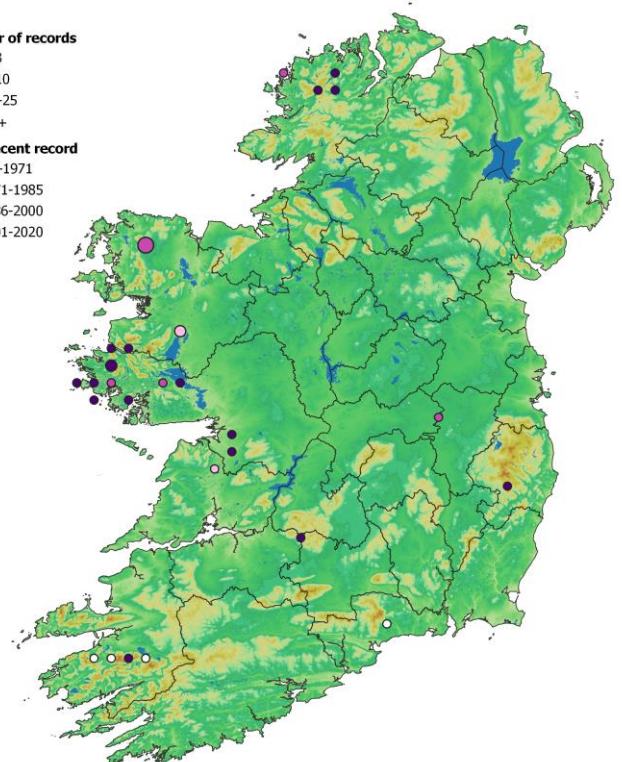
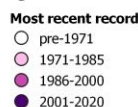
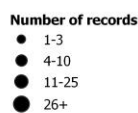
2001-2020:	26
1986-2000:	56
1971-1985:	5
Pre-1971:	4
Total:	91

#### Number of hectads (by most recent time period)

2001-2020:	16
1986-2000:	5
1971-1985:	2
Pre-1971:	4
Total:	27

#### Number of hectads (records in each time period)

2001-2020:	16
1986-2000:	7
1971-1985:	2
Pre-1971:	4



### Synoptic table (n = 65)

Species	Frequency		Cover		Species	Frequency		Cover	
	(from I-V)		min	(med) max		(from I-V)		min	(med) max
<i>Juncus bulbosus</i>	V		2-(5)	-9	<i>Aneura pinguis</i>	I		2-(3)	-3
<i>Campylopus introflexus</i>	IV		3-(7)	-9	<i>Cladonia portentosa</i>	I		2-(2)	-3
<i>Juncus effusus</i>	III		2-(5)	-9	<i>Peltigera polydactylon</i>	I		2-(3)	-3
<i>Polytrichum commune</i>	III		2-(5)	-8	<i>Ranunculus flammula</i>	I		+-	(2)-3
<i>Lophocolea bidentata</i>	II		2-(3)	-7	<i>Rumex acetosella</i>	I		2-(3)	-5
<i>Aulacomnium palustre</i>	II		2-(3)	-5	<i>Dryopteris carthusiana</i>	I		+-	(2)-3
<i>Kindbergia praelonga</i>	II		2-(3)	-7	<i>Molinia caerulea</i>	I		+-	(3)-4
<i>Pellia neesiana</i>	II		2-(5)	-7	<i>Osmunda regalis</i>	I		2-(2)	-3
<i>Holcus lanatus</i>	II		+-	(3)-7	<i>Potamogeton gramineus</i>	I		2-(2)	-3
<i>Hypochaeris radicata</i>	I		+-	(3)-5	<i>Schoenoplectus lacustris</i>	I		2-(4)	-5
<i>Eriophorum angustifolium</i>	I		3-(3)	-8	<i>Hypnum jutlandicum</i>	I		2-(3)	-7
<i>Potamogeton natans</i>	I		+-	(2)-4	<i>Juncus articulatus</i>	I		2-(4)	-5
<i>Sphagnum cuspidatum</i>	I		2-(5)	-8	<i>Menyanthes trifoliata</i>	I		2-(3)	-3
<i>Sphagnum subsecundum</i> agg.	I		2-(5)	-9	<i>Myriophyllum alterniflorum</i>	I		2-(3)	-4
<i>Sphagnum squarrosum</i>	I		2-(5)	-7	<i>Plagiomnium undulatum</i>	I		2-(3)	-3
<i>Agrostis canina/vinealis</i>	I		2-(5)	-8	<i>Potamogeton polygonifolius</i>	I		2-(5)	-8
<i>Calluna vulgaris</i>	I		+-	(2)-5	<i>Potentilla erecta</i>	I		+-	(3)-3
<i>Cephalozia bicuspidata</i>	I		3-(3)	-5	<i>Rhytidiadelphus squarrosus</i>	I		+-	(3)-5
<i>Mentha aquatica</i>	I		+-	(2)-3	<i>Sagina procumbens</i>	I		2-(4)	-5
<i>Agrostis stolonifera</i>	I		+-	(3)-3	<i>Sphagnum papillosum</i>	I		2-(3)	-3

#### Affinities

GHI: FL1 Dystrophic lakes / FL2 Oligotrophic lakes / PB4 Cutover bog / PF2 Poor fen and flush

ZM: PA Scheuchzerio palustris-Caricetea fuscae Tx. 1937 (55.4%) / CJ Koelerio-Corynephoretea canescentis Klika in Klika et Novák 1941 (23.1%)

EUNIS: C3.4134 *Juncus bulbosus* communities / D1.215 Western Irish *Juncus bulbosus* flush communities

NVC: M6c *Carex echinata-Sphagnum recurvum/auriculatum* mire *Juncus effusus* sub-community (27.5 %), but also A24b *Juncus bulbosus* community *Sphagnum auriculatum* sub-community (27.1%)

Annex I:3160 Acid oligotrophic lake habitat / 7130 Blanket bog (active)\*

#### Proxy environmental data

Light: 6.9 Reaction: 3.7 Wetness: 8.1 Fertility: 2.6 Salinity: 0.0

#### Conservation value

Some examples of sub-community FW1Ci are may correspond to EU HD Annex I habitat 3160 Dystrophic lakes. Examples of sub-community FW1Cii are likely to correspond to the inactive variant of EU HD Annex I habitat 7130 Blanket bog. For an aquatic community, it is quite species-rich (species/4 m<sup>2</sup> = 9.8, n = 10).

#### Management

This vegetation is typically unmanaged. Lakeshore and pool margin stands may be impacted upon by drainage and eutrophication. Stands of FW1Cii are typically a result of turf-cutting, either by machine or by hand, or erosion, which may be linked to extensive sheep grazing.

#### Key references

Farrell, C.A. (2001) An ecological study of intact and industrial cutaway Atlantic blanket bog at Bellacorick, north-west Mayo (Ph.D. thesis). University College Dublin.

van Groenendael, J., Hochstenbach, S.M.H., van Mansfeld, M., Roozen, A.J.M., Westhoff, V. (1982) The influence of the sea on the vegetation of lakes in southwest Connemara. *Journal of Life Sciences - Royal Dublin Society* 3, 221-242.

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Synopsis author(s): P.M. Perrin



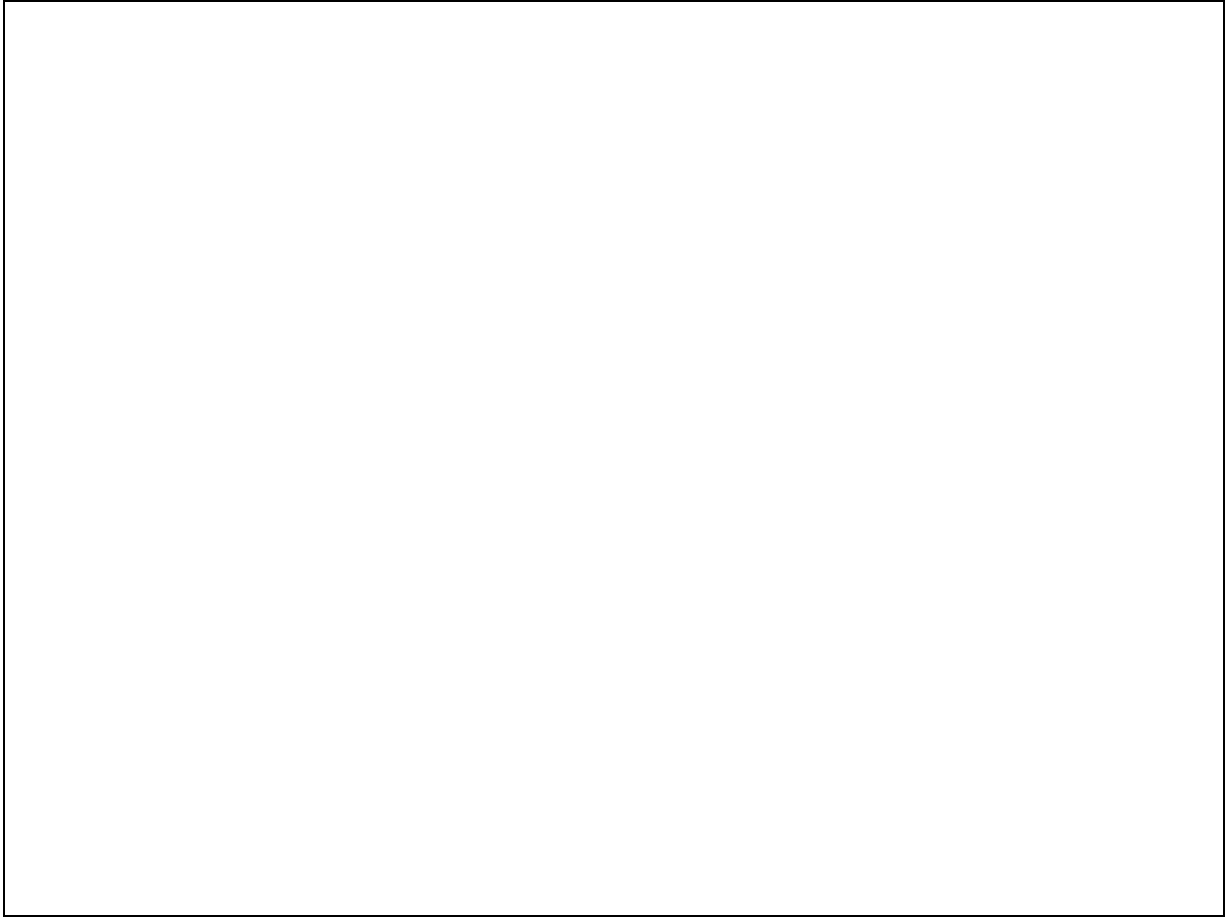


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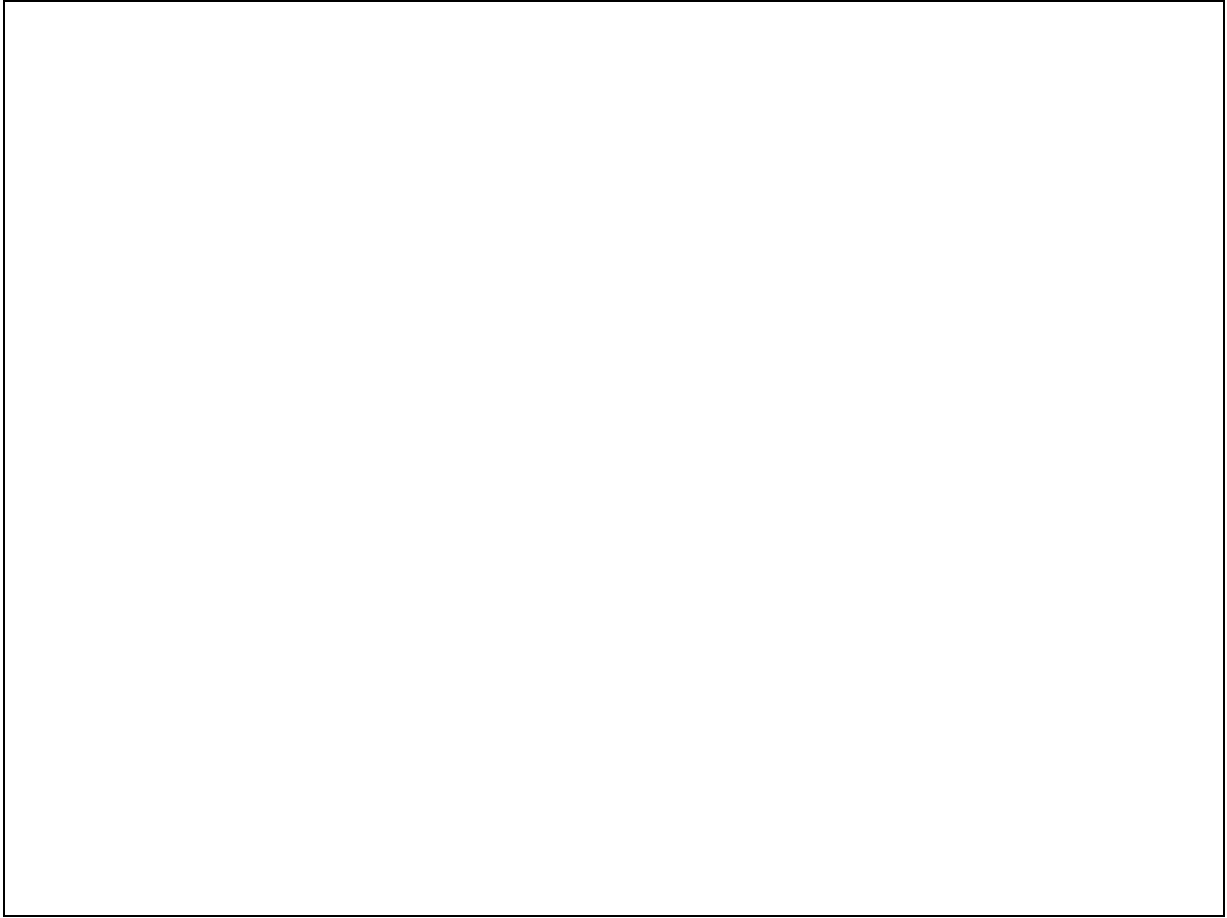


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<b>Scientific name</b>	<i>Najas flexilis</i> aquatic community
<b>Common name</b>	Slender Naiad aquatic community
<b>Community code</b>	FW1D

### Vegetation

*Najas flexilis* is the key species of this simple aquatic community. Frequently there will be some presence of *Potamogeton berchtoldii*, with its narrow linear leaves, and occasionally some *Potamogeton perfoliatus*. Stoneworts are frequent companions to *Najas* and species may include *Chara aspera*, *Chara globularis*, *Chara virgata*, *Nitella confervacea*, *Nitella flexilis* or *Nitella translucens*.

### Ecology

This is a submerged community of shallow to deep lake beds in the far west of Ireland. Water conditions are typically circumneutral with low nutrient levels.

### Sub-communities

No sub-communities are currently described.

### Similar communities

Surveying for *Najas* usually requires snorkelling or scuba-diving. Once the presence of the species has been confirmed, however, identifying this assemblage is straightforward as the species is not typically present in any other community.

### Records and distribution

#### Number of records (all)

Clearly assigned:	38
Transitional:	1
Total:	39

#### Number of records (mapped)

2001-2020:	32
1986-2000:	7
1971-1985:	0
Pre-1971:	0
Total:	39

#### Number of hectads (by most recent time period)

2001-2020:	18
1986-2000:	4
1971-1985:	0
Pre-1971:	0
Total:	22

#### Number of hectads (records in each time period)

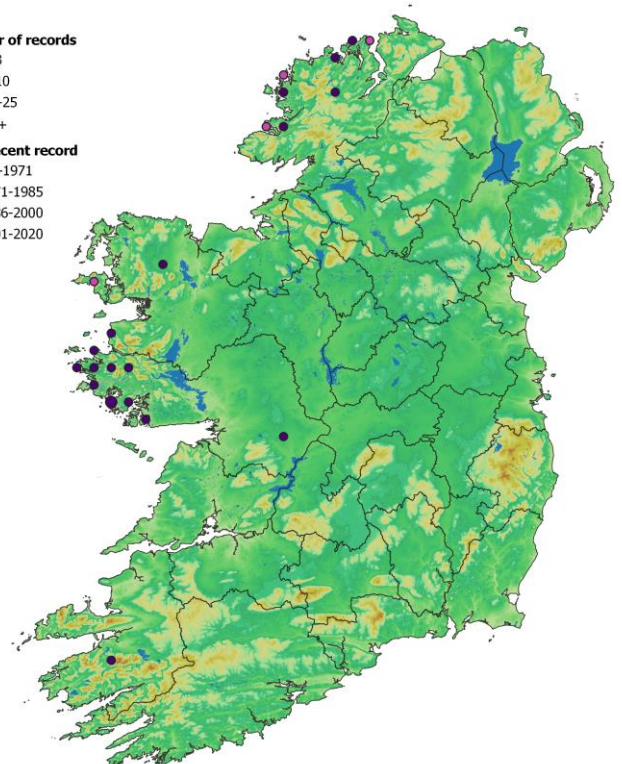
2001-2020:	18
1986-2000:	4
1971-1985:	0
Pre-1971:	0

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020





### Synoptic table (n = 38)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Najas flexilis</i>	V	2-(3)-9			
<i>Potamogeton berchtoldii</i>	III	2-(3)-5			
<i>Potamogeton perfoliatus</i>	II	2-(3)-7			
<i>Fontinalis antipyretica</i>	I	2-(3)-8			
<i>Callitriche hermaphroditica</i>	I	2-(2)-8			
<i>Isoetes lacustris</i>	I	2-(2)-3			
<i>Elatine hexandra</i>	I	2-(3)-3			
<i>Potamogeton obtusifolius</i>	I	3-(3)-5			
<i>Sparganium angustifolium</i>	I	2-(3)-7			
<i>Callitriche hamulata</i>	I	2-(3)-5			
<i>Hydrilla verticillata</i>	I	3-(5)-9			
<i>Apium inundatum</i>	I	2-(2)-2			
<i>Elodea canadensis</i>	I	2-(2)-2			
<i>Myriophyllum alterniflorum</i>	I	3-(3)-3			
<i>Potamogeton pusillus</i>	I	2-(2)-2			
<i>Zannichellia palustris</i>	I	3-(3)-3			

#### Affinities

GHI: FL2 Oligotrophic lakes / FL4 Mesotrophic lakes

ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (84.2%)

EUNIS: C1.13 Rooted submerged vegetation of oligotrophic waterbodies / C1.23 Rooted submerged vegetation of mesotrophic waterbodies

NVC: A23 *Isoetes lacustris/setacea* community (19.9%), but also A13 *Potamogeton perfoliatus-Myriophyllum alterniflorum* community (19.6%)

Annex I:3130 Mixed *Najas flexilis* lake habitat

#### Proxy environmental data

Light: 6.1 Reaction: 6.3 Wetness: 11.5 Fertility: 4.1 Salinity: 0.7

#### Conservation value

Examples of this community represent the recently redefined EU HD Annex I habitat 3130 Mixed *Najas* habitat. *Najas flexilis* is also listed in EU HD Annex II and is listed on the Flora (Protection) Order, 2015. Species diversity is low (species/1 m<sup>2</sup> = 3.0, n = 34).

#### Management

The main threats to this habitat come from impacts on water quality from forestry, agriculture, peat extraction and effluent.

#### Key references

Roden, C. (2004) The distribution of *Najas flexilis* in Ireland 2002-2004. (unpublished). National Parks and Wildlife Service, Dublin.

Roden, C. (1999) A survey of coastal lakes in counties Galway, Mayo, Sligo and Donegal. (unpublished). The Heritage Council, Kilkenny.

**Synopsis version:** V1.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

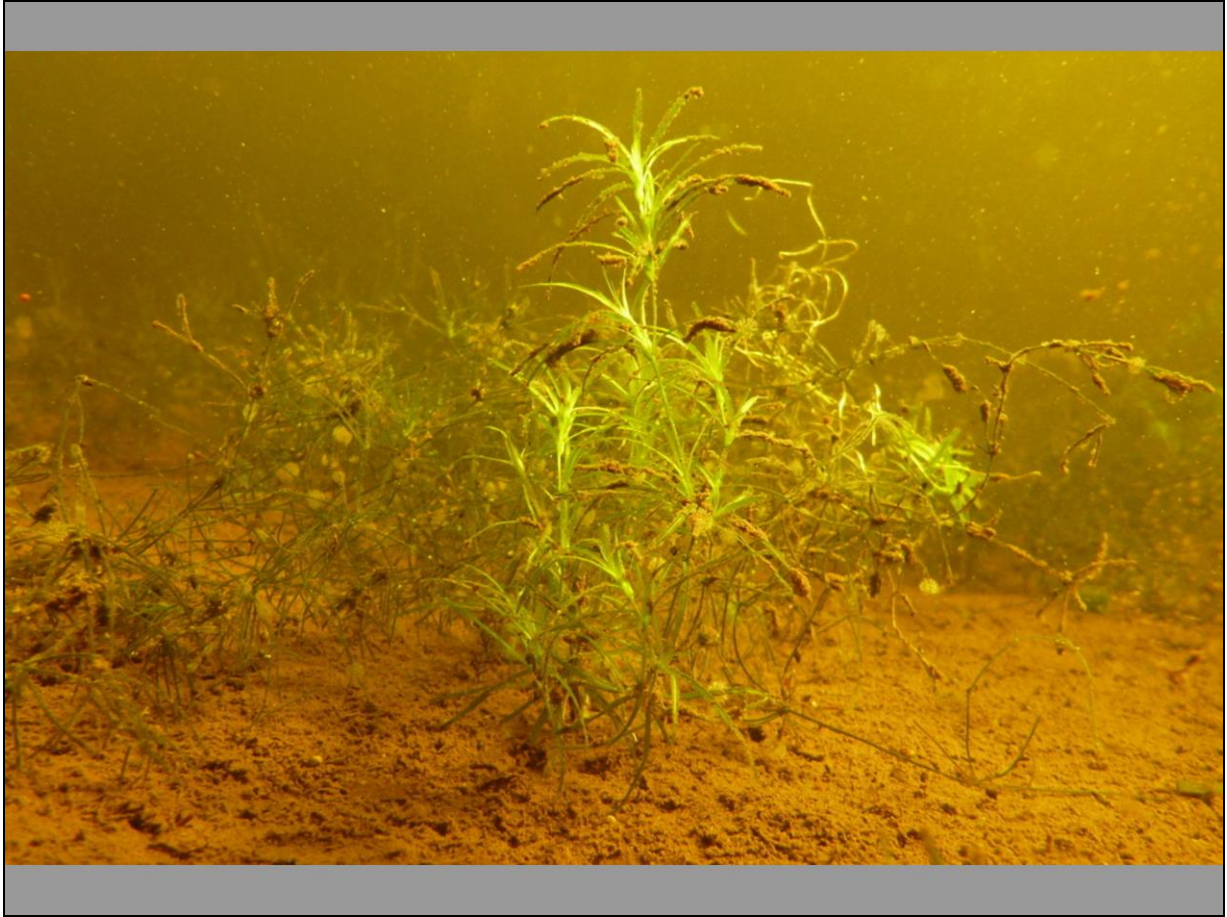


Photo 1. FW1D *Najas flexilis* aquatic community, Lough Leane, Killarney, Kerry (C. Roden, August 2013)

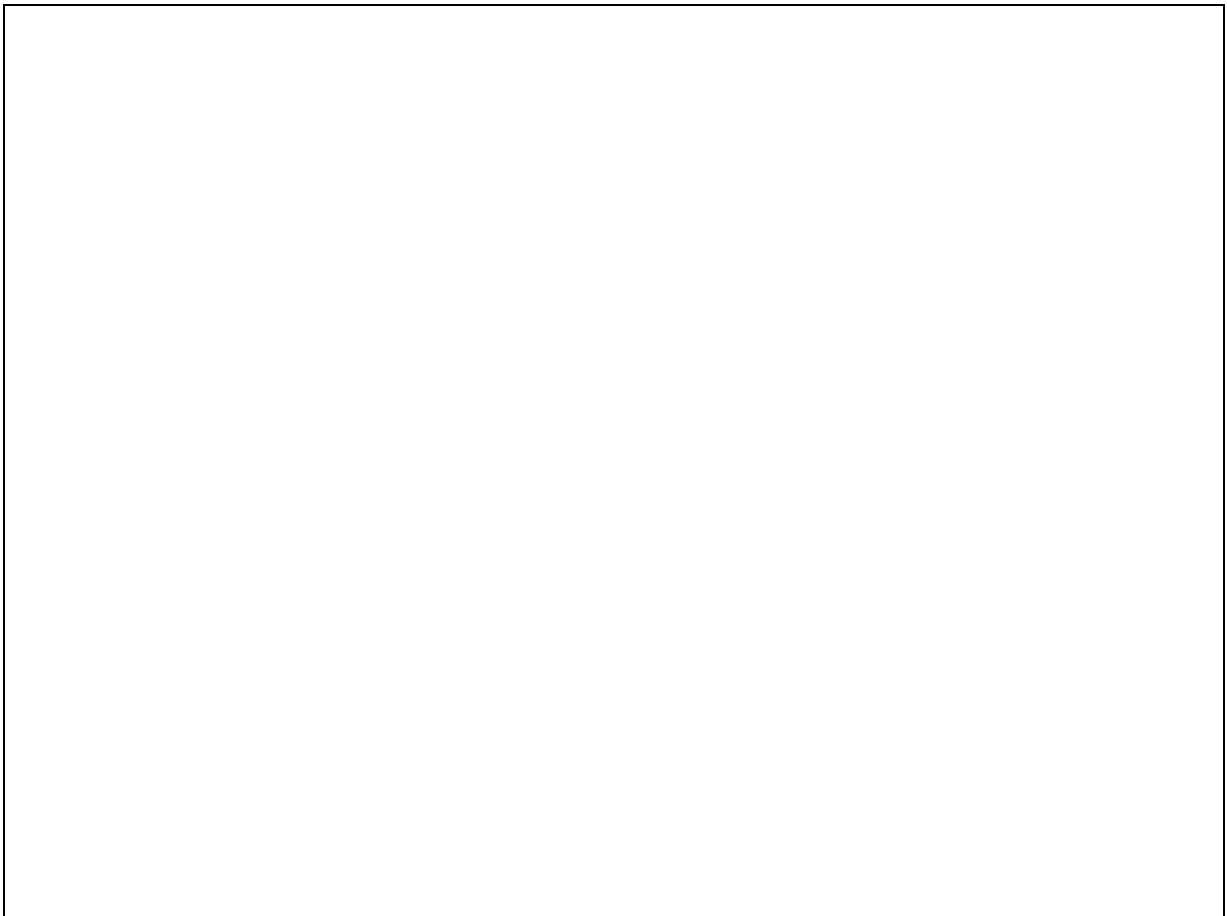


Photo required

<b>Scientific name</b>	<i>Fontinalis antipyretica</i> – <i>Myriophyllum alterniflorum</i> aquatic community
<b>Common name</b>	Greater Water-moss – Alternate Water-milfoil aquatic community
<b>Community code</b>	FW2A

### Vegetation

This is a species-poor, bryophyte-dominated aquatic community, usually with only sparse cover of vascular plants. *Fontinalis antipyretica* is the only constant species and can form sizeable submerged or floating patches. The most likely other bryophytes to be seen here are *Rhynchostegium riparioides*, *Leptodictyum riparium* and *Chiloscyphus polyanthos*. In the more nutrient-poor acidic streams of the uplands, *Fontinalis squamosa* may be found. In terms of vascular plants, the trailing stems of *Myriophyllum alterniflorum* occasionally occur within this community, while other species are rare but may include patches of *Apium nodiflorum*, *Ranunculus penicillatus* and *Potamogeton* species.

### Ecology

This community occurs in a range of aquatic habitats including lagoons and turloughs but it most typically found in mesotrophic, mildly base-rich rivers and streams.

### Sub-communities

No sub-communities are currently described

### Similar communities

The FW2B *Rhynchostegium riparioides* – *Chiloscyphus polyanthos* aquatic community is also dominated by bryophytes, but has a more diverse assemblage of mosses in which its titular species are far more frequent than they are in the present community

### Records and distribution

#### Number of records (all)

Clearly assigned:	108
Transitional:	10
Total:	118

#### Number of records (mapped)

2001-2020:	92
1986-2000:	10
1971-1985:	4
Pre-1971:	0
Total:	106

#### Number of hectads (by most recent time period)

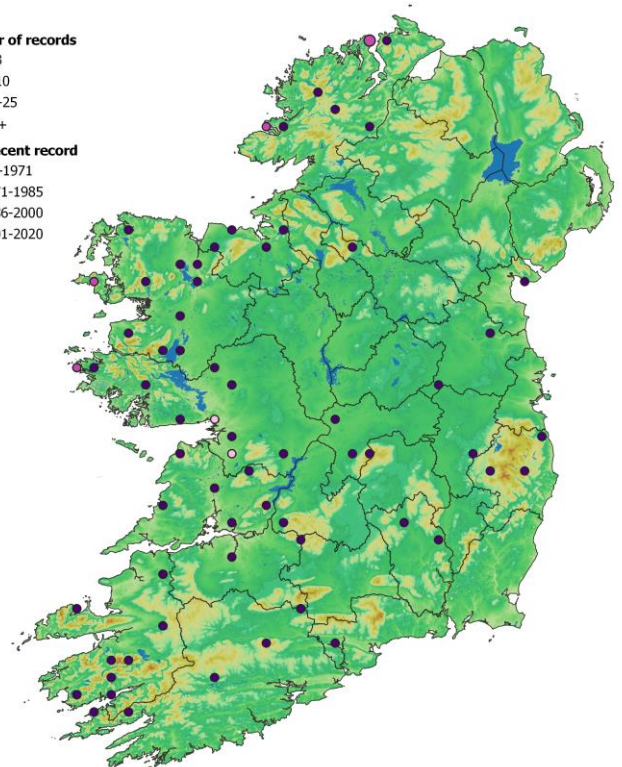
2001-2020:	61
1986-2000:	4
1971-1985:	2
Pre-1971:	0
Total:	67

#### Number of hectads (records in each time period)

2001-2020:	61
1986-2000:	4
1971-1985:	3
Pre-1971:	0

Number of records  
● 1-3  
● 4-10  
● 11-25  
● 26+

Most recent record  
○ pre-1971  
○ 1971-1985  
○ 1986-2000  
○ 2001-2020





### Synopsis table (n = 107)

Species	Frequency	Cover	Species	Frequency	Cover
	(from I-V)	min (med) max		(from I-V)	min (med) max
<i>Fontinalis antipyretica</i>	V	+-(-)5	<i>Rorippa nast.-aquaticum</i> agg.	I	1-(-)2
<i>Myriophyllum alterniflorum</i>	II	+-(+)-5	<i>Sparganium erectum</i>	I	+-(+)-+
<i>Apium nodiflorum</i>	I	+-(+)-2	<i>Urtica dioica</i>	I	+-(+)-+
<i>Crocoshia × crocosmiiflora</i>	I	+-(+)-2	<i>Angelica sylvestris</i>	I	+-(+)-+
<i>Rhynchosstegium riparioides</i>	I	+-(+)-2	<i>Callitriche stagnalis</i>	I	+-(+)-+
<i>Leptodictyum riparium</i>	I	+-(-)2	<i>Cinclidotus fontinaloides</i>	I	+-(+)-+
<i>Juncus effusus</i>	I	+-(+)-2	<i>Fallopia japonica</i>	I	+-(+)-2
<i>Phalaris arundinacea</i>	I	+-(+)-2	<i>Marchantia polymorpha</i>	I	+-(+)-+
<i>Chiloscyphus polyanthos</i>	I	+-(-)4	<i>Myosotis scorpioides</i>	I	+-(+)-+
<i>Mentha aquatica</i>	I	+-(+)-2	<i>Potamogeton crispus</i>	I	+-(-)5
<i>Ranunculus penicillatus</i>	I	+-(+)-2	<i>Veronica beccabunga</i>	I	+-(+)-+
<i>Filipendula ulmaria</i>	I	+-(+)-+	<i>Juncus articulatus</i>	I	2-(-)2
<i>Fontinalis squamosa</i>	I	+-(-)5	<i>Juncus bulbosus</i>	I	2-(-)2
<i>Elodea canadensis</i>	I	+-(+)-1	<i>Myriophyllum spicatum</i>	I	2-(3)-3
<i>Schoenoplectus lacustris</i>	I	+-(+)-3	<i>Persicaria maculosa</i>	I	2-(3)-3
<i>Epilobium hirsutum</i>	I	+-(+)-+	<i>Potamogeton berchtoldii</i>	I	3-(3)-3
<i>Lemna trisulca</i>	I	+-(+)-2	<i>Potamogeton perfoliatus</i>	I	+-(+)-+
<i>Caltha palustris</i>	I	+-(+)-2	<i>Rorippa amphibia</i>	I	3-(3)-3
<i>Impatiens glandulifera</i>	I	+-(+)-+	<i>Scapania undulata</i>	I	+-(+)-+
<i>Potamogeton pectinatus</i>	I	+-(+)-2	<i>Sparganium emersum</i>	I	+-(+)-+

#### Affinities

GHI: CW1 Lagoons and saline lakes / FL6 Turloughs / FW1 Eroding/upland rivers

ZM: No significant affinity, but see SA Platyhypnidio-Fontinalietea antipyreticae Philippi 1956 as bryophyte-dominated classes not covered by the EES

EUNIS: C1 Surface standing waters / C2.27 Mesotrophic vegetation of fast-flowing rivers / C2.33 Mesotrophic vegetation of slow-flowing rivers

NVC: A14 *Myriophyllum alterniflorum* community (32.1%), but bryophyte-dominated communities are outside scope of the NVC

Annex I:1150 Lagoons\* / 3260 Vegetation of flowing waters

#### Proxy environmental data

Light: 6.3 Reaction: 5.9 Wetness: 10.8 Fertility: 5.0 Salinity: 0.0

#### Conservation value

This is a species-poor community but due to the abundance of *Fontinalis antipyretica* it comprises part of the upland aspect of the EU HD Annex I habitat 3260 Floating river vegetation. It may also occur in habitat 1150 Lagoons\*.

#### Management

This community has no specific management. It may be adversely affected by eutrophication, siltation and river engineering including dredging and canalisation.

#### Key references

McGarrigle, M. (2010) Irish national river macrophyte and associated environmental data collected as part of the macrophyte intercalibration exercise in the Central and Baltic GIG under the Water Framework Directive. (unpublished data). Environmental Protection Agency, Wexford.

Kelly-Quinn, M., Bradley, C., Dodkins, I., Harrington, T.J., Ni Chathain, B., O'Connor, M., Rippey, B., Trigg, D. (2005) Water Framework Directive - Characterisation of reference conditions and testing of typology of rivers (2002-W-LS-7). Final Report. (unpublished). Environmental Protection Agency, Wexford

Synopsis version: V2.0

Synopsis date: April 2021

Synopsis author(s): P.M. Perrin

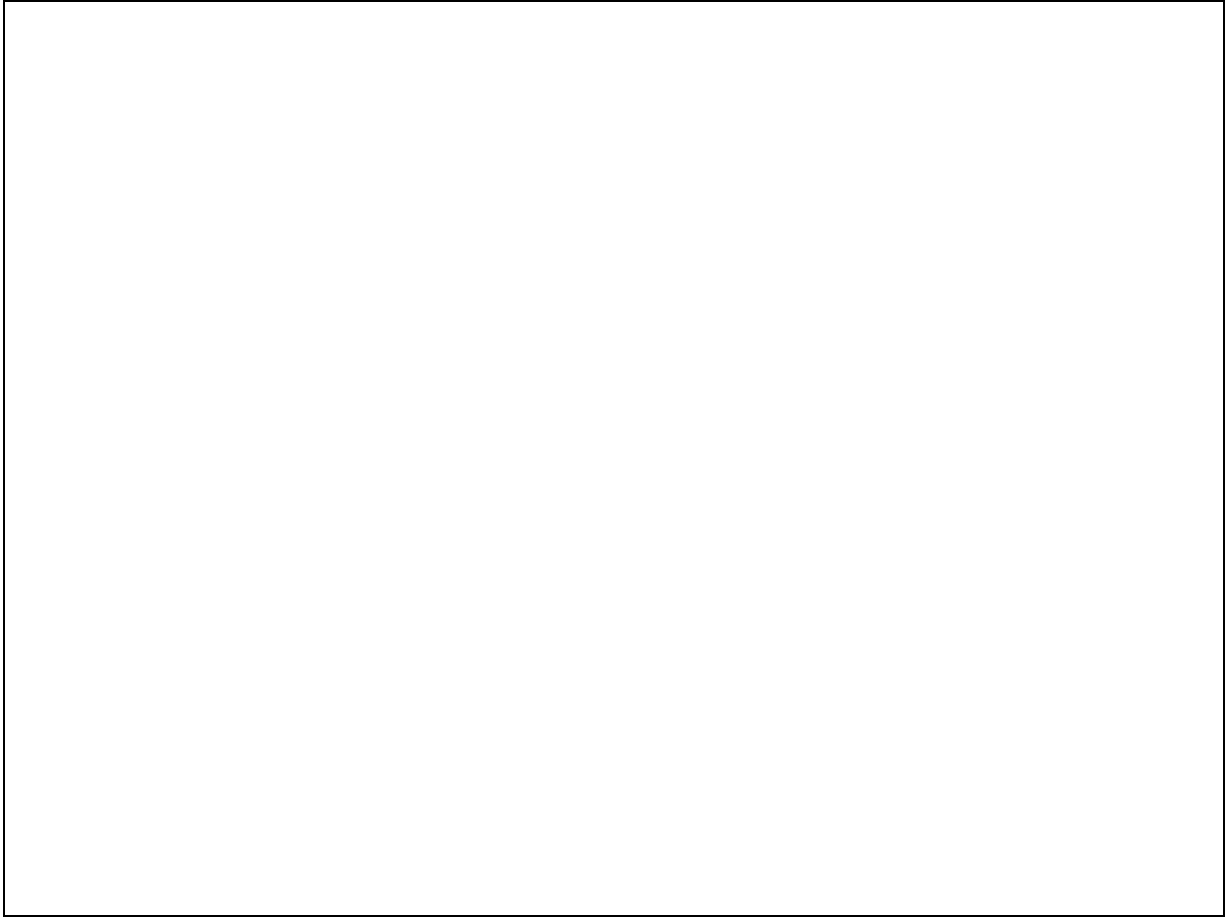


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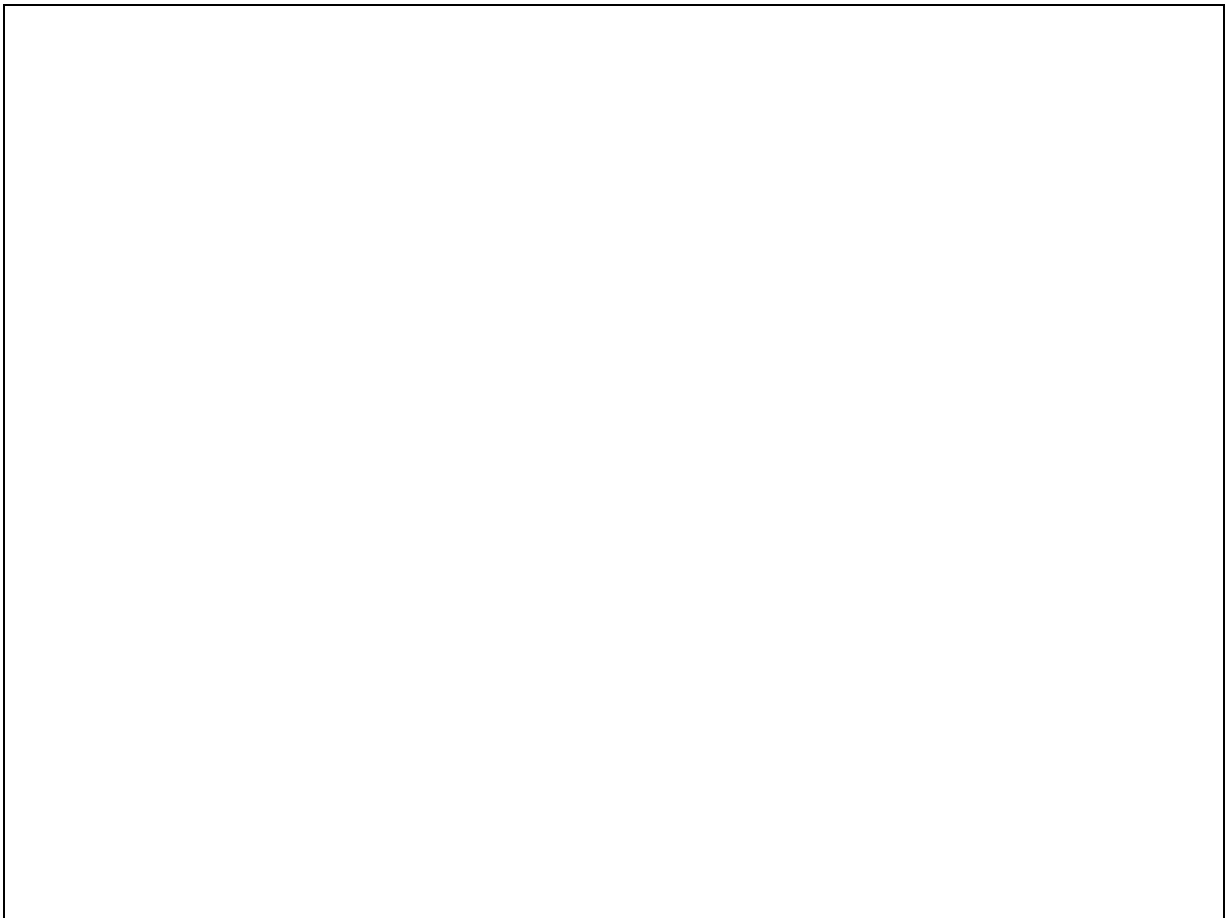


Photo required

<b>Scientific name</b>	<i>Rhynchostegium riparioides</i> – <i>Chiloscyphus polyanthos</i> aquatic community
<b>Common name</b>	Long-beaked Water Feather-moss – St Winifred’s Moss aquatic community
<b>Community code</b>	FW2B

**Vegetation**

Bryophytes dominate this aquatic community and vascular plants seldom occur. *Rhynchostegium riparioides* is the only constant species and patches of this moss, growing on rocks and stones, usually form the main vegetative cover. The liverwort *Chiloscyphus polyanthos* and the moss *Fontinalis antipyretica* are also frequent components. The thalli of *Conocephalum conicum*, *Pellia endiviifolia* and *Marchantia polymorpha* are occasionally found on shady rocks close to the water. Nutrient-poor, acidic streams in the uplands favour *Scapania undulata* and *Fontinalis squamosa*, the latter of which can grow abundantly in those waters. Conversely, in more base-rich situations, *Cratoneuron filicinum* can occur. The most frequent higher plants found here are *Oenanthe crocata* and *Phalaris arundinacea*.

**Ecology**

This community usually occurs in fairly fast-flowing, shaded, mesotrophic rivers and streams with a rocky substrate and beside waterfalls. Waters are typically mildly base-rich, but, as mentioned above, variants can occur in more acidic or alkaline conditions

**Sub-communities**

No sub-communities are currently described.

**Similar communities**

From the other bryophyte-dominated community in this group, FW2A, the present assemblage differs by its greater diversity of species and the lower frequency of *Fontinalis antipyretica*. It is also more confined to watercourses.

**Records and distribution**

*Number of records (all)*

Clearly assigned:	107
Transitional:	28
Total:	135

*Number of records (mapped)*

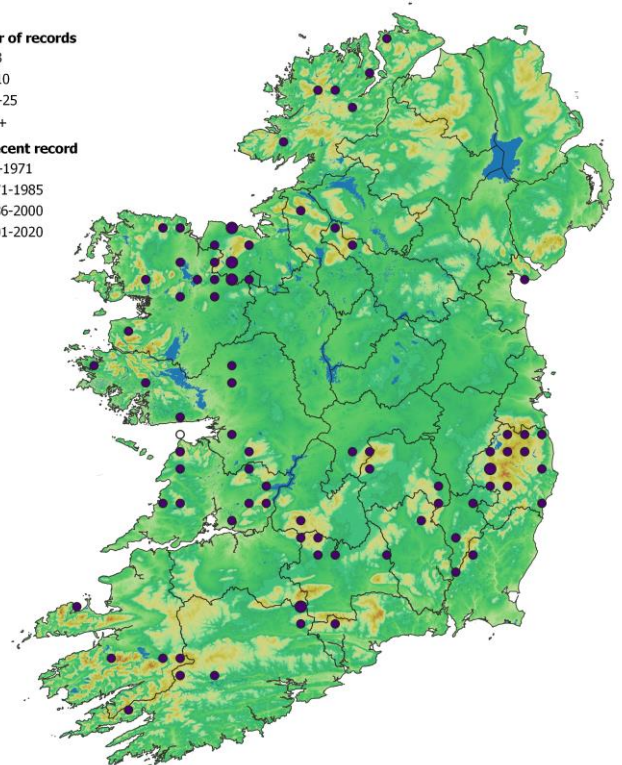
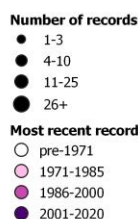
2001-2020:	134
1986-2000:	0
1971-1985:	0
Pre-1971:	1
Total:	135

*Number of hectads (by most recent time period)*

2001-2020:	79
1986-2000:	0
1971-1985:	0
Pre-1971:	1
Total:	80

*Number of hectads (records in each time period)*

2001-2020:	79
1986-2000:	0
1971-1985:	0
Pre-1971:	1





**Synoptic table (n = 104)**

Species	Frequency	Cover	Species	Frequency	Cover
	(from I-V)	min (med) max		(from I-V)	min (med) max
<i>Rhynchostegium riparioides</i>	V	+- (4)-6	<i>Racomitrium aciculare</i>	I	+- (2)-4
<i>Chiloscyphus polyanthos</i>	III	+- (3)-6	<i>Ranunculus penicillatus</i>	I	+- (3)-6
<i>Fontinalis antipyretica</i>	III	+- (3)-4	<i>Rhizomnium punctatum</i>	I	+- (+)-3
<i>Cinclidotus fontinaloides</i>	II	+- (3)-4	<i>Hygrohypnum ochraceum</i>	I	+- (3)-4
<i>Conocephalum conicum</i>	II	+- (3)-4	<i>Mnium hornum</i>	I	+- (+)-3
<i>Fontinalis squamosa</i>	II	+- (4)-7	<i>Didymodon insulanus</i>	I	+- (+)-3
<i>Thamnobryum alopecurum</i>	II	+- (3)-4	<i>Eurhynchium hians</i>	I	+- (+)-3
<i>Brachythecium rivulare</i>	II	+- (3)-5	<i>Brachythecium rutabulum</i>	I	+- (+)-4
<i>Pellia endiviifolia</i>	II	+- (3)-4	<i>Pellia epiphylla</i>	I	+- (3)-4
<i>Brachythecium plumosum</i>	II	+- (3)-5	<i>Mentha aquatica</i>	I	+- (3)-3
<i>Oenanthe crocata</i>	II	+- (3)-5	<i>Myriophyllum alterniflorum</i>	I	+- (3)-5
<i>Scapania undulata</i>	II	+- (3)-5	<i>Schistidium rivulare</i>	I	+- (3)-4
<i>Dichodontium pellucidum</i>	II	+- (3)-4	<i>Sparganium erectum</i>	I	+- (3)-3
<i>Marchantia polymorpha</i>	II	+- (+)-3	<i>Equisetum arvense</i>	I	+- (+)-3
<i>Leptodictyum riparium</i>	II	+- (3)-4	<i>Hygrohypnum luridum</i>	I	+- (3)-4
<i>Phalaris arundinacea</i>	I	+- (3)-4	<i>Lejeunea lamacerina</i>	I	+- (+)-3
<i>Fissidens taxifolius</i>	I	+- (+)-3	<i>Plagiomnium rostratum</i>	I	+- (+)-4
<i>Cratoneuron filicinum</i>	I	+- (3)-5	<i>Plagiomnium undulatum</i>	I	+- (+)-3
<i>Kindbergia praelonga</i>	I	+- (+)-3	<i>Rorippa nast.-aquaticum</i> agg.	I	+- (+)-3
<i>Apium nodiflorum</i>	I	+- (3)-3	<i>Hyocomium armoricum</i>	I	+- (3)-5

**Affinities**

GHI: FW1 Eroding/upland rivers

ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (24.0%), but see also SA Platyhypnidio-Fontinaliетеа antipyreticae Philippi 1956 as bryophyte-dominated classes not covered by the EES

EUNIS: C2.27 Mesotrophic vegetation of fast-flowing rivers

NVC: M32b *Philonotis fontana-Saxifraga stellaris* spring *Montia fontana-Chrysosplenium oppositifolium* sub-community (12.3%), but bryophyte-dominated communities are outside scope of the NVC

Annex I:3260 Vegetation of flowing waters

**Proxy environmental data**

Light: 5.3 Reaction: 5.7 Wetness: 9.6 Fertility: 5.0 Salinity: 0.0

**Conservation value**

This is a fairly bryophyte-rich community. Where there is an abundance of *Fontinalis antipyretica* it comprises part of the upland aspect of the EU HD Annex I habitat 3260 Floating river vegetation.

**Management**

This community has no specific management. It may be adversely affected by eutrophication, acidification, river engineering and trampling from livestock with access to the bankside. Removal of bankside tree cover may impact upon shade-loving bryophytes.

**Key references**

Weekes, L., Kački, Z., FitzPatrick, Ú., Kelly, F., Matson, R., Kelly-Quinn, M. (2018) An Irish national vegetation classification system for aquatic river macrophytes. *Applied Vegetation Science* 21, 322–340.

Kelly-Quinn, M., Bradley, C., Dodkins, I., Harrington, T.J., Ni Chathain, B., O'Connor, M., Rippey, B., Trigg, D. (2005) Water Framework Directive – Characterisation of reference conditions and testing of typology of rivers (2002-W-LS-7). Final Report. (unpublished). Environmental Protection Agency, Wexford

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

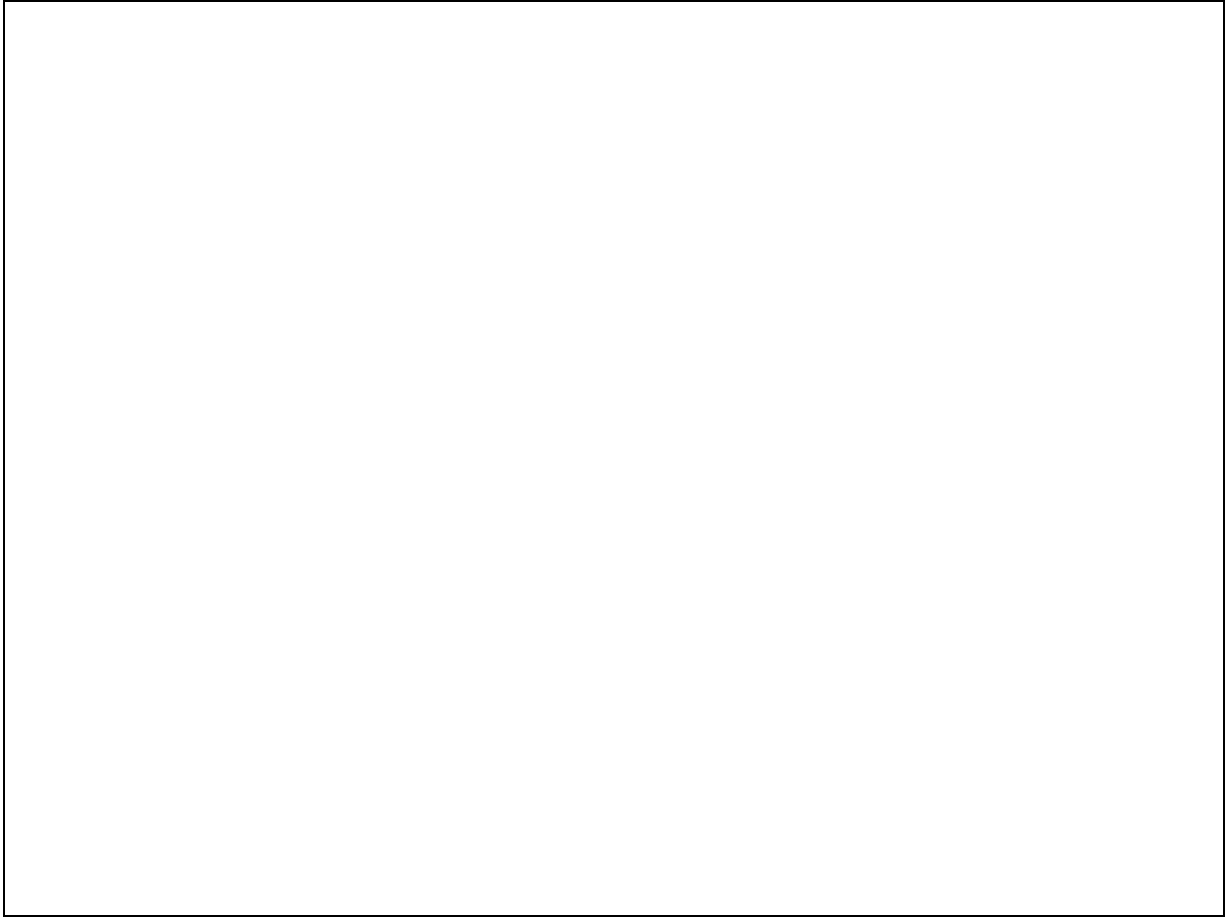


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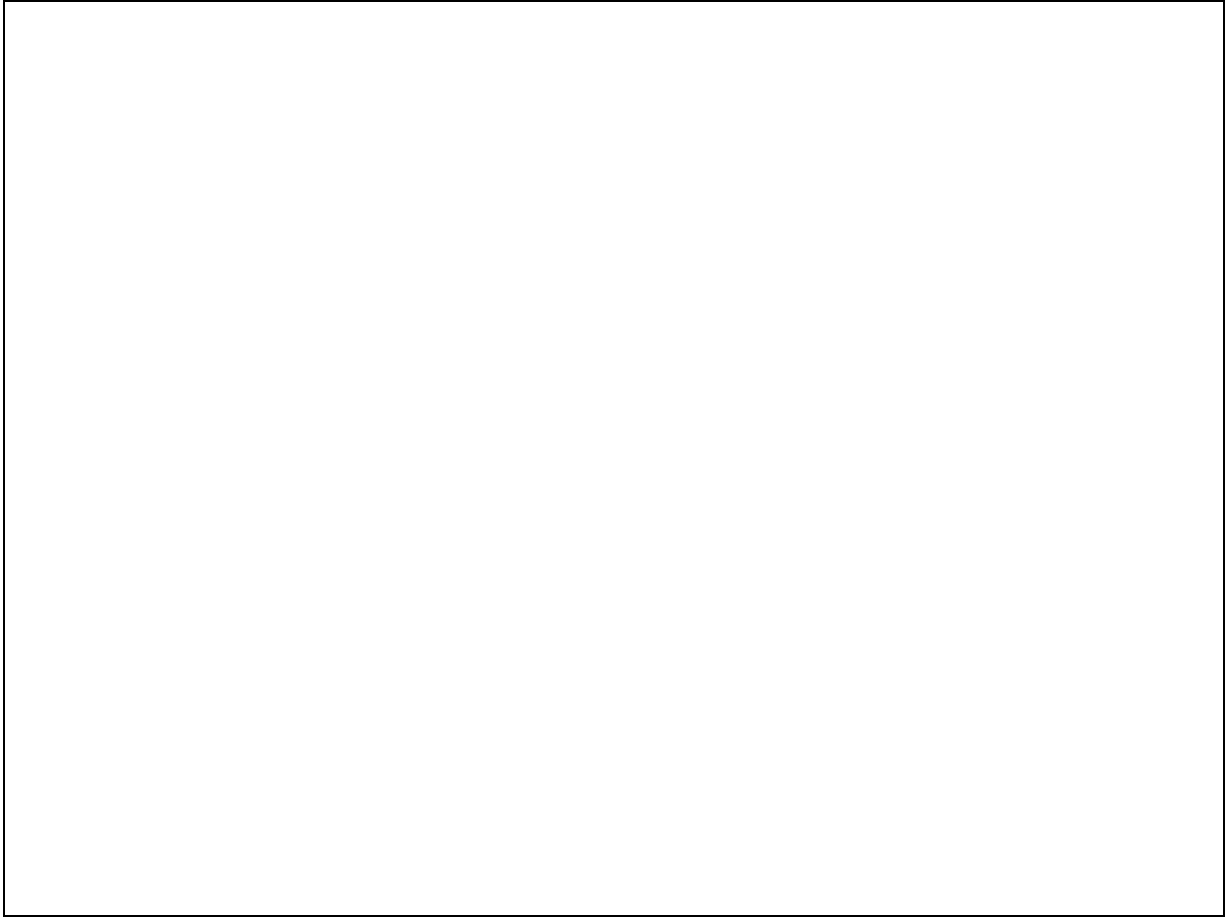


Photo required

<b>Scientific name</b>	<i>Ranunculus penicillatus</i> – <i>Fontinalis antipyretica</i> aquatic community
<b>Common name</b>	Stream Water-crowfoot – Greater Water-moss aquatic community
<b>Community code</b>	FW2C

### Vegetation

Mid-channel expanses of the floating leaves of *Ranunculus penicillatus* (subsp. *penicillatus*) are the key feature of this aquatic community, although rarer vegetation with *Ranunculus peltatus* is also included here. *Fontinalis antipyretica* is also a constant species in the channel but is never abundant. Rarely, there may be some sparse floating cover from pondweeds (*Potamogeton* species) or duckweed (*Lemna* species). A minor marginal element to the vegetation is frequently provided by *Phalaris arundinacea*, *Apium nodiflorum* and *Sparganium erectum*, with *Epilobium hirsutum*, *Filipendula ulmaria*, *Mentha aquatica* and *Juncus effusus* occasionally present. The non-native invasive *Impatiens glandulifera* is also only occasional but can dominate margins of watercourses.

### Ecology

This vegetation occurs in mildly eutrophic, distinctly base-rich rivers and streams

### Sub-communities

No sub-communities are currently described.

### Similar communities

*Ranunculus penicillatus* and *Fontinalis antipyretica* are also constant features in the FW2D *Apium nodiflorum* – *Ranunculus penicillatus* aquatic community. That community, however, has a more pronounced emergent and marginal element with *Apium nodiflorum* a constant species and *Berula erecta* frequent. Furthermore, *Callitriche stagnalis* is seldom encountered in FW2C unlike FW2D where it is a constant.

### Records and distribution

#### Number of records (all)

Clearly assigned:	97
Transitional:	12
Total:	109

#### Number of records (mapped)

2001-2020:	105
1986-2000:	0
1971-1985:	0
Pre-1971:	0
Total:	105

#### Number of hectads (by most recent time period)

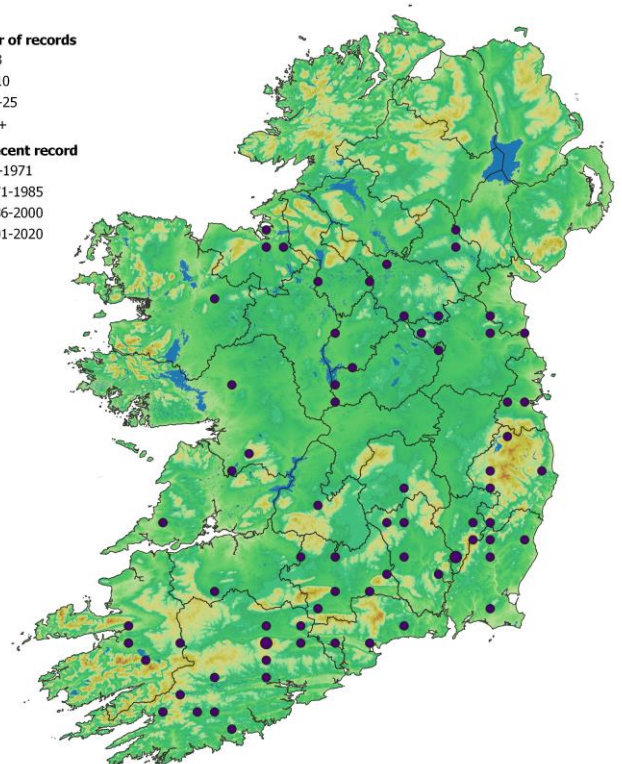
2001-2020:	70
1986-2000:	0
1971-1985:	0
Pre-1971:	0
Total:	70

#### Number of hectads (records in each time period)

2001-2020:	70
1986-2000:	0
1971-1985:	0
Pre-1971:	0

Number of records  
● 1-3  
● 4-10  
● 11-25  
● 26+

Most recent record  
○ pre-1971  
○ 1971-1985  
○ 1986-2000  
● 2001-2020





### Synoptic table (n = 97)

Species	Frequency		Cover		Species	Frequency		Cover	
	(from I-V)		min	(med) max		(from I-V)		min	(med) max
<i>Ranunculus penicillatus</i>	V		+-	(2)-5	<i>Stachys palustris</i>	I		+-	(+)-+
<i>Fontinalis antipyretica</i>	V		+-	(+)-2	<i>Veronica beccabunga</i>	I		+-	(+)-+
<i>Phalaris arundinacea</i>	III		+-	(+)-3	<i>Fallopia japonica</i>	I		+-	(+)-+
<i>Apium nodiflorum</i>	III		+-	(+)-2	<i>Chiloscyphus polyanthos</i>	I		+-	(+)-2
<i>Sparganium erectum</i>	III		+-	(+)-+	<i>Crocoshia × crocosmiiflora</i>	I		+-	(+)-+
<i>Impatiens glandulifera</i>	II		+-	(+)-8	<i>Lemna trisulca</i>	I		+-	(+)-3
<i>Juncus effusus</i>	II		+-	(+)-2	<i>Rhynchosstegium riparioides</i>	I		+-	(+)-2
<i>Epilobium hirsutum</i>	II		+-	(+)-+	<i>Myosotis scorpioides</i>	I		+-	(+)-+
<i>Filipendula ulmaria</i>	II		+-	(+)-+	<i>Potamogeton pectinatus</i>	I		+-	(+)-3
<i>Rorippa nast.-aquaticum</i> agg.	II		+-	(+)-+	<i>Sparganium emersum</i>	I		+-	(+)-+
<i>Mentha aquatica</i>	I		+-	(+)-2	<i>Angelica sylvestris</i>	I		+-	(+)-+
<i>Urtica dioica</i>	I		+-	(+)-+	<i>Caltha palustris</i>	I		+-	(+)-+
<i>Elodea canadensis</i>	I		+-	(+)-+	<i>Iris pseudacorus</i>	I		+-	(+)-1
<i>Leptodictyum riparium</i>	I		+-	(+)-+	<i>Oenanthe fluviatilis</i>	I		+-	(+)-+
<i>Equisetum palustre</i>	I		+-	(+)-+	<i>Alisma plantago-aquatica</i>	I		+-	(+)-+
<i>Myriophyllum alterniflorum</i>	I		+-	(+)-+	<i>Fontinalis squamosa</i>	I		+-	(+)-3
<i>Oenanthe crocata</i>	I		+-	(+)-2	<i>Lythrum salicaria</i>	I		+-	(+)-+
<i>Potamogeton crispus</i>	I		+-	(+)-+	<i>Rumex hydrolapathum</i>	I		+-	(+)-+
<i>Schoenoplectus lacustris</i>	I		+-	(+)-2	<i>Ranunculus peltatus</i>	I		3-	(3)-3
<i>Lemna minor</i>	I		+-	(+)-4	<i>Scapania undulata</i>	I		+-	(+)-+

#### Affinities

GHI: FW1 Eroding/upland rivers

ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (39.2%)

EUNIS: C2.27 Mesotrophic vegetation of fast-flowing rivers / C2.33 Mesotrophic vegetation of slow-flowing rivers

NVC: S14 *Sparganium erectum* swamp (38.4%), but see also A17 *Ranunculus peltatus* ssp. *pseudofluitans* community

Annex I:3260 Vegetation of flowing waters

#### Proxy environmental data

Light: 6.8 Reaction: 7.2 Wetness: 10.8 Fertility: 5.5 Salinity: 0.1

#### Conservation value

Due to the relative abundance of crowfoots (*Ranunculus* spp. subgenus *Batrachion*) almost all examples of this community correspond with the EU HD Annex I habitat 3260 Floating river vegetation. Several non-native plants occur in this community and impact on conservation value. *Impatiens glandulifera* and *Crocoshia × crocosmiiflora* are aggressive invaders of bankside vegetation. *Elodea canadensis* is a submergent that is not considered a major ecological threat and has already colonised much of its suitable niche in Ireland.

#### Management

This community has no specific management. Eutrophication from discharges and agriculture run-off is probably the major threat. Other impacts may come from river engineering, spread of invasive species and trampling from livestock with access to the bankside.

#### Key references

Kelly-Quinn, M., Bradley, C., Dodkins, I., Harrington, T.J., Ni Chathain, B., O'Connor, M., Rippey, B., Trigg, D. (2005) Water Framework Directive – Characterisation of reference conditions and testing of typology of rivers (2002-W-LS-7). Final Report. (unpublished). Environmental Protection Agency, Wexford

Synopsis version: V2.0

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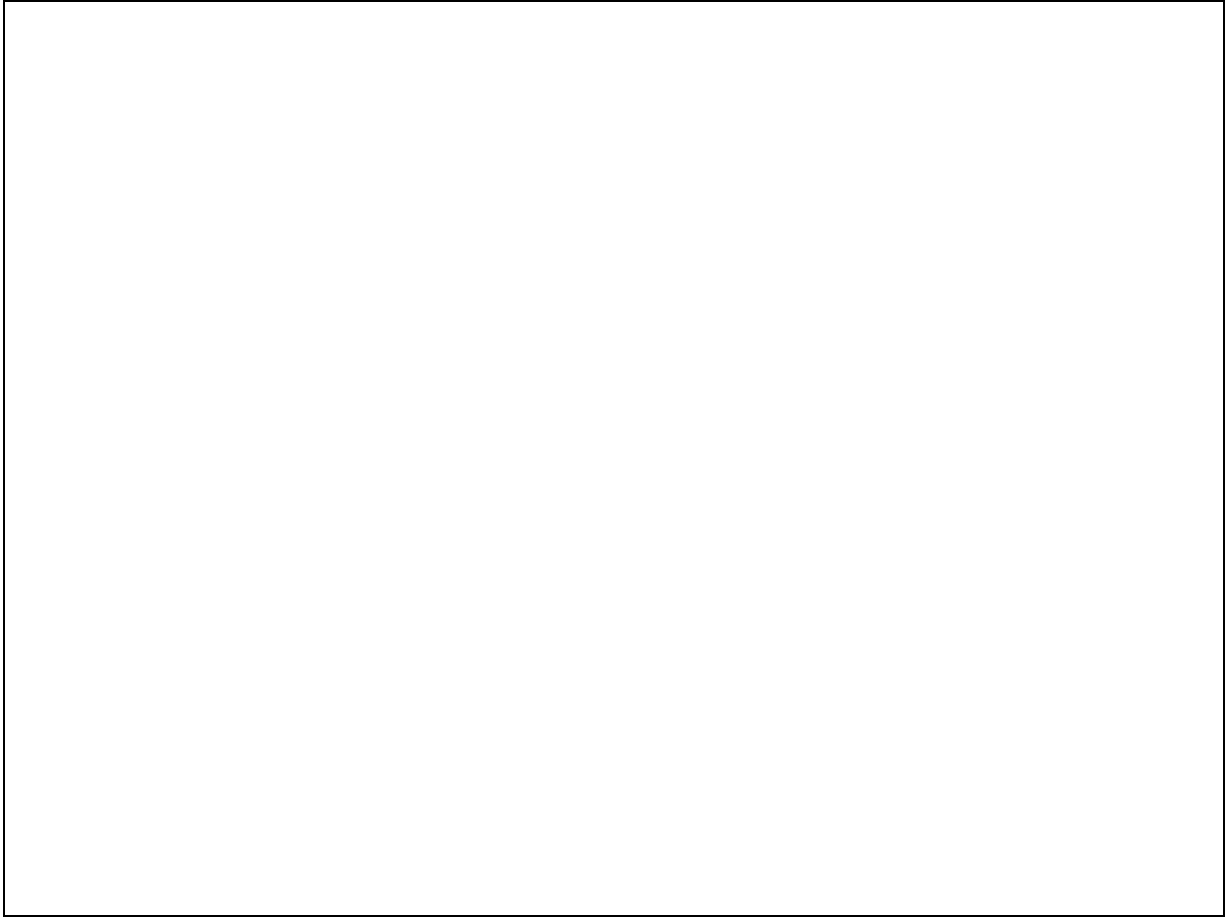


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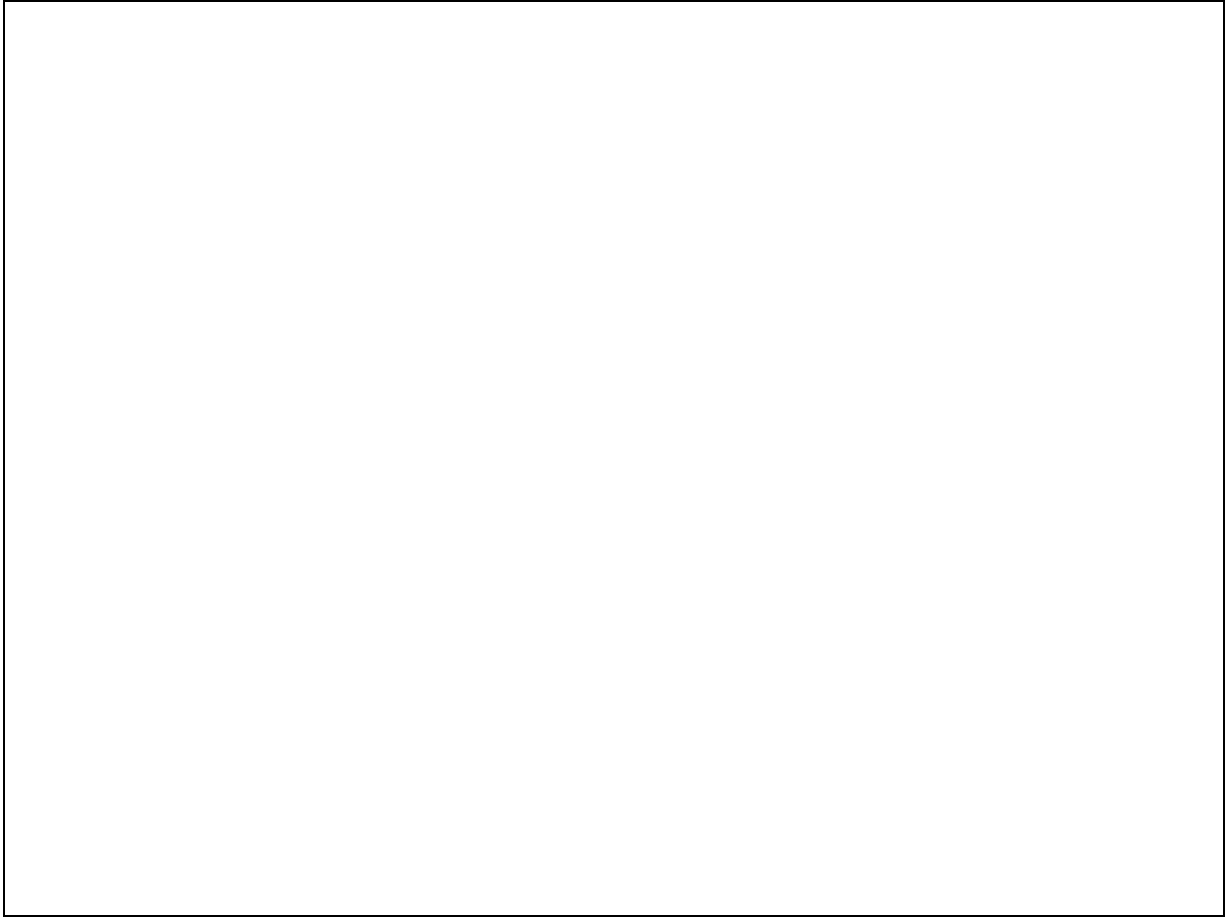


Photo required

<b>Scientific name</b>	<i>Apium nodiflorum</i> – <i>Ranunculus penicillatus</i> aquatic community
<b>Common name</b>	Fool's-water-cress – Stream Water-crowfoot aquatic community
<b>Community code</b>	FW2D

### Vegetation

This aquatic community has a notable floating-leaf component, with *Ranunculus penicillatus* (subsp. *penicillatus*) a constant species, as is *Fontinalis antipyretica*. The curly leaves of *Potamogeton crispus* are also frequent here, whilst other pondweeds (*Potamogeton natans*, *Potamogeton pectinatus*, *Potamogeton lucens*, *Potamogeton pusillus* and *Potamogeton gramineus*) may all occur but are individually rare. The main free-floating plant is *Callitriche stagnalis*, a constant, with *Lemna minor* and *Lemna trisulca* both occasional. Submergents consist of *Zannichellia palustris* and *Myriophyllum spicatum*. There is also a significant marginal/emergent component where *Apium nodiflorum* is constant, frequently accompanied by *Berula erecta*, *Rorippa nasturtium-aquaticum* agg., *Phalaris arundinacea*, *Mentha aquatica* and *Glyceria notata*. *Leptodictyum riparium* and *Rhynchostegium riparioides* expand the bryophyte element of the assemblage.

### Ecology

This vegetation occurs in fairly eutrophic, base-rich rivers and streams

### Sub-communities

No sub-communities are currently described.

### Similar communities

*Ranunculus penicillatus* and *Fontinalis antipyretica* are also constant features in the FW2C aquatic community. That community, however, has a less pronounced emergent and marginal element with both *Apium nodiflorum* and *Berula erecta* less frequent. Furthermore, *Callitriche stagnalis* is seldom encountered in FW2C. From FW2E, the present community differs by the higher frequency of pondweeds and the lower dominance of *Rorippa nasturtium-aquaticum* agg.

### Records and distribution

#### Number of records (all)

Clearly assigned:	117
Transitional:	9
Total:	126

#### Number of records (mapped)

2001-2020:	7
1986-2000:	0
1971-1985:	0
Pre-1971:	0
Total:	7

#### Number of hectads (by most recent time period)

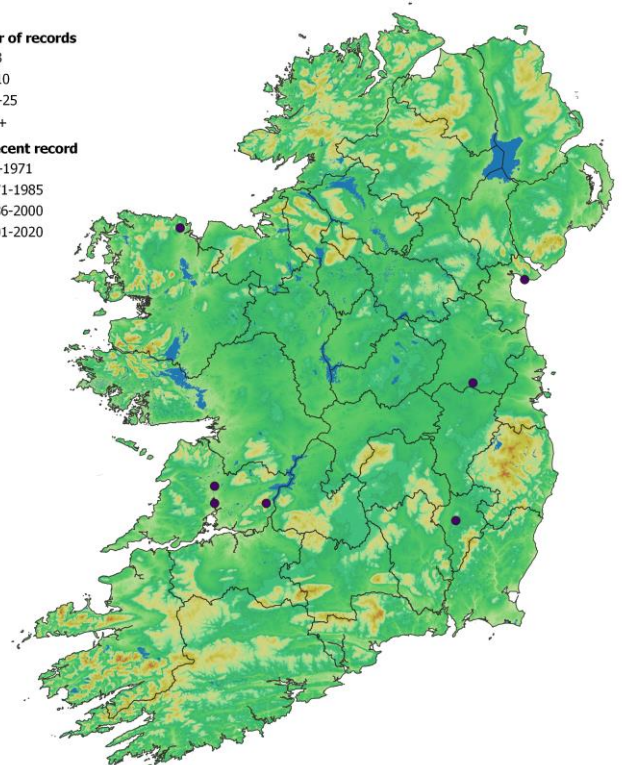
2001-2020:	7
1986-2000:	0
1971-1985:	0
Pre-1971:	0
Total:	7

#### Number of hectads (records in each time period)

2001-2020:	7
1986-2000:	0
1971-1985:	0
Pre-1971:	0

Number of records  
● 1-3  
● 4-10  
● 11-25  
● 26+

Most recent record  
○ pre-1971  
○ 1971-1985  
○ 1986-2000  
● 2001-2020



**Synoptic table (n = 117)**

Species	Frequency	Cover	Species	Frequency	Cover
	(from I-V)	min (med) max		(from I-V)	min (med) max
<i>Apium nodiflorum</i>	V	+- (1)-4	<i>Lemna trisulca</i>	II	+- (1)-3
<i>Ranunculus penicillatus</i>	V	+- (2)-5	<i>Elodea canadensis</i>	I	+- (1)-2
<i>Fontinalis antipyretica</i>	IV	+- (1)-3	<i>Sparganium emersum</i>	I	+- (1)-2
<i>Callitriche stagnalis</i>	IV	+- (1)-5	<i>Potamogeton natans</i>	I	+- (1)-3
<i>Berula erecta</i>	III	+- (1)-2	<i>Callitriche hermaphroditica</i>	I	+- (+)-1
<i>Rorippa nast.-aquaticum</i> agg.	III	+- (1)-3	<i>Oenanthe crocata</i>	I	+- (+)-1
<i>Potamogeton crispus</i>	III	+- (1)-2	<i>Potamogeton pectinatus</i>	I	1-(3)-3
<i>Glyceria notata</i>	III	+- (1)-5	<i>Epilobium hirsutum</i>	I	+- (1)-1
<i>Phalaris arundinacea</i>	III	+- (1)-3	<i>Iris pseudacorus</i>	I	+- (1)-1
<i>Leptodictyum riparium</i>	III	+- (1)-2	<i>Agrostis stolonifera</i>	I	+- (1)-1
<i>Mentha aquatica</i>	III	+- (+)-2	<i>Veronica beccabunga</i>	I	+- (+)-2
<i>Rhynchosstegium riparioides</i>	III	+- (1)-3	<i>Hippuris vulgaris</i>	I	+- (1)-2
<i>Myosotis scorpioides</i>	II	+- (+)-2	<i>Potamogeton lucens</i>	I	+- (1)-3
<i>Oenanthe aquatica</i>	II	+- (1)-2	<i>Potamogeton pusillus</i>	I	+- (1)-2
<i>Sparganium erectum</i>	II	+- (1)-4	<i>Equisetum fluviatile</i>	I	1-(1)-1
<i>Veronica anagallis-aquatica</i>	II	+- (+)-2	<i>Glyceria maxima</i>	I	1-(1)-1
<i>Lemna minor</i>	II	+- (1)-4	<i>Potamogeton gramineus</i>	I	+- (+)-1
<i>Myriophyllum spicatum</i>	II	+- (1)-3	<i>Ranunculus peltatus</i>	I	+- (1)-4
<i>Schoenoplectus lacustris</i>	II	+- (1)-4	<i>Rorippa amphibia</i>	I	+- (+)-+
<i>Zannichellia palustris</i>	II	+- (1)-3	<i>Ranunculus aquatilis</i>	I	+- (+)-+

**Affinities**

GHI: FW1 Eroding/upland rivers / FW2 Depositing/lowland rivers  
 ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (35.9%)  
 EUNIS: C2.27 Mesotrophic vegetation of fast-flowing rivers / C2.33 Mesotrophic vegetation of slow-flowing rivers  
 NVC: A8 *Nuphar lutea* community (33.4%), but see also A17 *Ranunculus penicillatus* ssp. *pseudofluitans* community  
 Annex I:3260 Vegetation of flowing waters

**Proxy environmental data**

Light: 6.8 Reaction: 7.0 Wetness: 10.8 Fertility: 6.0 Salinity: 0.2

**Conservation value**

Almost all examples of this community with a relative abundance of crowfoots (*Ranunculus* spp. subgenus *Batrachion*) correspond with the EU HD Annex I habitat 3260 Floating river vegetation. *Elodea canadensis* is a non-native submergent that is not considered a major ecological threat and has already colonised much of its suitable niche in Ireland.

**Management**

This community has no specific management. Eutrophication from discharges and agriculture run-off is probably the major threat. Other impacts may come from river engineering and trampling from livestock with access to the bankside.

**Key references**

Caffrey, J. (1990) Classification and dynamics of aquatic macrophytes in some Irish rivers. (Ph.D. thesis). University College Dublin.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin



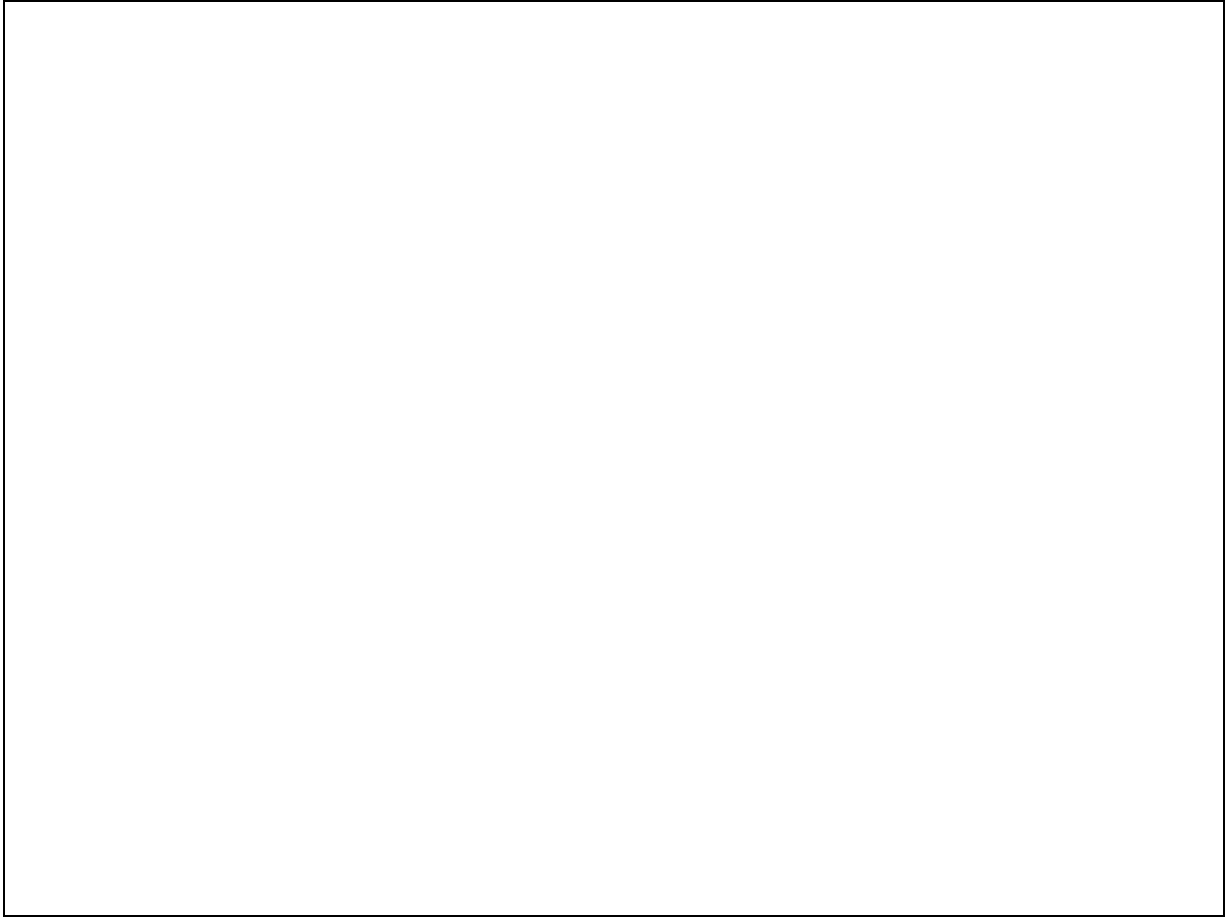


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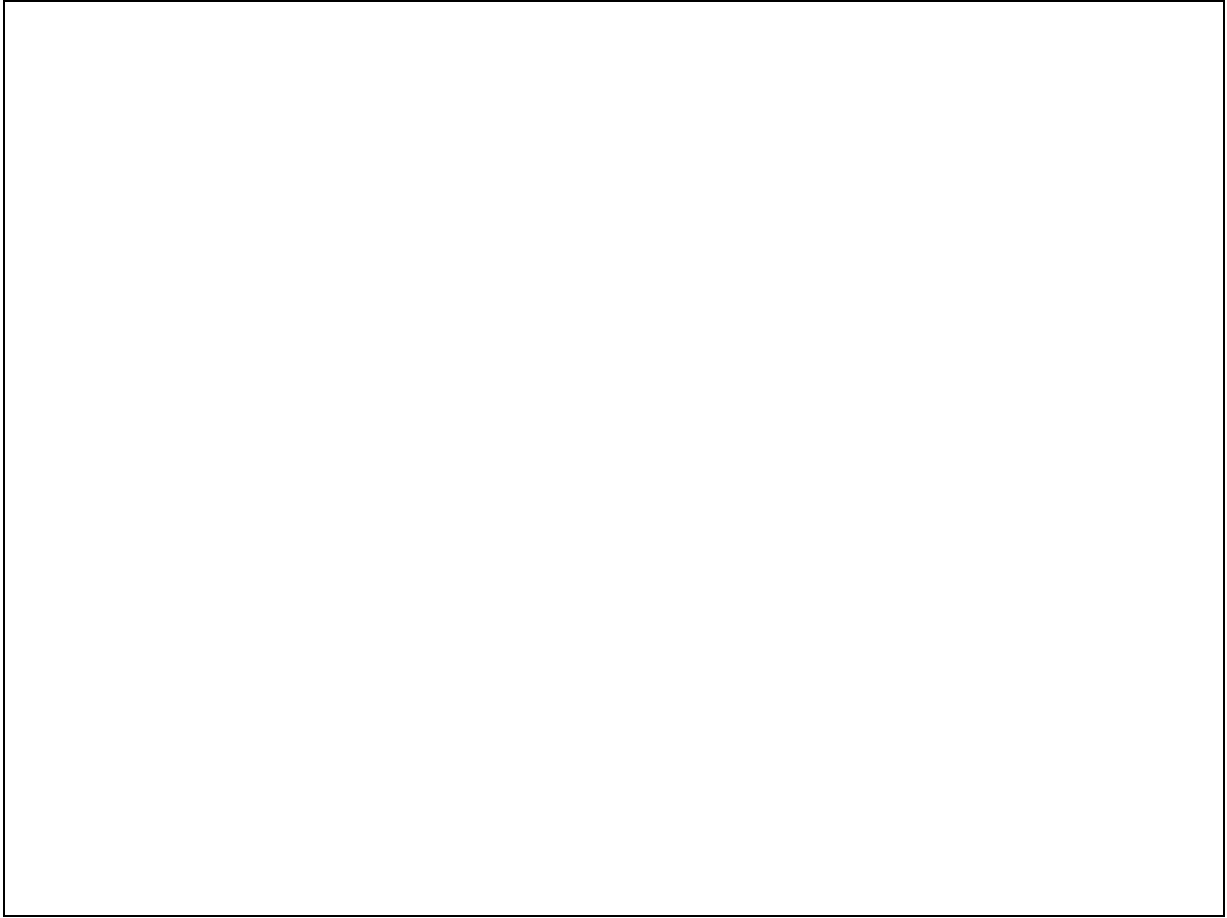


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<b>Scientific name</b>	<i>Apium nodiflorum</i> – <i>Rorippa nasturtium-aquaticum</i> agg. aquatic community
<b>Common name</b>	Fool's-water-cress – Watercress aquatic community
<b>Community code</b>	FW2E

### Vegetation

This is a rather variable community of watercourses in which a variety of species can dominate. However, *Apium nodiflorum* and *Rorippa nasturtium-aquaticum* agg. are constants here and lend a strong forb element to the rather diverse marginal/emergent vegetation which also frequently includes *Phalaris arundinacea*, and occasionally *Agrostis stolonifera*, *Sparganium erectum*, *Veronica beccabunga*, *Oenanthe crocata*, *Menta aquatica*, *Epilobium hirsutum*, *Solanum dulcamara* and *Sparganium emersum*. *Ranunculus penicillatus* is a frequent species of the channel which can dominate. Other floating plants include *Glyceria fluitans*, *Lemna minor*, *Callitriche stagnalis* and *Callitriche platycarpa*. The bryophyte element here usually consists of *Leptodictyum riparium*, *Fontinalis antipyretica* and *Rhynchostegium riparioides*.

### Ecology

This is a community typical of fast-flowing rivers and streams in the lowlands, with fairly base-rich and nutrient enriched waters.

### Sub-communities

No sub-communities are currently described.

### Similar communities

This community is related to both FW2C and FW2D. It differs from both in its greater component of marginal and emergent vegetation, particularly the abundance of *Rorippa nasturtium-aquaticum* agg., and its lower frequency of *Ranunculus penicillatus*.

### Records and distribution

#### Number of records (all)

Clearly assigned:	98
Transitional:	37
Total:	135

#### Number of records (mapped)

2001-2020:	93
1986-2000:	29
1971-1985:	6
Pre-1971:	5
Total:	133

#### Number of hectads (by most recent time period)

2001-2020:	73
1986-2000:	17
1971-1985:	3
Pre-1971:	3
Total:	96

#### Number of hectads (records in each time period)

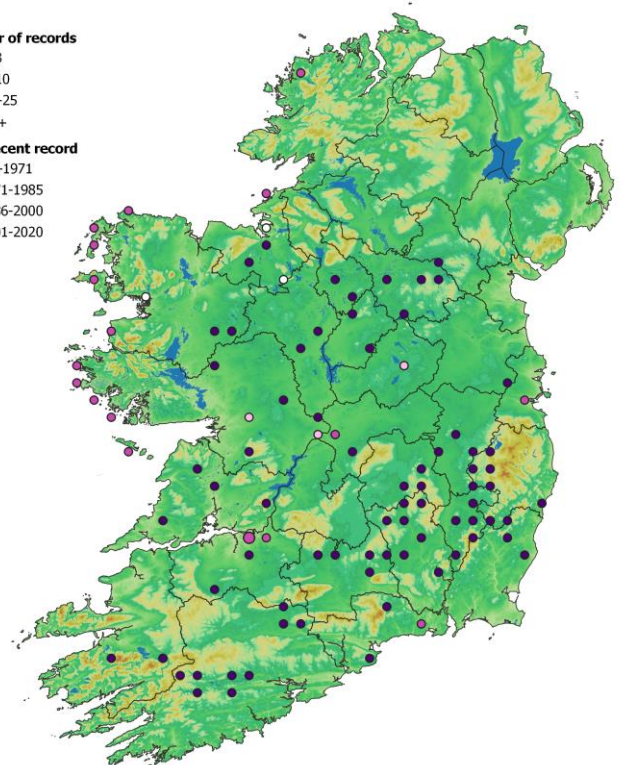
2001-2020:	73
1986-2000:	17
1971-1985:	4
Pre-1971:	4

#### Number of records

- 1-3
- 4-10
- 11-25
- 26+

#### Most recent record

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synopsis table (n = 92)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Apium nodiflorum</i>	V	+-(3)-9	<i>Rhynchosytem riparioides</i>	II	+-(3)-4
<i>Rorippa nast.-aquaticum</i> agg.	IV	+-(3)-8	<i>Persicaria hydropiper</i>	I	+-(+)-3
<i>Fontinalis antipyretica</i>	IV	+-(3)-7	<i>Conocephalum conicum</i>	I	+-(3)-3
<i>Ranunculus penicillatus</i>	III	+-(5)-9	<i>Veronica anagallis-aquatica</i>	I	+-(2)-5
<i>Leptodictyum riparium</i>	III	+-(3)-8	<i>Elodea canadensis</i>	I	+-(3)-7
<i>Phalaris arundinacea</i>	III	+-(3)-8	<i>Iris pseudacorus</i>	I	+-(3)-4
<i>Sparganium erectum</i>	II	+-(3)-4	<i>Myosotis scorpioides</i>	I	+-(+)-5
<i>Agrostis stolonifera</i>	II	+-(3)-5	<i>Potamogeton crispus</i>	I	+-(3)-3
<i>Oenanthe crocata</i>	II	+-(3)-5	<i>Brachythecium rivulare</i>	I	+-(1)-3
<i>Veronica beccabunga</i>	II	+-(3)-4	<i>Caltha palustris</i>	I	+-(2)-3
<i>Glyceria fluitans</i>	II	+-(3)-7	<i>Fissidens crassipes</i>	I	+-(+)-3
<i>Lemna minor</i>	II	+-(3)-5	<i>Lemna trisulca</i>	I	+-(+)-4
<i>Callitriche stagnalis</i>	II	+-(3)-5	<i>Lunularia cruciata</i>	I	+-(3)-4
<i>Chiloscyphus polyanthos</i>	II	+-(3)-5	<i>Pohlia melanodon</i>	I	+-(2)-3
<i>Epilobium hirsutum</i>	II	+-(3)-7	<i>Brachythecium plumosum</i>	I	+-(+)-3
<i>Mentha aquatica</i>	II	+-(3)-4	<i>Brachythecium rutabulum</i>	I	+-(+)-3
<i>Solanum dulcamara</i>	II	+-(3)-3	<i>Callitriche obtusangula</i>	I	+-(3)-5
<i>Callitriche platycarpa</i>	II	+-(3)-3	<i>Filipendula ulmaria</i>	I	+-(3)-3
<i>Sparganium emersum</i>	II	+-(3)-5	<i>Juncus articulatus</i>	I	+-(+)-3
<i>Pellia endiviifolia</i>	II	+-(2)-3	<i>Schoenoplectus lacustris</i>	I	+-(3)-6

#### Affinities

GHI: FW2 Depositing/lowland rivers

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (68.5%) / NB Potamogetonetea Klika in Klika et Novák 1941 (30.4%)

EUNIS: C3.11 Beds of small helophytes of fast-flowing waters

NVC: S14 *Sparganium erectum* swamp (38.1%), but see also S23 Other water-margin vegetation

Annex I:3260 Vegetation of flowing waters

#### Proxy environmental data

Light: 6.8 Reaction: 6.9 Wetness: 10.2 Fertility: 6.0 Salinity: 0.1

#### Conservation value

Almost all examples of this community with a relative abundance of crowfoots (*Ranunculus* spp. subgenus *Batrachion*) correspond with the EU HD Annex I habitat 3260 Floating river vegetation.

#### Management

This community may be affected by eutrophication, river engineering including dredging and canalisation, and trampling from livestock with access to the bankside

#### Key references

Weekes, L., Kački, Z., FitzPatrick, Ú., Kelly, F., Matson, R., Kelly-Quinn, M. (2018) An Irish national vegetation classification system for aquatic river macrophytes. *Applied Vegetation Science* 21, 322–340.

Kelleher, C. (2011) Floating river vegetation (EU habitat code 3260) – A review of the habitat description and its distribution in Ireland. (unpublished). National Parks and Wildlife Service, Dublin.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

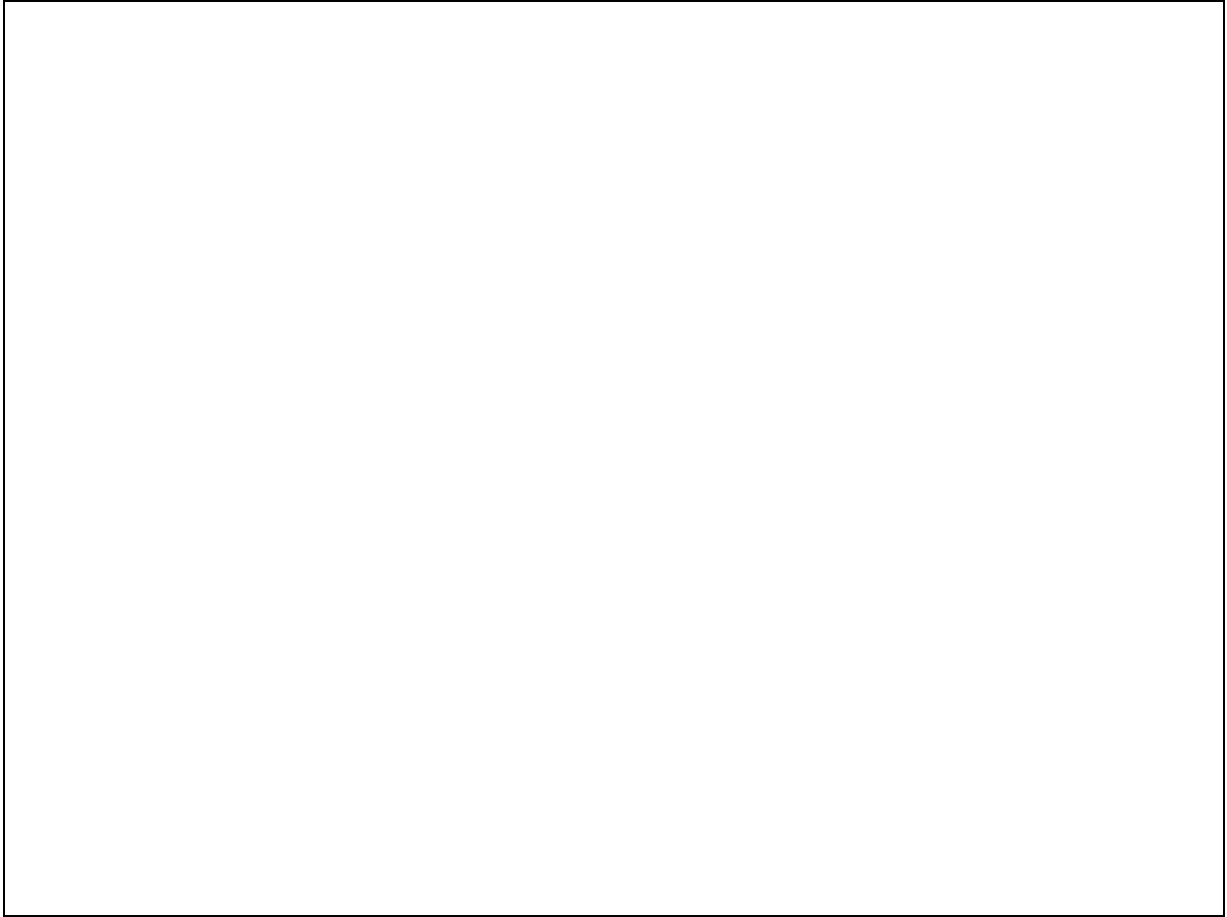


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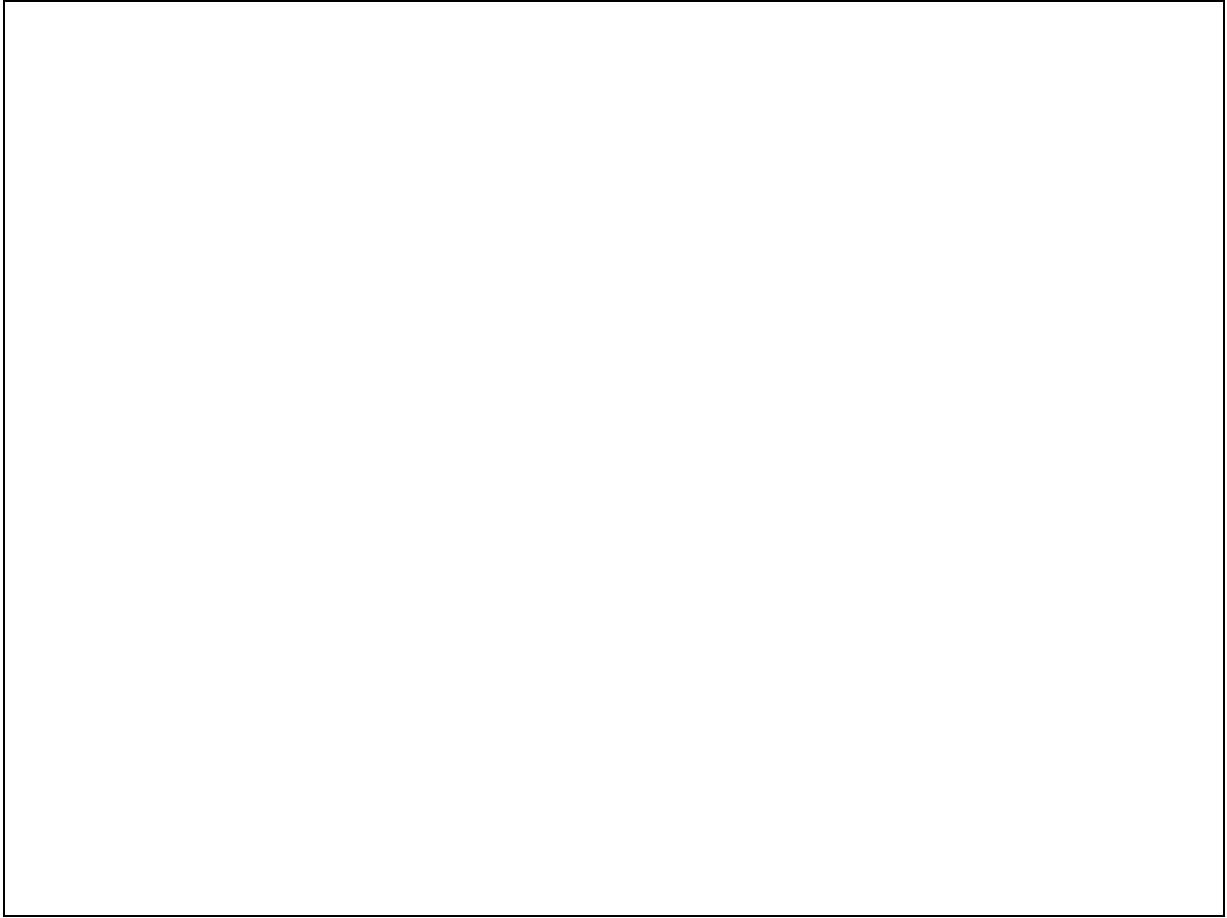


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<b>Scientific name</b>	<i>Potamogeton pectinatus</i> – <i>Myriophyllum spicatum</i> aquatic community
<b>Common name</b>	Fennel Pondweed – Spiked Water-milfoil aquatic community
<b>Community code</b>	FW2F

### Vegetation

The fine leaves of *Potamogeton pectinatus* dominate this aquatic community and it is the only constant species. Occasionally, it is accompanied by *Potamogeton berchtoldii*, the whorled stems of *Myriophyllum spicatum* or, in more saline waters, *Ruppia maritima/cirrrosa*. More rarely, one may find the floating duckweeds *Lemna trisulca* and *Lemna minor* or other pondweeds.

### Ecology

This community is to be found mostly in lagoons with lower salinity, but also occurs in lowland rivers and freshwater lakes. It is associated with fairly base-rich and distinctly eutrophic waters.

### Sub-communities

No sub-communities are currently described.

### Similar communities

The dominance of *Potamogeton pectinatus* differentiates this community from the SW1A *Ruppia maritima/cirrrosa* lagoon community in which *P. pectinatus* may also occur.

### Records and distribution

#### Number of records (all)

Clearly assigned:	94
Transitional:	5
Total:	99

#### Number of records (mapped)

2001-2020:	1
1986-2000:	52
1971-1985:	32
Pre-1971:	0
Total:	85

#### Number of hectads (by most recent time period)

2001-2020:	1
1986-2000:	18
1971-1985:	3
Pre-1971:	0
Total:	22

#### Number of hectads (records in each time period)

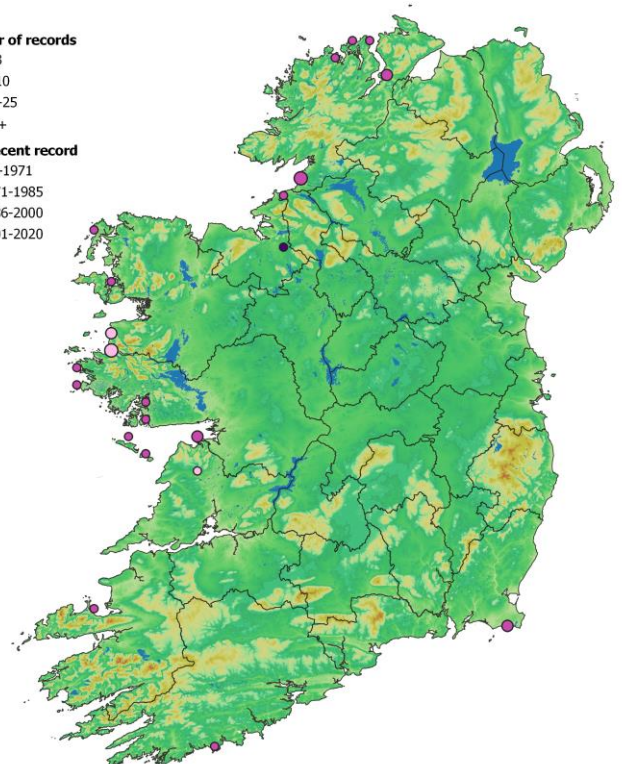
2001-2020:	1
1986-2000:	18
1971-1985:	3
Pre-1971:	0

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synoptic table (n = 92)

Species	Frequency		Cover		Species	Frequency		Cover	
	(from I-V)		min	(med) max		(from I-V)		min	(med) max
<i>Potamogeton pectinatus</i>	V		2-	(5)-10	<i>Potamogeton natans</i>	I		3-	(3)-3
<i>Myriophyllum spicatum</i>	II		1-	(3)-9	<i>Glyceria notata</i>	I		+-	(+)-+
<i>Potamogeton bertholdii</i>	II		2-	(3)-5	<i>Potamogeton perfoliatus</i>	I		2-	(4)-7
<i>Ruppia maritima/cirrhosa</i>	II		2-	(3)-5	<i>Rorippa nast.-aquaticum</i> agg.	I		+-	(1)-2
<i>Apium nodiflorum</i>	I		+-	(+)-2	<i>Schoenoplectus tabernaemontani</i>	I		3-	(3)-4
<i>Potamogeton crispus</i>	I		1-	(1)-7	<i>Utricularia australis/vulgaris</i>	I		2-	(3)-4
<i>Lemna trisulca</i>	I		+-	(1)-3	<i>Veronica anagallis-aquatica</i>	I		+-	(+)-+
<i>Leptodictyum riparium</i>	I		1-	(2)-4	<i>Callitriche stagnalis</i>	I		+-	(+)-1
<i>Eleocharis palustris</i>	I		2-	(3)-5	<i>Iris pseudacorus</i>	I		+-	(+)-1
<i>Hippuris vulgaris</i>	I		+-	(2)-8	<i>Menyanthes trifoliata</i>	I		2-	(2)-3
<i>Lemna minor</i>	I		+-	(2)-2	<i>Oenanthe aquatica</i>	I		+-	(+)-1
<i>Elodea canadensis</i>	I		+-	(1)-3	<i>Phragmites australis</i>	I		2-	(4)-5
<i>Fontinalis antipyretica</i>	I		+-	(1)-3	<i>Ranunculus trichophyllus</i>	I		3-	(3)-5
<i>Phalaris arundinacea</i>	I		+-	(1)-2	<i>Callitriche hermaphroditica</i>	I		+-	(3)-3
<i>Ranunculus penicillatus</i>	I		+-	(1)-2	<i>Caltha palustris</i>	I		2-	(2)-2
<i>Schoenoplectus lacustris</i>	I		+-	(2)-3	<i>Mentha aquatica</i>	I		+-	(+)-1
<i>Sparganium erectum</i>	I		+-	(2)-2	<i>Myosotis scorpioides</i>	I		+-	(+)-+
<i>Zannichellia palustris</i>	I		1-	(3)-4	<i>Oenanthe fluviatilis</i>	I		+-	(+)-+
<i>Equisetum fluviatile</i>	I		2-	(2)-3	<i>Potamogeton coloratus</i>	I		2-	(3)-3
<i>Persicaria amphibia</i>	I		3-	(7)-8	<i>Potamogeton × nitens</i>	I		3-	(4)-5

#### Affinities

GHI: CW1 Lagoons and saline lakes / FL5 Eutrophic lakes / FW2 Depositing lowland rivers

ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (96.7%)

EUNIS: C1.232 Small pondweed communities

NVC: A12 *Potamogeton pectinatus* community (60.9%)

Annex I:1150 Lagoons\* / 3150 Rich pondweed lake habitat / 3260 Vegetation of flowing waters

#### Proxy environmental data

Light: 6.4 Reaction: 6.9 Wetness: 11.8 Fertility: 6.6 Salinity: 1.6

#### Conservation value

Many examples of this community occur in water bodies that qualify as EU HD Annex I priority habitat 1150 Lagoons\*. Species diversity is low.

#### Management

This community is typically unmanaged. It is mainly threatened by impacts which affect lagoons, including drainage for purposes of agricultural reclamation and natural siltation. The association with nutrient-enriched waters mean that eutrophication of both lakes and rivers is likely to affect its abundance.

#### Key references

Hatch, P. (1996) A survey of the vegetation of Irish coastal lagoons. National Parks and Wildlife Service, Dublin.

Roden, C.M. (1998) A survey of the flora and vegetation of sixteen Irish coastal lagoons. Part three of 1998 lagoon survey. (unpublished). Dúchas, The Heritage Service, Dublin.

Brock, T., Frigge, P., van der Ster, H. (1978) A vegetation study of the pools and surrounding wetlands in the Dooaghtry area, Co. Mayo, Republic of Ireland. (unpublished). Laboratory of Geobotany, Catholic University of Nijmegen, The Netherlands.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

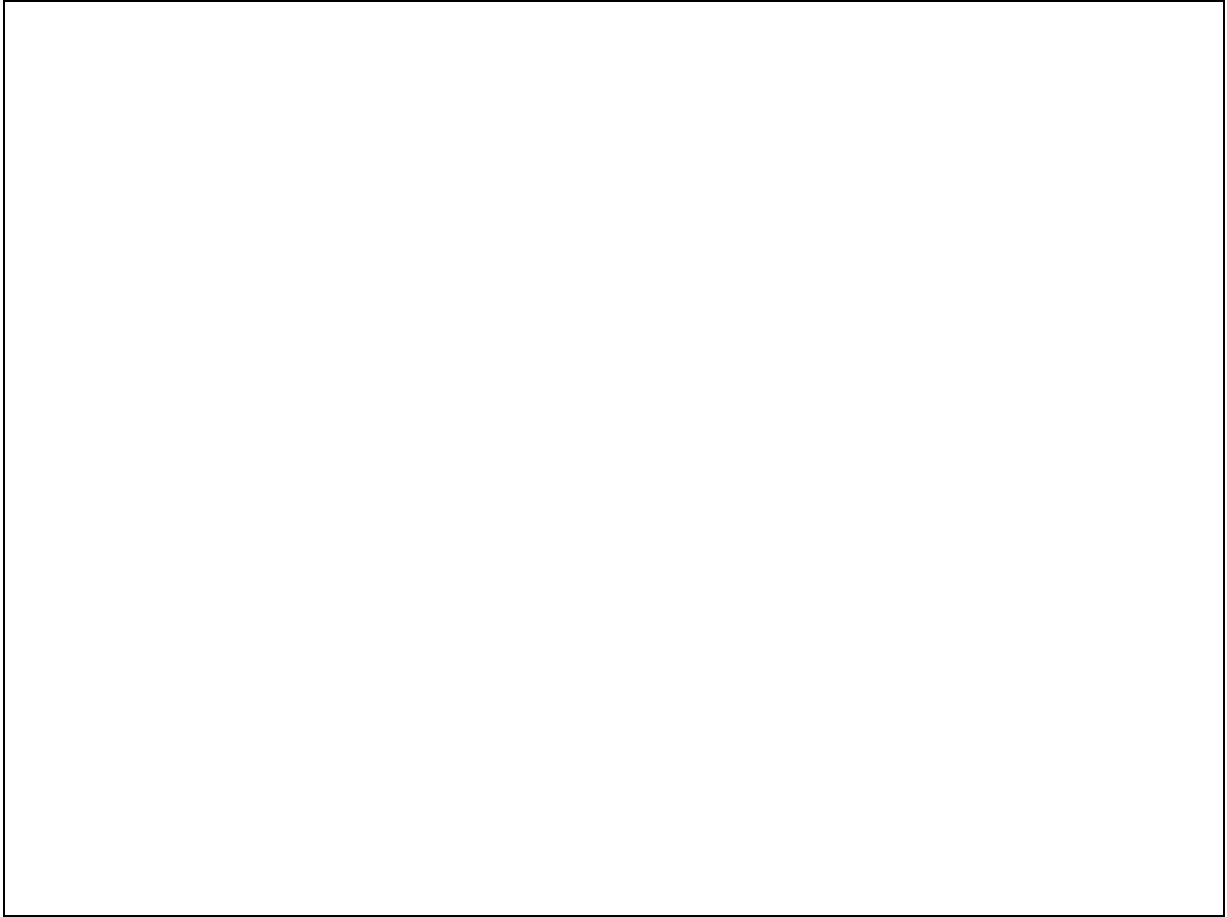


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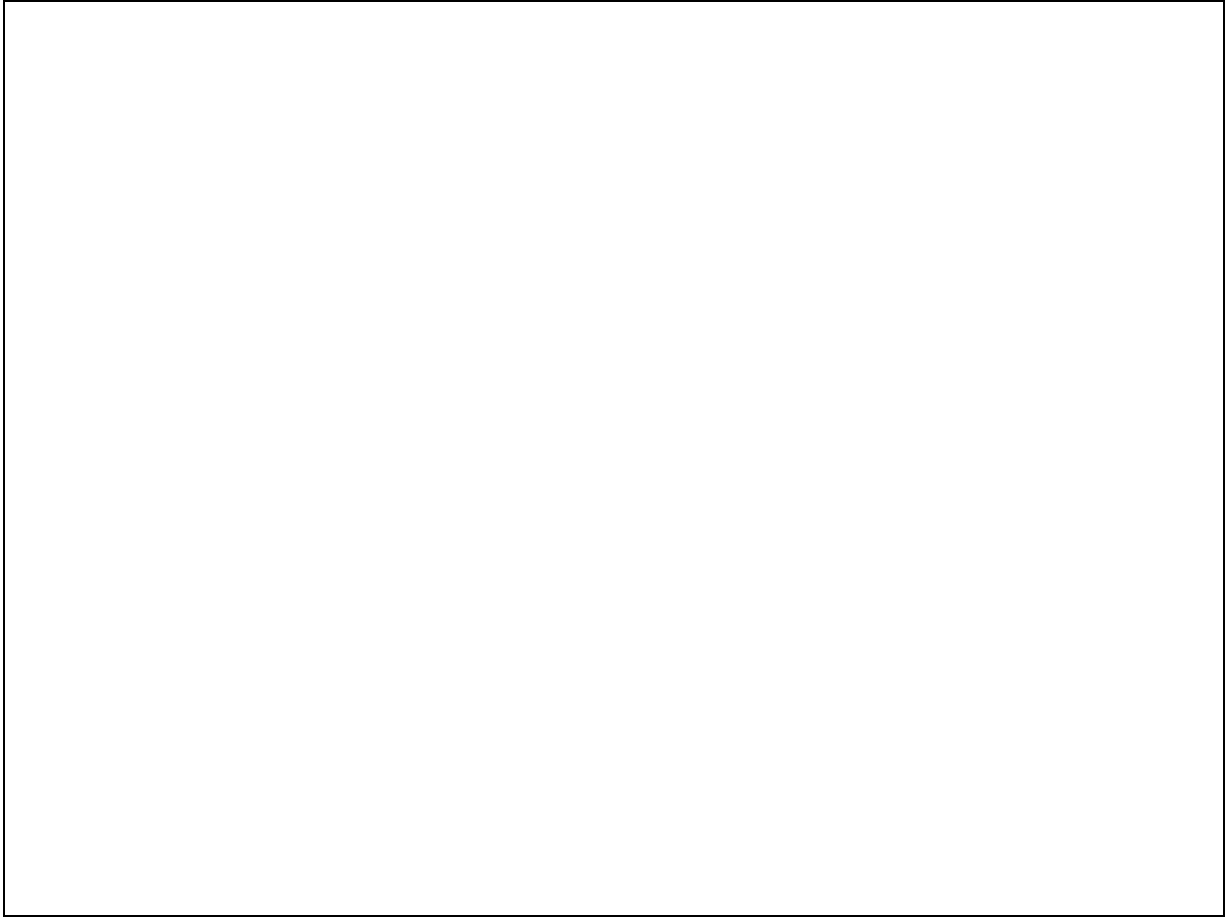


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<b>Scientific name</b>	<i>Potamogeton natans</i> – <i>Equisetum fluviatile</i> aquatic community
<b>Common name</b>	Broad-leaved Pondweed – Water Horsetail aquatic community
<b>Community code</b>	FW2G

### Vegetation

*Potamogeton natans* is the only constant of this quite variable aquatic community and is usually a modest dominant. Occasionally found floating beside the pondweed are patches of *Lemna minor* or pads of *Nymphaea alba*. In an emergent element, *Equisetum fluviatile* is frequent while *Phragmites australis*, *Menyanthes trifoliata*, *Hippuris vulgaris*, *Mentha aquatica*, *Eleocharis palustris* and *Apium nodiflorum* occur less often.

### Ecology

This community occurs in mesotrophic, fairly base-rich waters in lakes, lagoons and turloughs, but also in dystrophic pools.

### Sub-communities

No sub-communities are currently described.

### Similar communities

This community is closely related to the FW2I *Nymphaea alba* aquatic community, but can be differentiated on the contrasting frequencies and abundances of *Potamogeton natans* and *Nymphaea alba*.

[Previously, this community was coded as FW3]

### Records and distribution

#### Number of records (all)

Clearly assigned:	48
Transitional:	4
Total:	52

#### Number of records (mapped)

2001-2020:	10
1986-2000:	21
1971-1985:	18
Pre-1971:	0
Total:	49

#### Number of hectads (by most recent time period)

2001-2020:	4
1986-2000:	10
1971-1985:	1
Pre-1971:	0
Total:	15

#### Number of hectads (records in each time period)

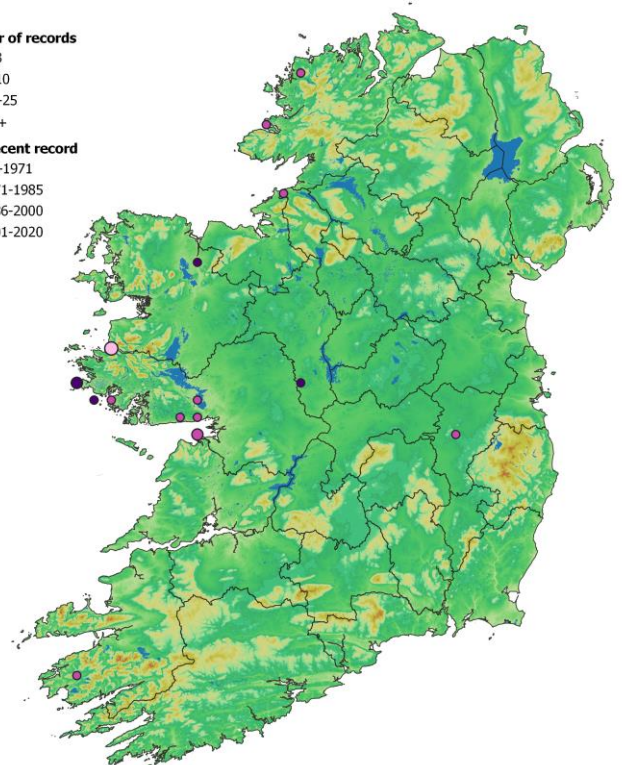
2001-2020:	4
1986-2000:	11
1971-1985:	2
Pre-1971:	0

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020





### Synoptic table (n = 44)

Species	Frequency		Cover min (med) max	Species	Frequency		Cover min (med) max
	(from I-V)				(from I-V)		
<i>Potamogeton natans</i>	V		3-(5)-9	<i>Juncus bulbosus</i>	I		3-(4)-5
<i>Equisetum fluviatile</i>	III		2-(3)-8	<i>Potamogeton pectinatus</i>	I		3-(3)-5
<i>Phragmites australis</i>	II		2-(3)-3	<i>Schoenoplectus lacustris</i>	I		+(2)-3
<i>Hippuris vulgaris</i>	II		2-(3)-5	<i>Typha latifolia</i>	I		2-(2)-4
<i>Menyanthes trifoliata</i>	II		2-(3)-4	<i>Utricularia australis/vulgaris</i>	I		2-(2)-2
<i>Mentha aquatica</i>	II		2-(3)-5	<i>Alisma plantago-aquatica</i>	I		2-(2)-3
<i>Eleocharis palustris</i>	II		2-(3)-3	<i>Calliergon giganteum</i>	I		2-(2)-3
<i>Apium nodiflorum</i>	II		+(2)-3	<i>Carex nigra</i>	I		2-(2)-2
<i>Lemna minor</i>	II		2-(2)-5	<i>Hydrocotyle vulgaris</i>	I		2-(2)-2
<i>Nymphaea alba</i>	II		2-(3)-4	<i>Iris pseudacorus</i>	I		2-(3)-3
<i>Agrostis stolonifera</i>	I		2-(2)-3	<i>Myriophyllum spicatum</i>	I		3-(7)-8
<i>Sparganium erectum</i>	I		+(4)-9	<i>Potentilla palustris</i>	I		2-(2)-2
<i>Juncus articulatus</i>	I		2-(3)-3	<i>Berula erecta</i>	I		2-(5)-7
<i>Sparganium natans</i>	I		3-(4)-5	<i>Carex lasiocarpa</i>	I		2-(3)-3
<i>Baldellia ranunculoides</i>	I		2-(2)-3	<i>Drepanocladus aduncus</i>	I		3-(4)-4
<i>Carex rostrata</i>	I		2-(3)-3	<i>Glyceria fluitans</i>	I		2-(3)-3
<i>Persicaria amphibia</i>	I		2-(3)-9	<i>Myriophyllum alterniflorum</i>	I		3-(7)-9
<i>Apium inundatum</i>	I		2-(3)-3	<i>Nuphar lutea</i>	I		2-(2)-2
<i>Lemna trisulca</i>	I		+(2)-2	<i>Ranunculus flammula</i>	I		2-(2)-2
<i>Isolepis fluitans</i>	I		3-(3)-3	<i>Utricularia minor</i>	I		5-(5)-5

#### Affinities

GHI: CW1 Lagoons and saline lakes / FL1 Dystrophic lakes / FL4 Mesotrophic lakes / FL6 Turloughs  
 ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (77.3%)  
 EUNIS: C1.2414 Broad-leaved pondweed carpets  
 NVC: S4c *Phragmites australis* swamp and reed-beds *Menyanthes trifoliata* sub-community (46.6%), but also  
 A9a *Potamogeton natans* community species-poor sub-community (45.2%)  
 Annex I:1150 Lagoons\* / 3180 Turloughs\*

#### Proxy environmental data

Light: 7.1 Reaction: 6.1 Wetness: 10.7 Fertility: 4.4 Salinity: 0.2

#### Conservation value

This is an aquatic community of medium species richness (species/4 m<sup>2</sup> = 6.9, n = 21). Samples have been recorded from lagoons which correspondent with the priority EU HD Annex I habitat 1150 Lagoons\*. Samples from turlough basins correspond to priority habitat 3180 Turloughs\*.

#### Management

This is an unmanaged community. The main threat would appear to be eutrophication.

#### Key references

Brock, T., Frigge, P., van der Ster, H. (1978) A vegetation study of the pools and surrounding wetlands in the Dooaghry area, Co. Mayo, Republic of Ireland. (unpublished). Laboratory of Geobotany, Catholic University of Nijmegen, The Netherlands.  
 Crawford, I., Bleasdale, A., Conaghan, J. (1998) BIOMAR survey of Irish machair sites 1996. Volume 2: Plant communities. *Irish Wildlife Manuals* No. 4. Dúchas, The Heritage Service, Dublin.  
 van Groenendael, J., Hochstenbach, S.M.H., van Mansfeld, M., Roozen, A.J.M., Westhoff, V. (1982) The influence of the sea on the vegetation of lakes in southwest Connemara. *Journal of Life Sciences - Royal Dublin Society* 3, 221-242.

Synopsis version: V2.0

Synopsis date: April 2021

Synopsis author(s): P.M. Perrin

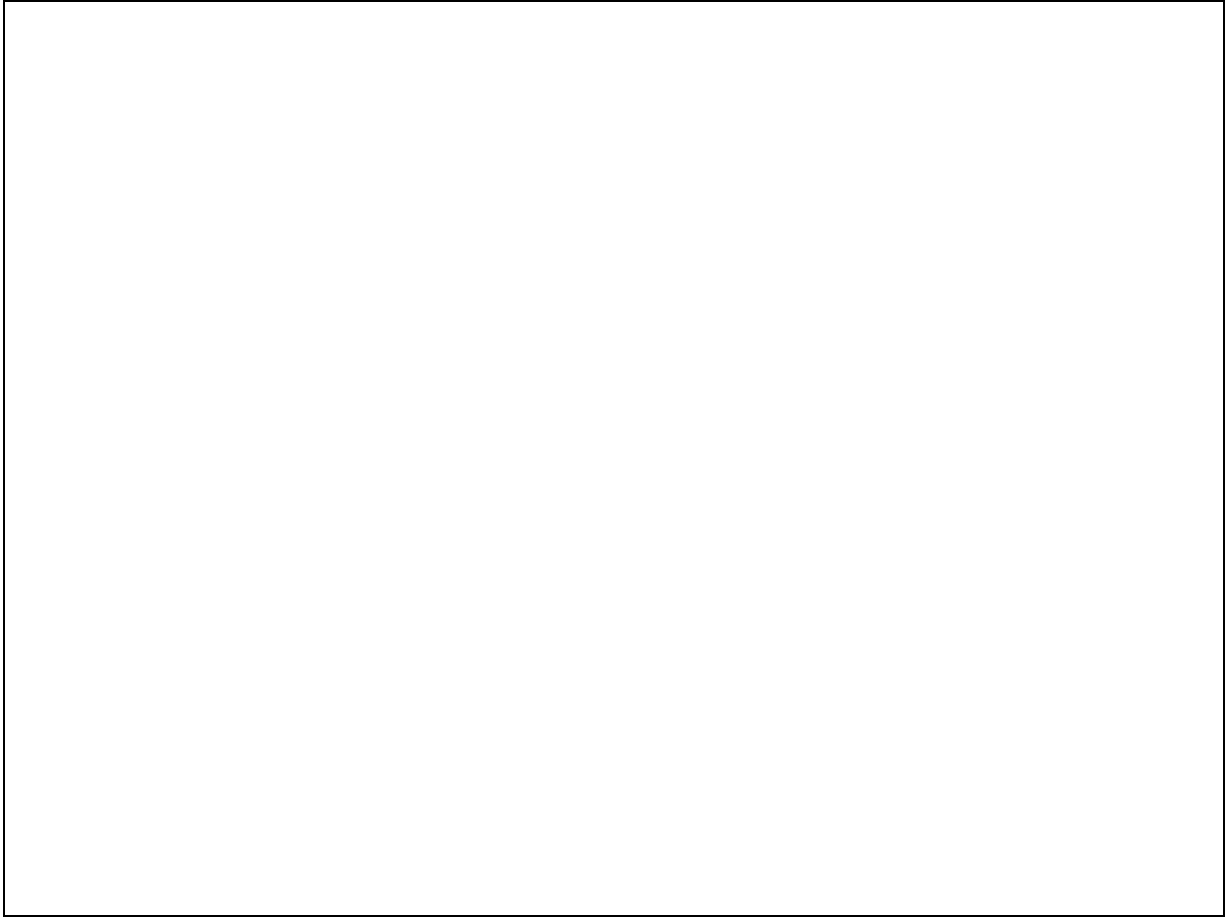


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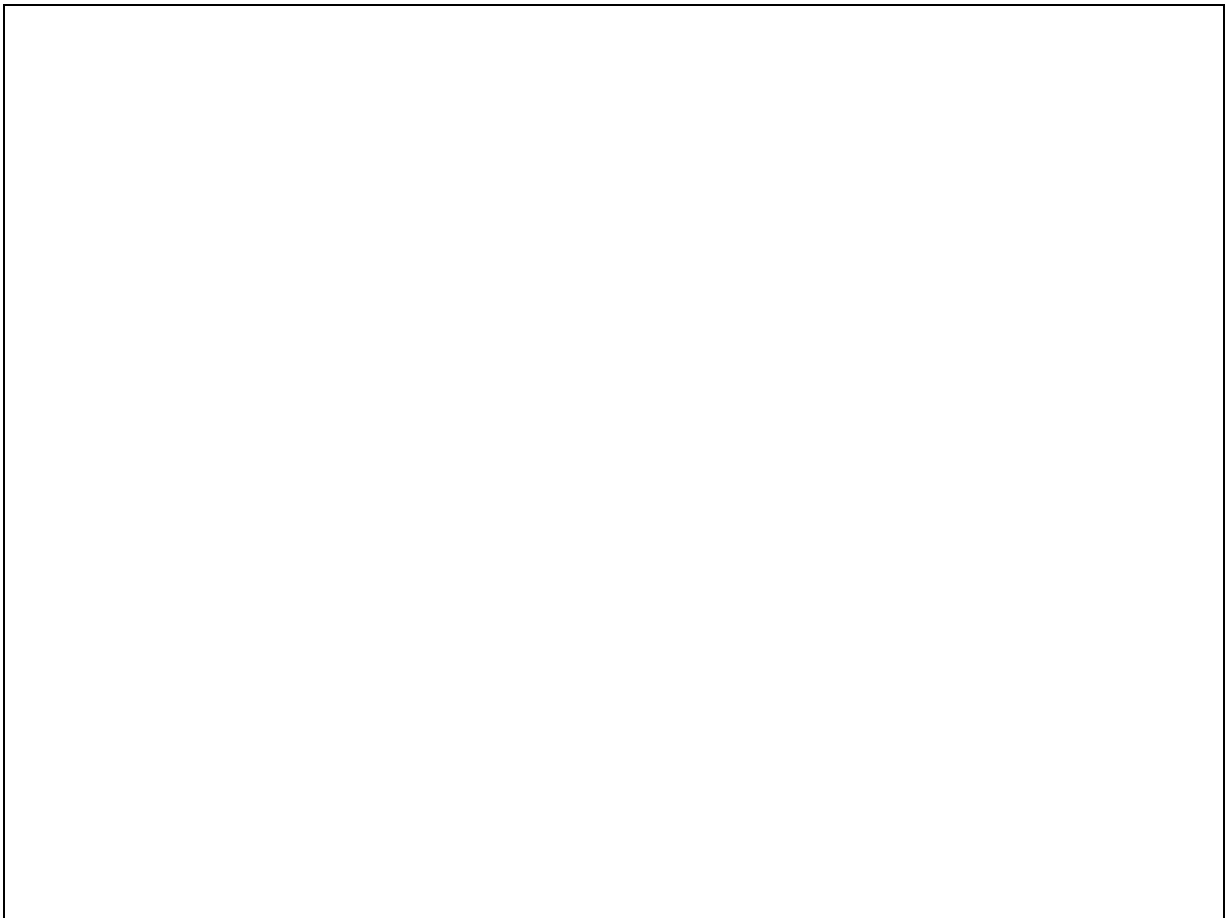


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<b>Scientific name</b>	<i>Potamogeton filiformis</i> – <i>Myriophyllum alterniflorum</i> aquatic community
<b>Common name</b>	Slender-leaved Pondweed – Alternate Water-milfoil aquatic community
<b>Community code</b>	FW2H

### Vegetation

This is a simple aquatic community indicated by the presence of the slender-leaved *Potamogeton filiformis*. A frequent companion to the pondweed is the submerged perennial *Myriophyllum alterniflorum*. Other vascular species are scarce, but charophytes have a significant presence, with the species recorded including *Chara aspera*, *Chara contraria*, *Chara curta*, *Chara muscosa*, *Chara vulgaris* and *Tolypella glomerata*.

### Ecology

This community has been recorded from nutrient-poor coastal lakes such as those associated with machair plains. Roden (1999) describes it as occurring on a sand shelf which extends from the seaward shore at a depth of 0.5 to 1.5 m.

### Sub-communities

No sub-communities are currently described.

### Similar communities

This is a distinct community which should be easily recognised.

### Records and distribution

#### Number of records (all)

Clearly assigned:	7
Transitional:	0
Total:	7

#### Number of records (mapped)

2001-2020:	0
1986-2000:	7
1971-1985:	0
Pre-1971:	0
Total:	7

#### Number of hectads (by most recent time period)

2001-2020:	0
1986-2000:	6
1971-1985:	0
Pre-1971:	0
Total:	6

#### Number of hectads (records in each time period)

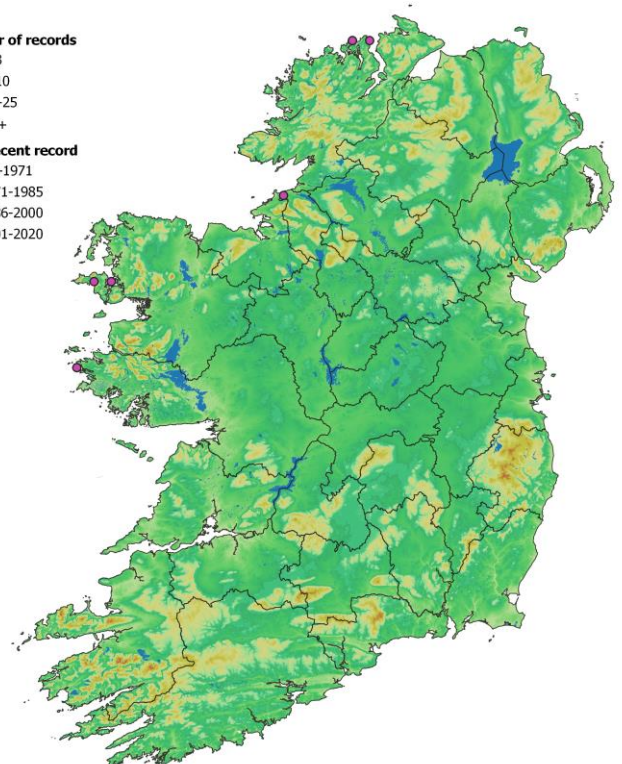
2001-2020:	0
1986-2000:	6
1971-1985:	0
Pre-1971:	0

#### Number of records

- 1-3
- 4-10
- 11-25
- 26+

#### Most recent record

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synoptic table (*n* = 7)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Potamogeton filiformis</i>	V	3-(3)-5			
<i>Myriophyllum alterniflorum</i>	III	3-(3)-5			
<i>Elodea canadensis</i>	I	2-(2)-2			
<i>Littorella uniflora</i>	I	2-(2)-2			
<i>Myriophyllum spicatum</i>	I	3-(3)-3			
<i>Potamogeton perfoliatus</i>	I	2-(2)-2			
<i>Ranunculus trichophyllus</i>	I	5-(5)-5			

#### Affinities

GHI: FL2 Acid oligotrophic lakes

ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (100.0%)

EUNIS: C1.141 *Chara* carpets / C1.232 Small pondweed communities

NVC: A14 *Myriophyllum alterniflorum* community (29.9%), but see accounts of submerged stonewort swards in Rodwell et al. (p. 22, 2000)

Annex I:3140 Hard-water lake habitat

#### Proxy environmental data

Light: 7.0    Reaction: 6.4    Wetness: 12.0    Fertility: 4.6    Salinity: 0.6

#### Conservation value

Where there is an abundance of charophytes, this habitat corresponds with the EU HD Annex I habitat 3140 Hard-water lake habitat. Calculated species diversity is very low (species/4 m<sup>2</sup> = 2.1, *n* = 7) but this does not include charophytes.

#### Management

This is an unmanaged community. The main threat is eutrophication from agricultural sources and wastewater.

#### Key references

Roden, C. (1999) A survey of coastal lakes in counties Galway, Mayo, Sligo and Donegal. (unpublished). The Heritage Council, Kilkenny.

Crawford, I., Bleasdale, A., Conaghan, J. (1998) BIOMAR survey of Irish machair sites 1996. Volume 2: Plant communities. *Irish Wildlife Manuals* No. 4. Dúchas, The Heritage Service, Dublin.

Rodwell, J.S., Dring, J.C., Averis, A.B.G., Proctor, M.C.F., Malloch, A.J.C., Schaminée, J.H.J., Dargie, T.C.D. (2000) Review of coverage of the National Vegetation Classification, JNCC Report 302. JNCC, Peterborough.

**Synopsis version:** V1.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin



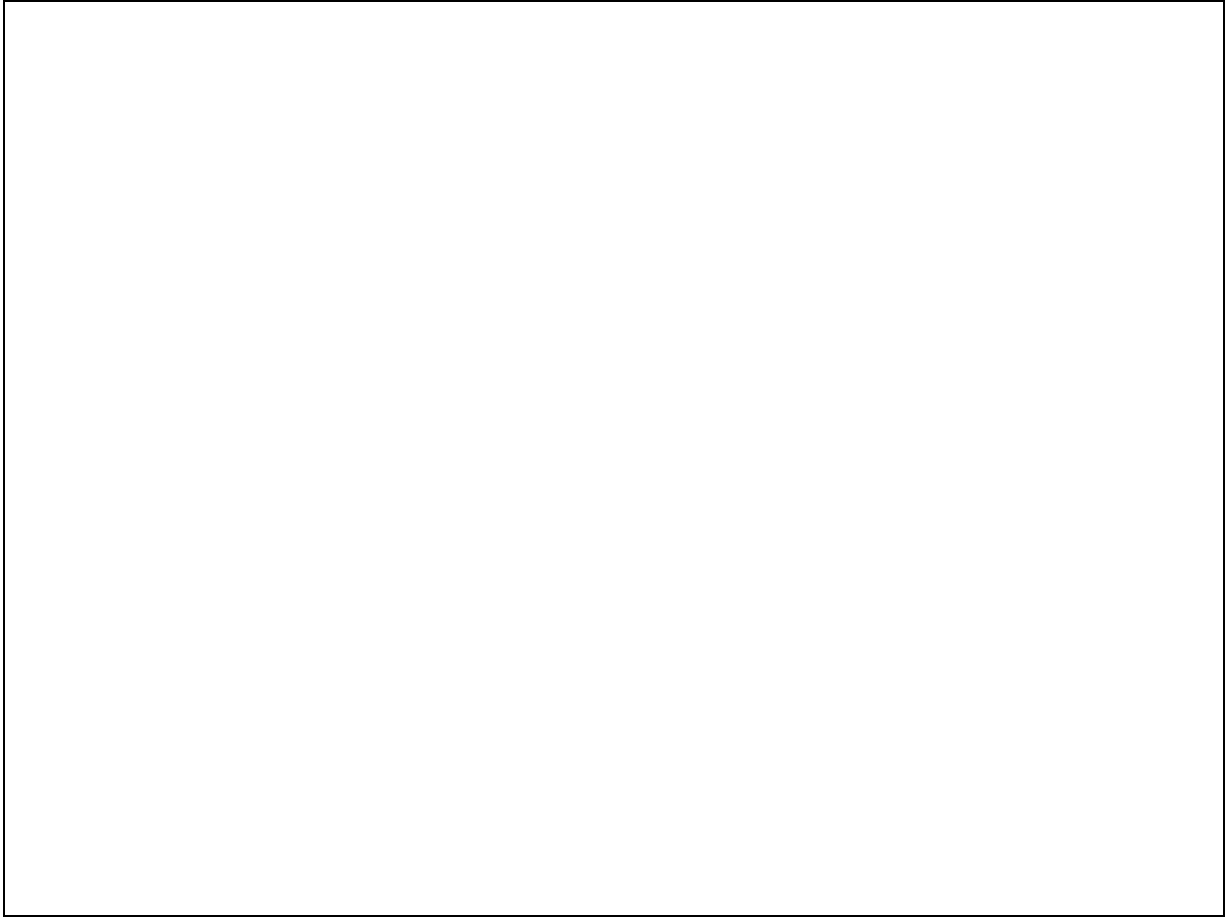


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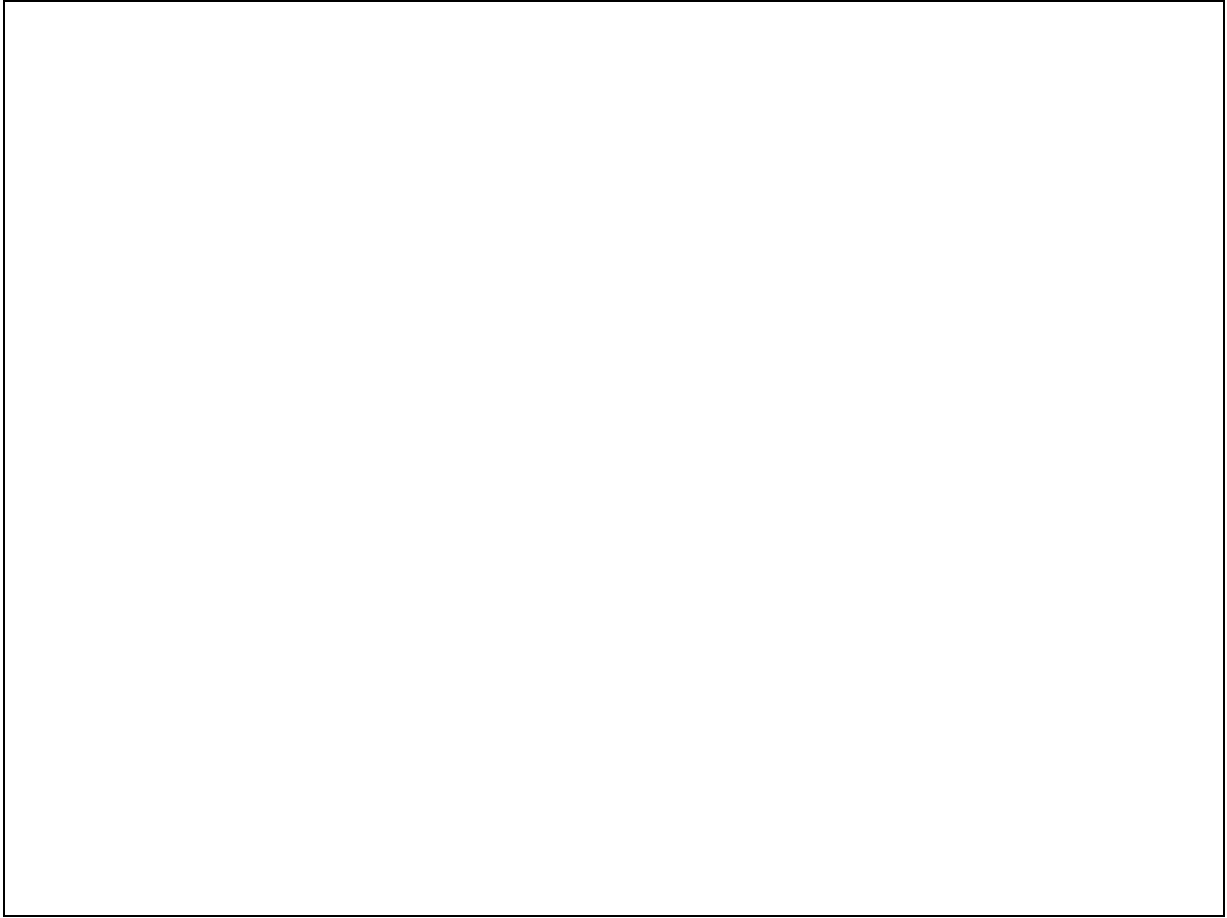


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<b>Scientific name</b>	<i>Nymphaea alba</i> aquatic community
<b>Common name</b>	White Water-lily aquatic community
<b>Community code</b>	FW2I

### Vegetation

The floating-leaves of *Nymphaea alba* dominate this aquatic community. Amongst the lily pads, *Potamogeton natans* frequently occurs and less often there may be some leaves of *Potamogeton coloratus* or patchy *Lemna minor* cover. There is often an accompanying emergent component to the assemblage consisting of *Phragmites australis* with *Equisetum fluviatile* and, occasionally, *Menyanthes trifoliata*, *Carex rostrata* or *Typha latifolia*.

### Ecology

This community has been found in mesotrop

### Sub-communities

No sub-communities are currently described.

### Similar communities

*Nymphaea alba* dominates in no other communities.

[<i>Previously, this community was coded as FW3A</i>]

### Records and distribution

#### Number of records (all)

Clearly assigned:	28
Transitional:	1
Total:	29

#### Number of records (mapped)

2001-2020:	2
1986-2000:	10
1971-1985:	14
Pre-1971:	2
Total:	28

#### Number of hectads (by most recent time period)

2001-2020:	2
1986-2000:	6
1971-1985:	2
Pre-1971:	0
Total:	10

#### Number of hectads (records in each time period)

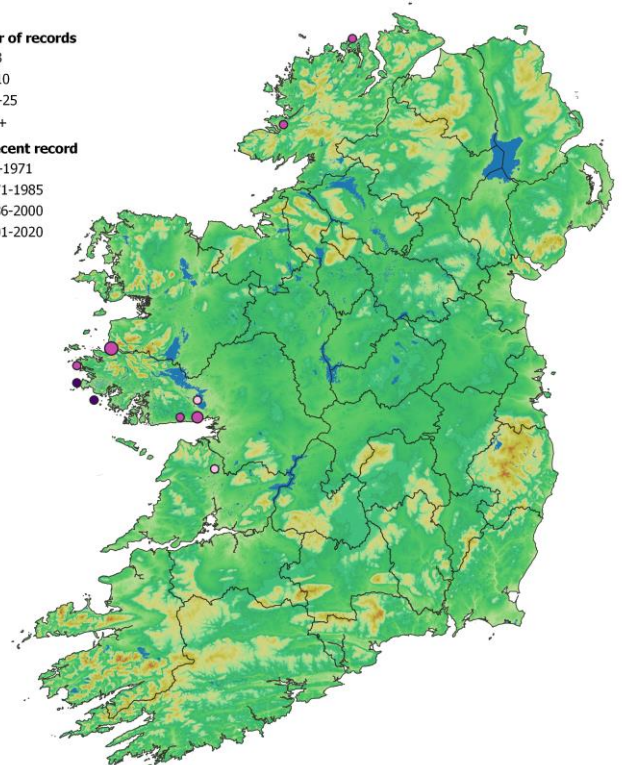
2001-2020:	2
1986-2000:	7
1971-1985:	4
Pre-1971:	1

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synoptic table (n = 25)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Nymphaea alba</i>	V	5-(7)-9	<i>Elodea canadensis</i>	I	3-(3)-3
<i>Phragmites australis</i>	IV	2-(3)-5	<i>Epilobium palustre</i>	I	3-(3)-3
<i>Equisetum fluviatile</i>	III	2-(3)-5	<i>Juncus subnodulosus</i>	I	2-(2)-2
<i>Potamogeton natans</i>	III	2-(3)-4	<i>Lemna minor</i>	I	2-(2)-2
<i>Menyanthes trifoliata</i>	II	2-(4)-5	<i>Myriophyllum alterniflorum</i>	I	7-(7)-7
<i>Typha latifolia</i>	II	2-(2)-4	<i>Nuphar lutea</i>	I	4-(4)-4
<i>Carex rostrata</i>	II	2-(3)-7	<i>Potamogeton gramineus</i>	I	2-(2)-2
<i>Scorpidium scorpioides</i>	II	3-(4)-4	<i>Potentilla palustris</i>	I	1-(1)-1
<i>Sparganium natans</i>	I	2-(3)-3	<i>Schoenoplectus tabernaemontani</i>	I	3-(3)-3
<i>Utricularia australis/vulgaris</i>	I	2-(2)-3	<i>Sphagnum subsecundum</i> agg.	I	3-(3)-3
<i>Hippuris vulgaris</i>	I	2-(3)-3	<i>Utricularia intermedia</i>	I	4-(4)-4
<i>Isolepis fluitans</i>	I	2-(4)-4			
<i>Schoenoplectus lacustris</i>	I	2-(4)-5			
<i>Calliergon giganteum</i>	I	2-(5)-7			
<i>Cladium mariscus</i>	I	3-(3)-3			
<i>Juncus bulbosus</i>	I	3-(3)-3			
<i>Potamogeton coloratus</i>	I	3-(3)-3			
<i>Baldellia ranunculoides</i>	I	2-(2)-2			
<i>Carex nigra</i>	I	2-(2)-2			
<i>Eleocharis multicaulis</i>	I	5-(5)-5			

#### Affinities

GHI: CW1 Lagoons and saline lakes / FL4 Mesotrophic lakes

ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (88.0%)

EUNIS: C1.24112 Northern *Nymphaea* beds

NVC: S4c *Phragmites australis* swamp and reed-beds *Menyanthes trifoliata* sub-community (60.4%), but also A7 *Nymphaea alba* community (42.0%)

Annex I:1150 Lagoons\*

#### Proxy environmental data

Light: 7.2 Reaction: 5.9 Wetness: 10.8 Fertility: 4.0 Salinity: 0.1

#### Conservation value

This is species-poor aquatic community (species/4 m<sup>2</sup> = 3.8, n = 15). Stands have been recorded from lagoons which correspondent with the priority EU HD Annex I habitat 1150 Lagoons\*.

#### Management

This is an unmanaged community. The main threat would appear to be eutrophication.

#### Key references

Brock, T., Frigge, P., van der Ster, H. (1978) A vegetation study of the pools and surrounding wetlands in the Dooaghry area, Co. Mayo, Republic of Ireland. (unpublished). Laboratory of Geobotany, Catholic University of Nijmegen, The Netherlands.

Crawford, I., Bleasdale, A., Conaghan, J. (1998) BIOMAR survey of Irish machair sites 1996. Volume 2: Plant communities. *Irish Wildlife Manuals* No. 4. Dúchas, The Heritage Service, Dublin.

Crawford, I., Bleasdale, A., Conaghan, J. (1998) BIOMAR survey of Irish machair sites 1996. Volume 2: Plant communities. *Irish Wildlife Manuals* No. 4. Dúchas, The Heritage Service, Dublin.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

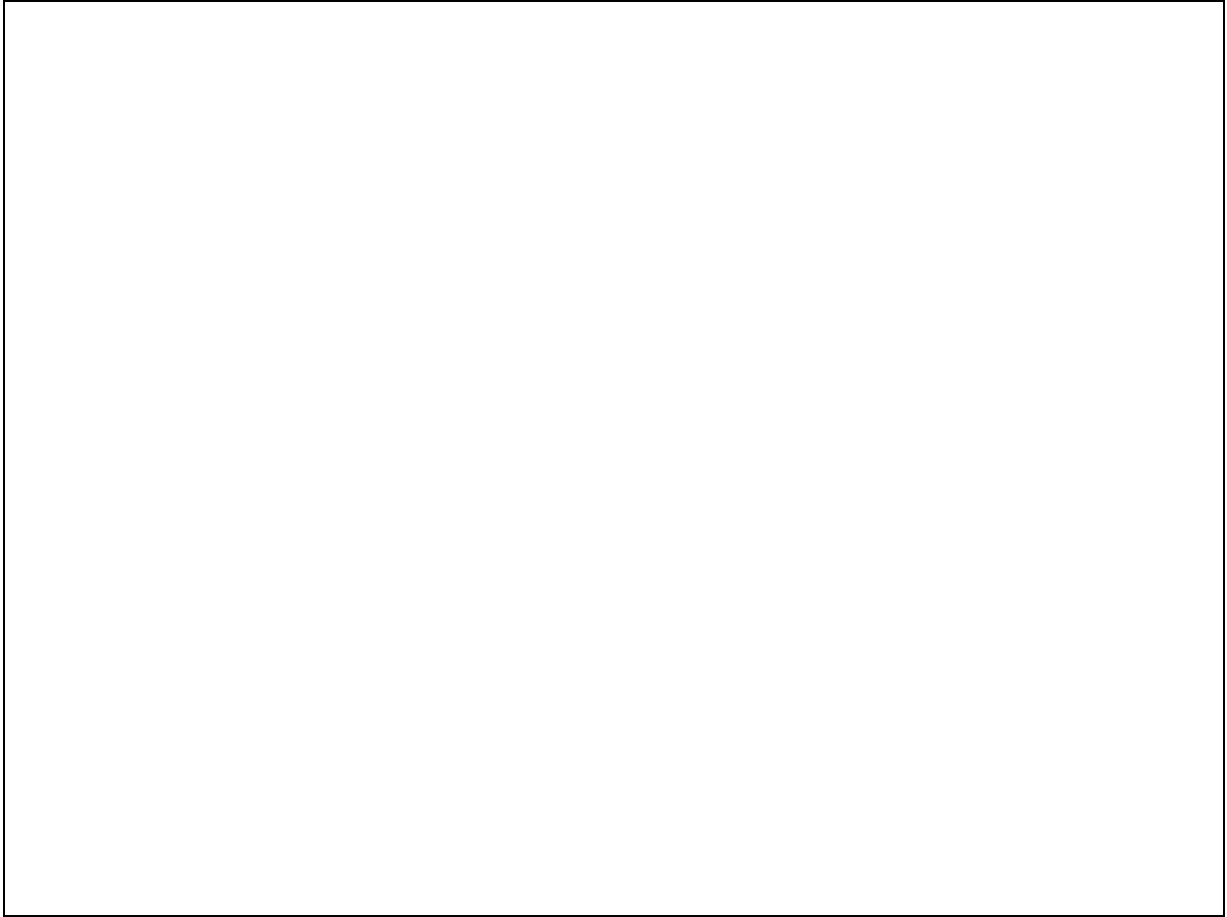


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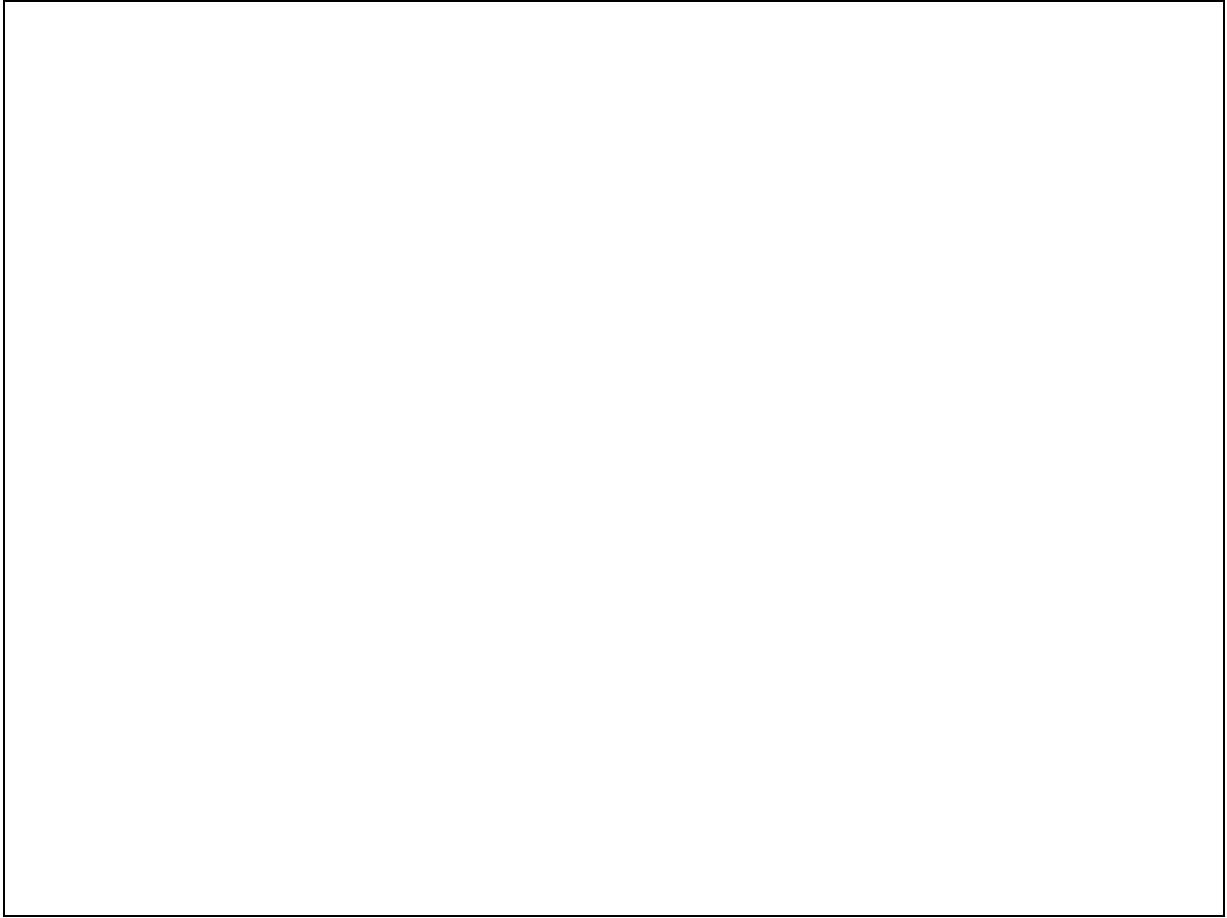


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<b>Scientific name</b>	<i>Nuphar lutea</i> aquatic community
<b>Common name</b>	Yellow Water-lily aquatic community
<b>Community code</b>	FW2J

### Vegetation

The yellow water-lily, *Nuphar lutea* is the sole constant in this aquatic community and provides a substantial amount of the cover. Growing with it occasionally will be emergents such as *Equisetum fluviatile*, *Phragmites australis*, *Schoenoplectus lacustris*, *Sparganium erectum* or *Typha latifolia*, but these typically don't form dense stands. A range of pondweeds (*Potamogeton* spp.) may also be found here. Stoneworts recorded from this community include *Chara contraria*, *Chara globularis*, *Chara rudis*, *Chara virgata* and *Chara vulgaris*.

### Ecology

This community has largely been recorded from mesotrophic lakes in the lowlands, but probably also occurs in slow-moving rivers and canals.

### Sub-communities

No sub-communities are currently described.

### Similar communities

*Nuphar lutea* dominates in no other communities.

### Records and distribution

#### Number of records (all)

Clearly assigned:	20
Transitional:	1
Total:	21

#### Number of records (mapped)

2001-2020:	1
1986-2000:	14
1971-1985:	5
Pre-1971:	1
Total:	21

#### Number of hectads (by most recent time period)

2001-2020:	1
1986-2000:	5
1971-1985:	1
Pre-1971:	1
Total:	8

#### Number of hectads (records in each time period)

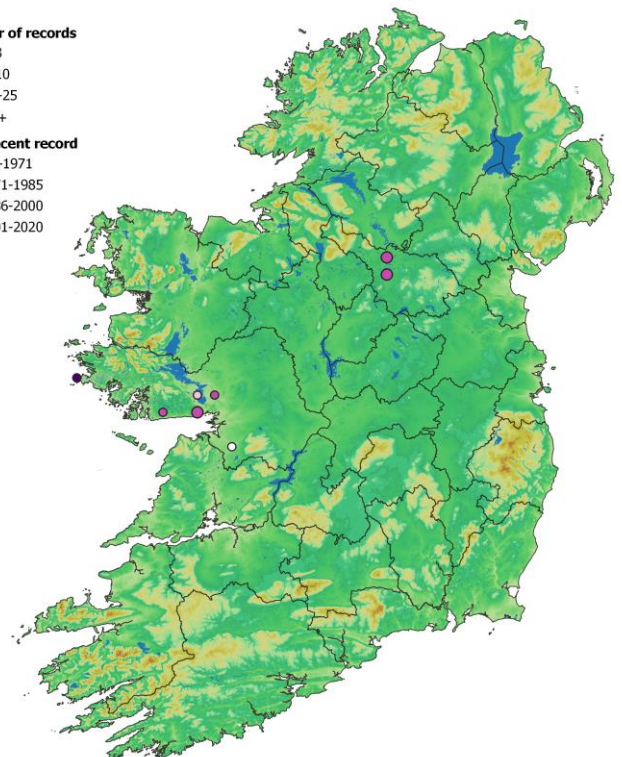
2001-2020:	1
1986-2000:	5
1971-1985:	3
Pre-1971:	1

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020





### Synoptic table (n = 20)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Nuphar lutea</i>	V	5-(7)-9	<i>Potamogeton berchtoldii</i>	I	2-(2)-2
<i>Equisetum fluviatile</i>	II	2-(3)-5	<i>Potamogeton natans</i>	I	4-(4)-4
<i>Phragmites australis</i>	II	2-(3)-5	<i>Potamogeton pectinatus</i>	I	2-(2)-2
<i>Elodea canadensis</i>	II	2-(3)-5	<i>Potentilla palustris</i>	I	2-(2)-2
<i>Menyanthes trifoliata</i>	I	1-(3)-4	<i>Sparganium emersum</i>	I	7-(7)-7
<i>Schoenoplectus lacustris</i>	I	3-(3)-3	<i>Utricularia intermedia</i>	I	3-(3)-3
<i>Potamogeton lucens</i>	I	5-(5)-9			
<i>Sparganium erectum</i>	I	2-(3)-9			
<i>Typha latifolia</i>	I	3-(3)-8			
<i>Hippuris vulgaris</i>	I	3-(4)-5			
<i>Lemna minor</i>	I	2-(3)-3			
<i>Potamogeton coloratus</i>	I	3-(5)-7			
<i>Alisma plantago-aquatica</i>	I	2-(2)-2			
<i>Carex limosa</i>	I	2-(2)-2			
<i>Carex rostrata</i>	I	2-(2)-2			
<i>Cladium mariscus</i>	I	3-(3)-3			
<i>Glyceria fluitans</i>	I	2-(2)-2			
<i>Hydrocotyle vulgaris</i>	I	2-(2)-2			
<i>Nymphaea alba</i>	I	5-(5)-5			
<i>Oenanthe aquatica</i>	I	3-(3)-3			

#### Affinities

GHI: FL4 Mesotrophic lakes

ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (80.0%)

EUNIS: C1.24111 *Nuphar* beds

NVC: A8a *Nuphar lutea* community species-poor sub-community (71.4%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 7.1    Reaction: 6.8    Wetness: 10.9    Fertility: 5.9    Salinity: 0.7

#### Conservation value

This is species-poor aquatic community (species/4 m<sup>2</sup> = 3.2, n = 11). *Elodea canadensis* is an invasive non-native species found in this community but it is not considered a major ecological threat and has already colonised much of its suitable niche in Ireland.

#### Management

This is an unmanaged community. The main threat would appear to be eutrophication.

#### Key references

Mooney, E. (1991) A phytosociological and palaeoecological study of the wetlands of the Lower Corrib basin, Co. Galway, Ireland. (Ph.D. thesis). National University of Ireland Galway.

Conaghan, J. (1999) The vegetation, ecology and conservation of the Lough Oughter lake system, Co. Cavan. (unpublished). The Heritage Council, Kilkenny.

**Synopsis version:** V1.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

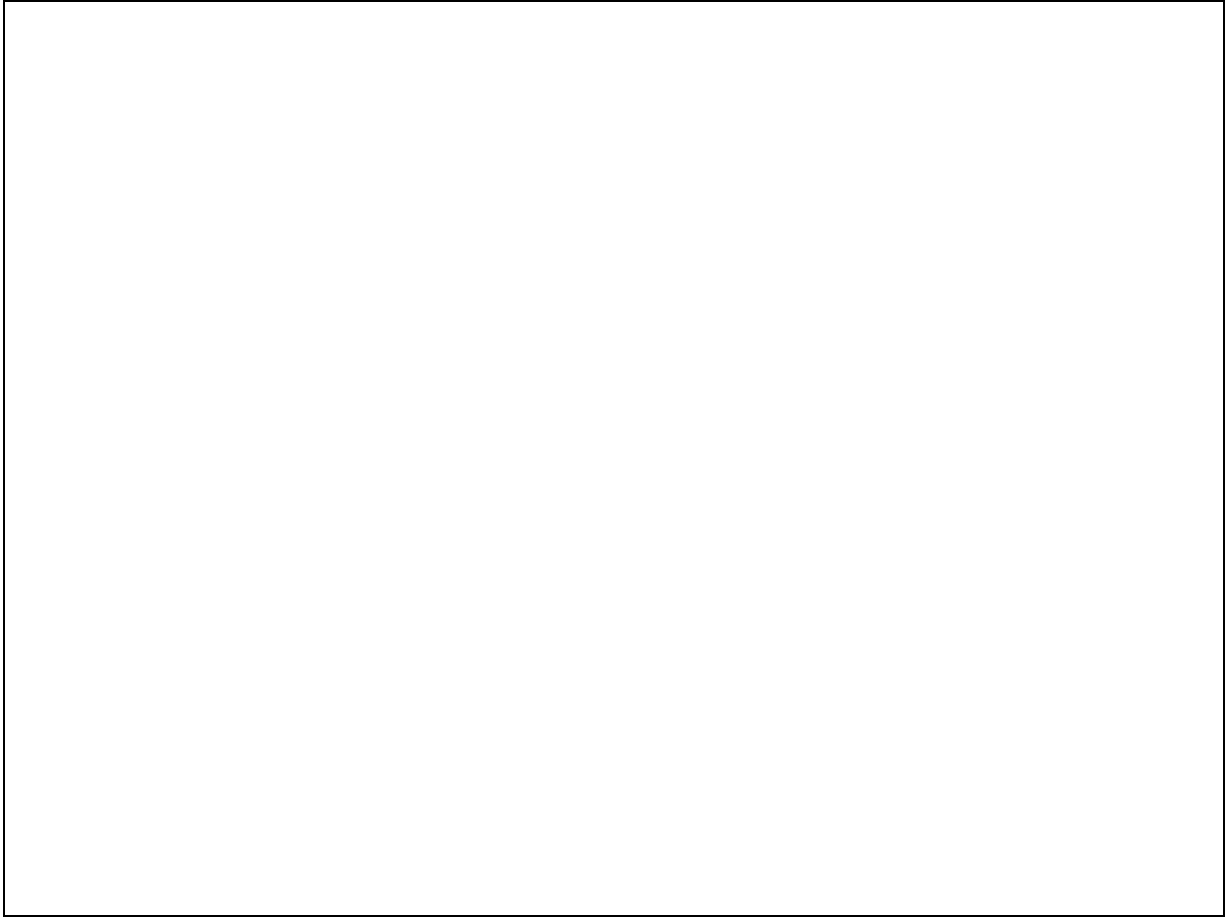


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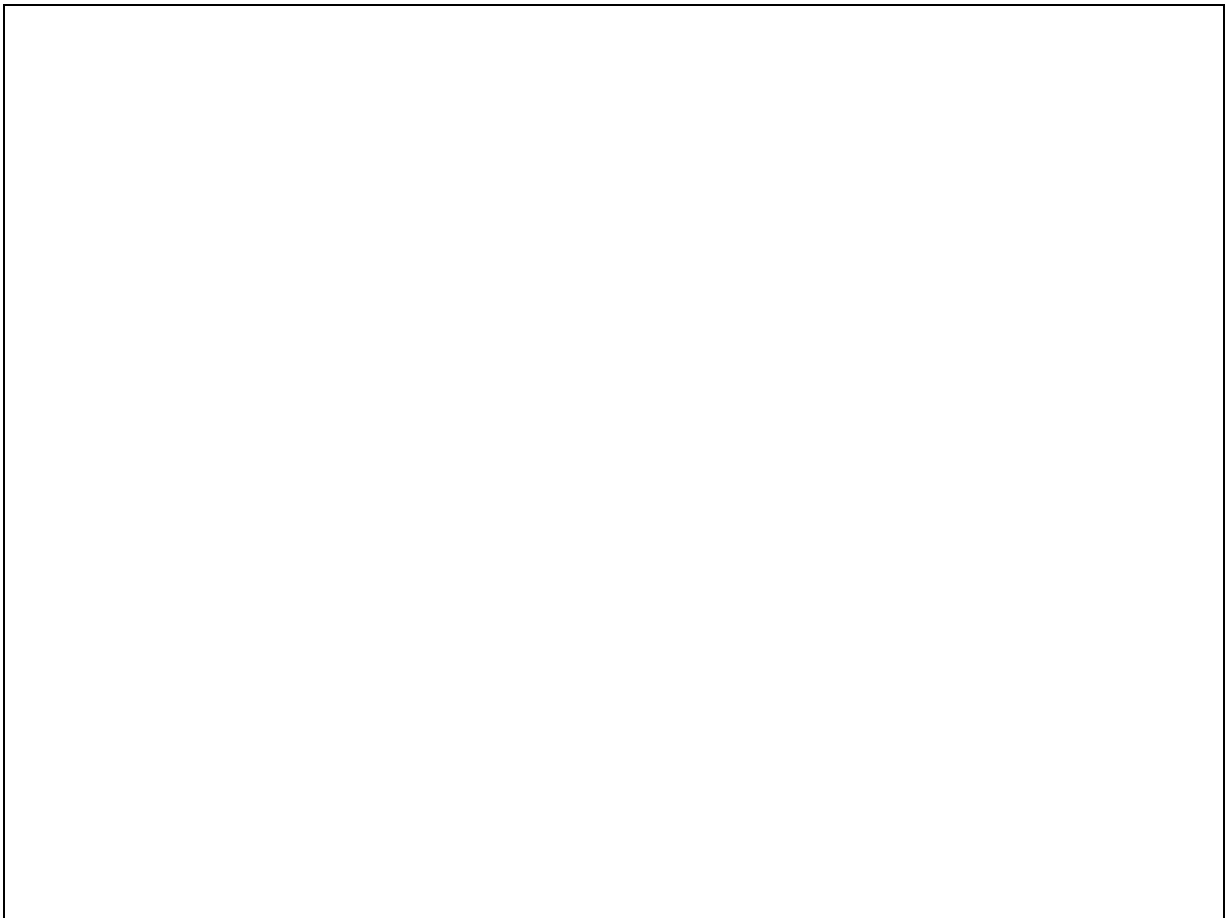


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<b>Scientific name</b>	<i>Zannichellia palustris</i> aquatic community
<b>Common name</b>	Horned Pondweed aquatic community
<b>Community code</b>	FW2K

### Vegetation

This is a simple, submerged aquatic community characterised by the presence of the perennial *Zannichellia palustris*. Often it is the sole vascular component, but occasionally one can find some pondweed (*Potamogeton berchtoldii*, *Potamogeton crispus*), *Elodea canadensis* or *Myriophyllum spicatum*. *Ruppia* occurs only rarely. Stoneworts recorded from this community include *Chara aspera*, *Chara rudis*, *Chara virgata* and *Chara vulgaris*.

### Ecology

This community has largely been recorded from lagoons and mesotrophic lakes.

### Sub-communities

No sub-communities are currently described.

### Similar communities

*Zannichellia palustris* can also occur in the SW1A *Ruppia maritima/cirrhosa* lagoon community, but there it will be subordinate to the *Ruppia*.

### Records and distribution

#### Number of records (all)

Clearly assigned:	10
Transitional:	1
Total:	11

#### Number of records (mapped)

2001-2020:	0
1986-2000:	8
1971-1985:	3
Pre-1971:	0
Total:	11

#### Number of hectads (by most recent time period)

2001-2020:	0
1986-2000:	4
1971-1985:	2
Pre-1971:	0
Total:	6

#### Number of hectads (records in each time period)

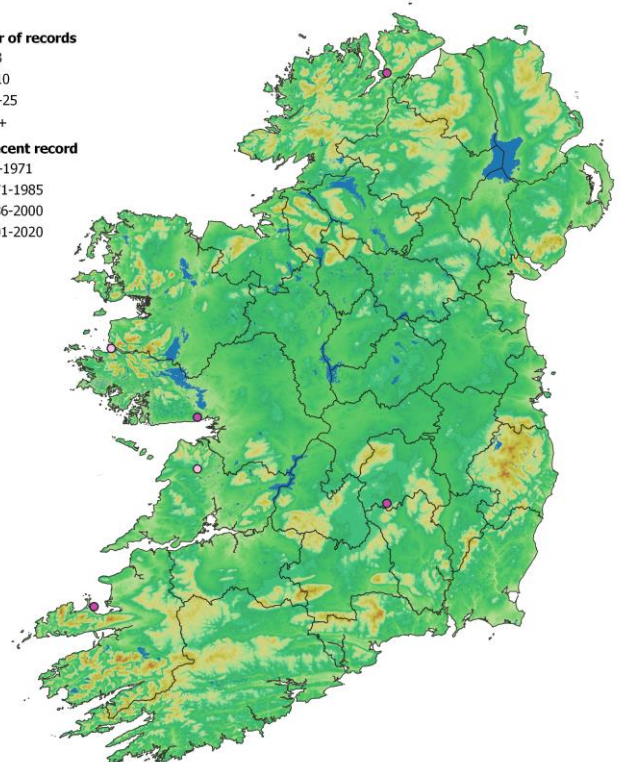
2001-2020:	0
1986-2000:	4
1971-1985:	2
Pre-1971:	0

#### Number of records

- 1-3
- 4-10
- 11-25
- 26+

#### Most recent record

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synoptic table (*n* = 8)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Zannichellia palustris</i>	V	3-(4)-9			
<i>Potamogeton berchtoldii</i>	II	3-(5)-5			
<i>Elodea canadensis</i>	II	2-(3)-3			
<i>Myriophyllum spicatum</i>	II	2-(3)-4			
<i>Groenlandia densa</i>	I	5-(5)-5			
<i>Potamogeton crispus</i>	I	2-(2)-2			
<i>Ruppia maritima/cirrhosa</i>	I	4-(4)-4			

#### Affinities

GHI: CW1 Lagoons and saline lakes / FL4 Mesotrophic lakes

ZM: NB Potamogetonetea Klika in Klika et Novák 1941 (100.0%)

EUNIS: C1.232 Small pondweed communities

NVC: A8b *Nuphar lutea* community *Callitriche stagnalis-Zannichellia palustris* sub-community (32.7%)

Annex I:1150 Lagoons\*

#### Proxy environmental data

Light: 6.9 Reaction: 7.4 Wetness: 11.7 Fertility: 6.5 Salinity: 1.6

#### Conservation value

Samples have been recorded from lagoons which correspondent with the priority EU HD Annex I habitat 1150 Lagoons\*. *Elodea canadensis* is an invasive non-native species found in this community but it is not considered a major ecological threat and has already colonised much of its suitable niche in Ireland. Vascular plant diversity is low.

#### Management

This community is typically unmanaged but is threatened by impacts which affect lagoons and lakes, including drainage for purposes of agricultural reclamation, natural siltation and eutrophication.

#### Key references

Hatch, P. (1996) A survey of the vegetation of Irish coastal lagoons. National Parks and Wildlife Service, Dublin.

Mooney, E. (1991) A phytosociological and palaeoecological study of the wetlands of the Lower Corrib basin, Co. Galway, Ireland. (Ph.D. thesis). National University of Ireland Galway.

**Synopsis version:** V1.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

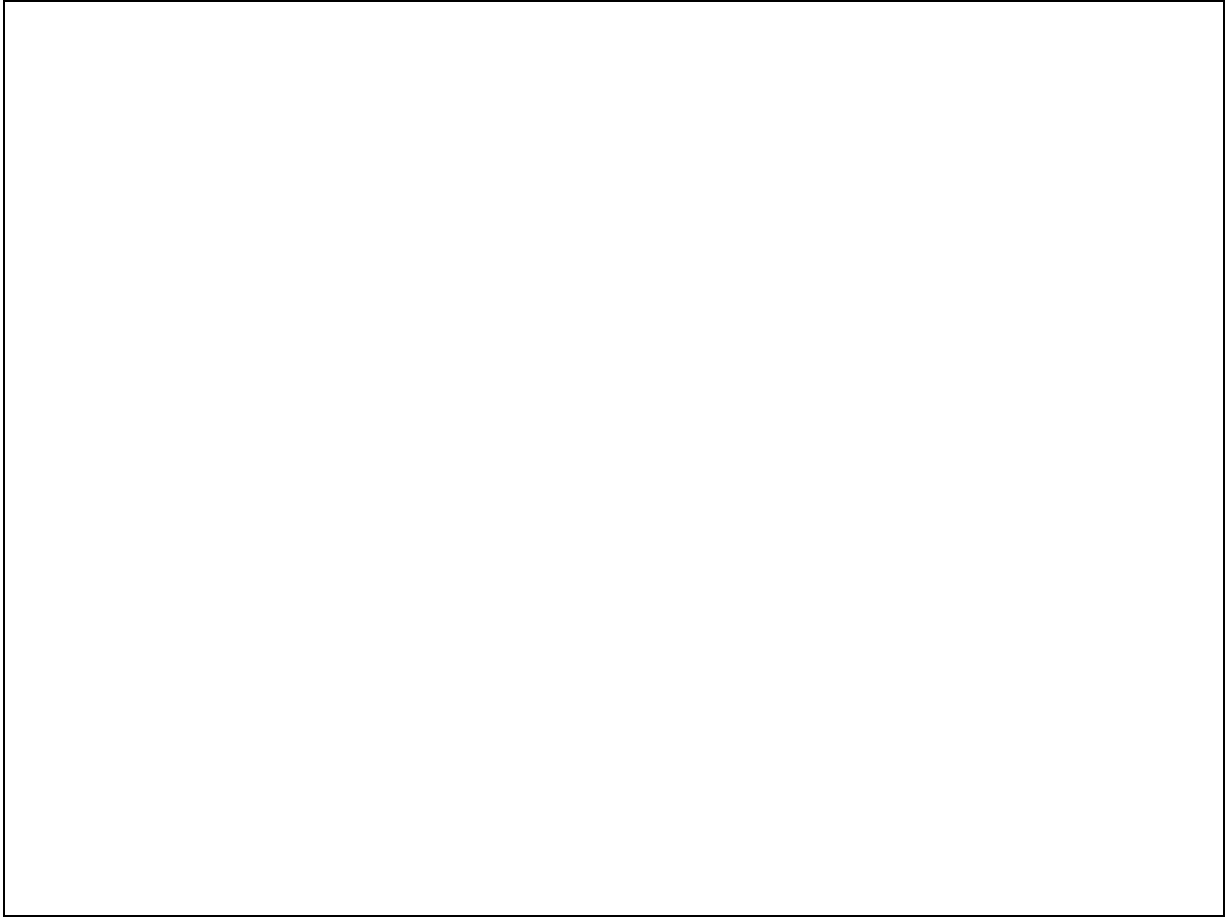


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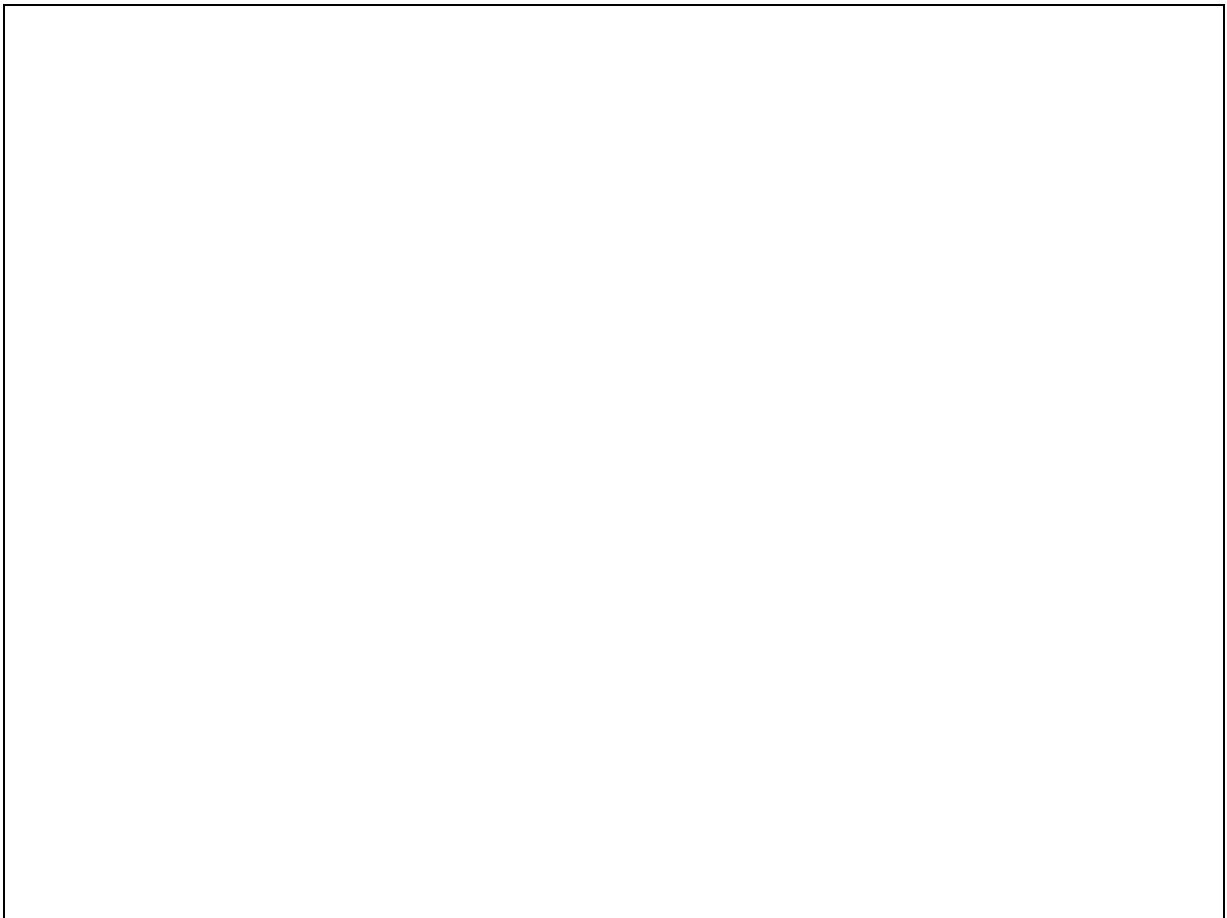


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<b>Scientific name</b>	<i>Schoenoplectus lacustris</i> – <i>Sparganium erectum</i> swamp
<b>Common name</b>	Common Club-rush – Branched Bur-reed swamp
<b>Community code</b>	FW3A

### Vegetation

*Schoenoplectus lacustris*, *Sparganium erectum* and *Apium nodiflorum* are constants within this swamp community. Of the other emergents, *Phalaris arundinacea* is frequently encountered while *Berula erecta* and *Myosotis scorpioides* are occasionally found. An accompanying element of floating-leaf and free-floating plants is characterised by *Nuphar lutea* with *Potamogeton natans*, *Potamogeton crispus* and *Lemna minor* occasional. *Sparganium emersum* is a frequent plant which may contribute to either or both of these elements. Submerged plants may also occur but are infrequent, the chief species are likely to be the non-native *Elodea canadensis*, submerged forms of *Veronica anagallis-aquatica*, the bryophyte *Fontinalis antipyretica* and *Myriophyllum spicatum*.

### Ecology

This is a community of lowland freshwater river systems with fairly base-rich and eutrophic waters.

### Sub-communities

No sub-communities are currently described.

### Similar communities

*Schoenoplectus lacustris* is also a constant in community FW3D *Schoenoplectus lacustris* swamp. In that less diverse assemblage, *Sparganium erectum* and *Nuphar lutea* are much less frequent, however, and *S. lacustris* tends to dominate.

[Previously, this community was coded as FW2G]

### Records and distribution

#### Number of records (all)

Clearly assigned:	89
Transitional:	13
Total:	102

#### Number of records (mapped)

2001-2020:	21
1986-2000:	1
1971-1985:	1
Pre-1971:	1
Total:	24

#### Number of hectads (by most recent time period)

2001-2020:	19
1986-2000:	1
1971-1985:	1
Pre-1971:	1
Total:	22

#### Number of hectads (records in each time period)

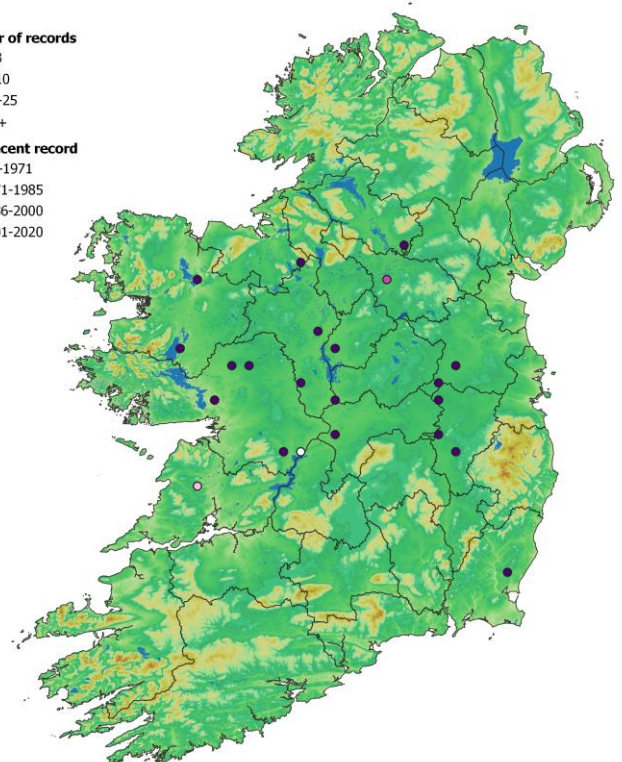
2001-2020:	19
1986-2000:	1
1971-1985:	1
Pre-1971:	1

#### Number of records

- 1-3
- 4-10
- 11-25
- 26+

#### Most recent record

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synopsis table (n = 89)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Sparganium erectum</i>	IV	+-(1)-5	<i>Oenanthe aquatica</i>	I	+-(+)-2
<i>Schoenoplectus lacustris</i>	IV	+-(2)-4	<i>Phragmites australis</i>	I	+-(1)-3
<i>Apium nodiflorum</i>	IV	+-(+)-4	<i>Veronica beccabunga</i>	I	+-(+)-+
<i>Nuphar lutea</i>	III	+-(1)-3	<i>Iris pseudacorus</i>	I	+-(1)-1
<i>Phalaris arundinacea</i>	III	+-(1)-3	<i>Sagittaria sagittifolia</i>	I	+-(+)-2
<i>Sparganium emersum</i>	III	+-(1)-4	<i>Epilobium hirsutum</i>	I	+-(+)-2
<i>Mentha aquatica</i>	III	+-(+)-2	<i>Potamogeton gramineus</i>	I	+-(1)-3
<i>Elodea canadensis</i>	II	+-(1)-3	<i>Potamogeton pectinatus</i>	I	+-(2)-3
<i>Potamogeton natans</i>	II	+-(2)-5	<i>Rorippa nast.-aquaticum</i> agg.	I	+-(1)-2
<i>Lemna minor</i>	II	+-(1)-3	<i>Callitriche stagnalis</i>	I	+-(1)-1
<i>Myosotis scorpioides</i>	II	+-(+)-2	<i>Hippuris vulgaris</i>	I	+-(1)-2
<i>Potamogeton crispus</i>	II	+-(1)-2	<i>Leptodictyum riparium</i>	I	+-(1)-3
<i>Berula erecta</i>	II	+-(+)-2	<i>Callitriche hermaphroditica</i>	I	+-(+)-+
<i>Veronica anagallis-aquatica</i>	II	+-(+)-1	<i>Potamogeton pusillus</i>	I	+-(1)-2
<i>Fontinalis antipyretica</i>	II	+-(+)-2	<i>Persicaria amphibia</i>	I	+-(+)-1
<i>Myriophyllum spicatum</i>	II	+-(1)-4	<i>Potamogeton perfoliatus</i>	I	+-(2)-3
<i>Lemna trisulca</i>	II	+-(1)-2	<i>Ranunculus penicillatus</i>	I	+-(+)-1
<i>Glyceria notata</i>	I	+-(1)-1	<i>Rumex hydrolapathum</i>	I	+-(+)-1
<i>Potamogeton lucens</i>	I	+-(1)-3	<i>Rhynchosytem riparioides</i>	I	+-(1)-2
<i>Alisma plantago-aquatica</i>	I	+-(+)-1	<i>Nymphaea alba</i>	I	1-(1)-2

#### Affinities

GHI: FS1 Reed and large sedge swamp

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (39.3%) / NB Potamogetonetea Klika in Klika et Novák 1941 (20.2%)

EUNIS: C2.34 Eutrophic vegetation of slow-flowing rivers / C3.22 *Scirpus lacustris* beds

NVC: S14 *Sparganium erectum* swamp (43.5%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 7.2    Reaction: 6.8    Wetness: 10.7    Fertility: 6.1    Salinity: 0.3

#### Conservation value

*Elodea canadensis* is an invasive non-native species found in this community but it is not considered a major ecological threat and has already colonised much of its suitable niche in Ireland.

#### Management

This community may be affected by eutrophication, river engineering including dredging and canalisation, clearance works for navigation and trampling from livestock with access to the bankside.

#### Key references

Caffrey, J. (1990) Classification and dynamics of aquatic macrophytes in some Irish rivers. (Ph.D. thesis). University College Dublin.

McGarrigle, M. (2010) Irish national river macrophyte and associated environmental data collected as part of the macrophyte intercalibration exercise in the Central and Baltic GIG under the Water Framework Directive. (unpublished data). Environmental Protection Agency, Wexford.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

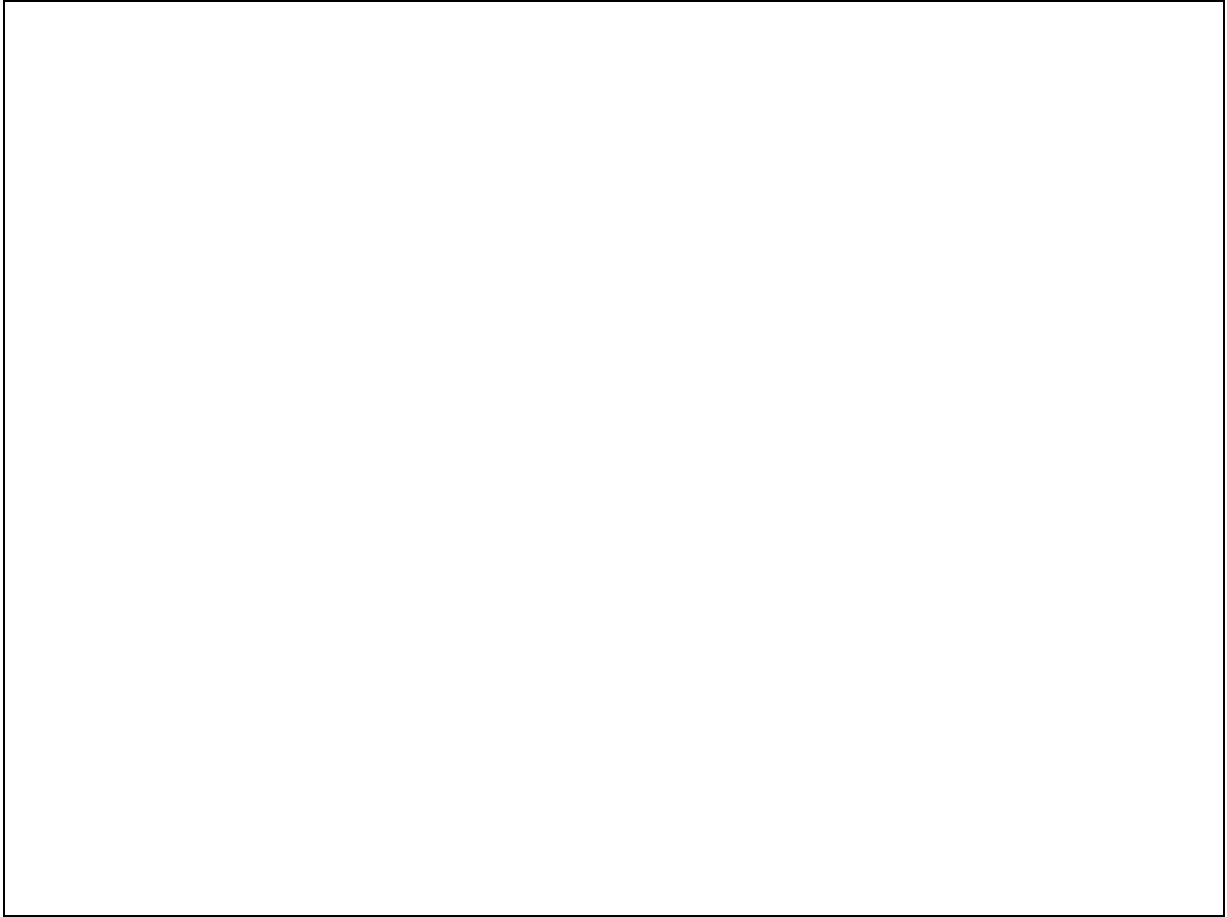


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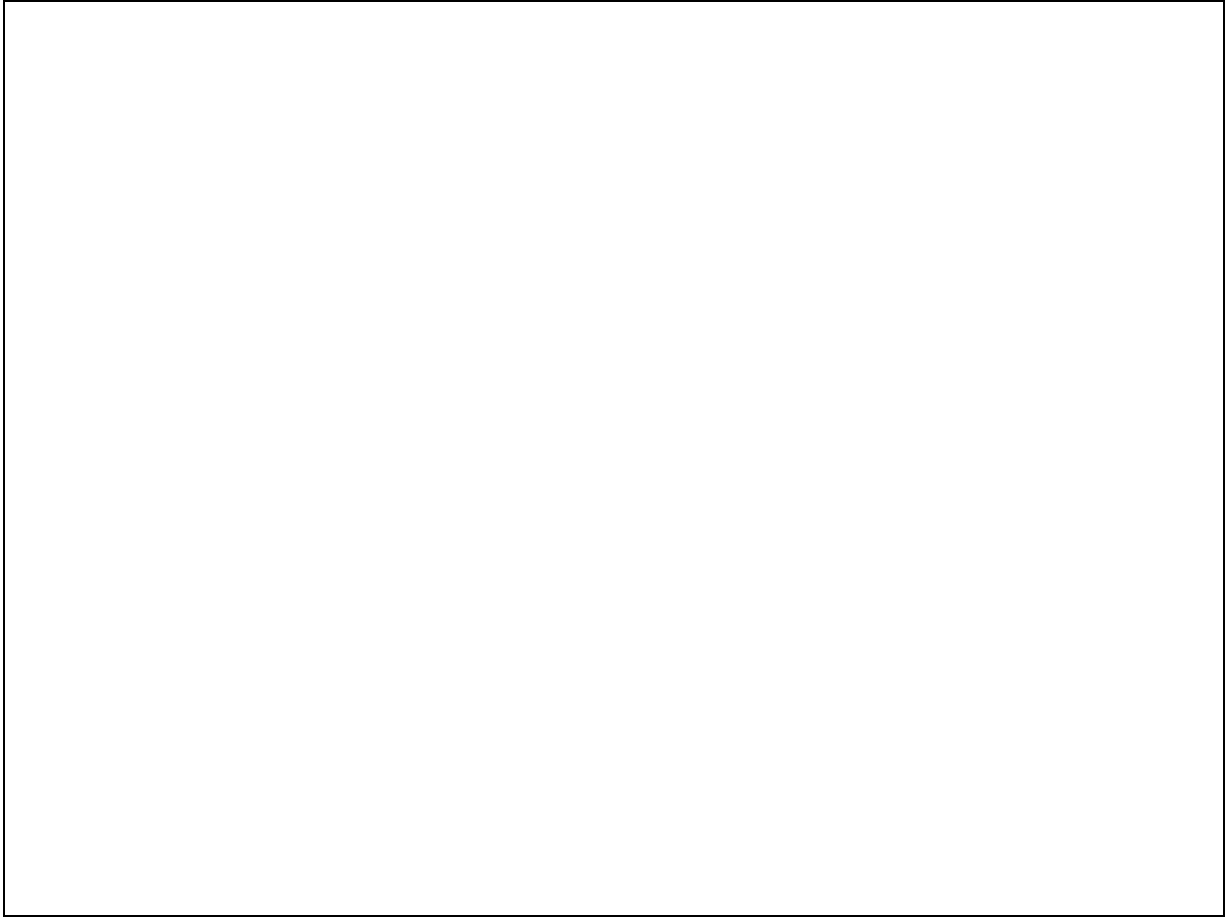


Photo required

<b>Scientific name</b>	<i>Phragmites australis</i> – <i>Agrostis stolonifera</i> swamp
<b>Common name</b>	Common Reed – Creeping Bent swamp
<b>Community code</b>	FW3B

### Vegetation

This is a somewhat mixed and often open swamp community. *Phragmites australis*, *Bolboschoenus maritimus* and *Agrostis stolonifera* are the constant species. Frequently accompanying them is the tall swamp species *Typha latifolia* with *Schoenoplectus tabernaemontani* occasionally present. With *Agrostis* in the rather sparse understorey may be found *Juncus articulatus*, *Eleocharis palustris*, *Hippuris vulgaris*, *Mentha aquatica*, *Galium palustre*, *Lythrum salicaria*, *Iris pseudacorus* or *Ranunculus flammula*.

### Ecology

These stands occur in mildly eutrophic, quite base-rich waters. They have predominantly been recorded from the margins of coastal lagoons, but also from estuaries and from mesotrophic lakes further inland.

### Sub-communities

No sub-communities are currently described.

### Similar communities

*Bolboschoenus maritimus* is also a key species in the SM6A *Bolboschoenus maritimus* – *Agrostis stolonifera* saltmarsh-swamp. However, in that community *Phragmites australis* is rare and *Bolboschoenus* forms dense beds, often accompanied by at least one other halophile, such as *Aster tripolium*, *Triglochin maritimum* or *Glaux maritima*. Dense beds of *Phragmites* may be referred to the FW3E *Phragmites australis* – *Equisetum fluviatile* swamp.

### Records and distribution

#### Number of records (all)

Clearly assigned:	57
Transitional:	17
Total:	74

#### Number of records (mapped)

2001-2020:	6
1986-2000:	6
1971-1985:	59
Pre-1971:	1
Total:	72

#### Number of hectads (by most recent time period)

2001-2020:	3
1986-2000:	6
1971-1985:	9
Pre-1971:	0
Total:	18

#### Number of hectads (records in each time period)

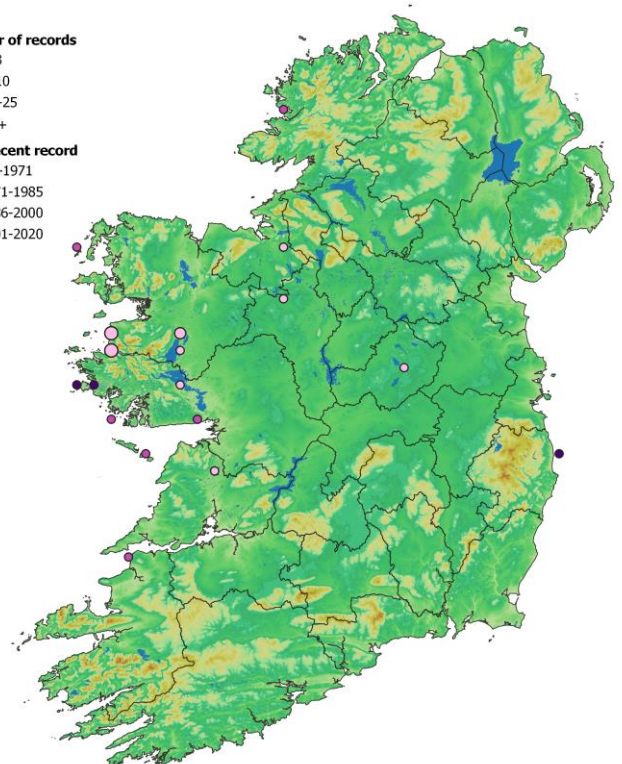
2001-2020:	3
1986-2000:	6
1971-1985:	10
Pre-1971:	1

Number of records

- 1-3
- 4-10
- 11-25
- 26+

Most recent record

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synoptic table (n = 55)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Phragmites australis</i>	V	2-(3)-5	<i>Equisetum fluviatile</i>	I	2-(2)-3
<i>Agrostis stolonifera</i>	IV	+--(4)-7	<i>Baldellia ranunculoides</i>	I	2-(4)-5
<i>Bolboschoenus maritimus</i>	IV	2-(3)-5	<i>Sagina procumbens</i>	I	2-(3)-4
<i>Juncus articulatus</i>	III	2-(3)-4	<i>Juncus effusus</i>	I	2-(2)-3
<i>Eleocharis palustris</i>	III	2-(3)-4	<i>Senecio aquaticus</i>	I	2-(2)-3
<i>Typha latifolia</i>	III	2-(2)-4	<i>Oenanthe lachenalii</i>	I	2-(2)-5
<i>Schoenoplectus tabernaemontani</i>	II	2-(3)-5	<i>Carex rostrata</i>	I	2-(2)-2
<i>Mentha aquatica</i>	II	2-(2)-3	<i>Glaux maritima</i>	I	2-(3)-4
<i>Galium palustre</i>	II	2-(2)-4	<i>Potamogeton berchtoldii</i>	I	3-(4)-7
<i>Iris pseudacorus</i>	II	2-(2)-4	<i>Juncus bulbosus</i>	I	2-(3)-3
<i>Ranunculus flammula</i>	II	2-(2)-3	<i>Lemna minor</i>	I	2-(2)-2
<i>Hippuris vulgaris</i>	II	2-(3)-4	<i>Potentilla palustris</i>	I	2-(2)-3
<i>Lythrum salicaria</i>	II	2-(2)-4	<i>Schoenus nigricans</i>	I	2-(2)-2
<i>Menyanthes trifoliata</i>	II	2-(3)-5	<i>Sparganium natans</i>	I	3-(4)-4
<i>Myosotis laxa</i>	II	2-(2)-4	<i>Plantago coronopus</i>	I	2-(2)-2
<i>Caltha palustris</i>	II	2-(2)-3	<i>Plantago lanceolata</i>	I	2-(2)-2
<i>Hydrocotyle vulgaris</i>	II	2-(2)-3	<i>Ranunculus acris</i>	I	2-(2)-2
<i>Samolus valerandi</i>	II	2-(3)-7	<i>Rumex conglomeratus</i>	I	2-(2)-2
<i>Cardamine pratensis</i>	I	2-(2)-3	<i>Salix cinerea</i>	I	2-(2)-3
<i>Carex nigra</i>	I	2-(2)-3	<i>Sparganium erectum</i>	I	2-(2)-2

#### Affinities

GHI: FS1 Reed and tall sedge swamps

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (56.4%)

EUNIS: C3.2111 Freshwater *Phragmites* beds / C3.2112 Inland saline water *Phragmites* beds

NVC: S4 *Phragmites australis* swamp and reed-beds (51.6%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 7.5    Reaction: 6.7    Wetness: 9.2    Fertility: 5.2    Salinity: 1.5

#### Conservation value

Stands may occur fringing lagoons corresponding to the priority EU HD Annex I habitat 1150 Lagoons\*. It is a relatively diverse swamp type (species/4 m<sup>2</sup> = 10.6, n = 18).

#### Management

Occasionally, *Phragmites* beds are cut for reeds, but those in this community may be too sparse for this to be practical. This vegetation may be threatened by eutrophication and drainage.

#### Key references

Brock, T., Frigge, P., van der Ster, H. (1978) A vegetation study of the pools and surrounding wetlands in the Dooaghry area, Co. Mayo, Republic of Ireland. (unpublished). Laboratory of Geobotany, Catholic University of Nijmegen, The Netherlands.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

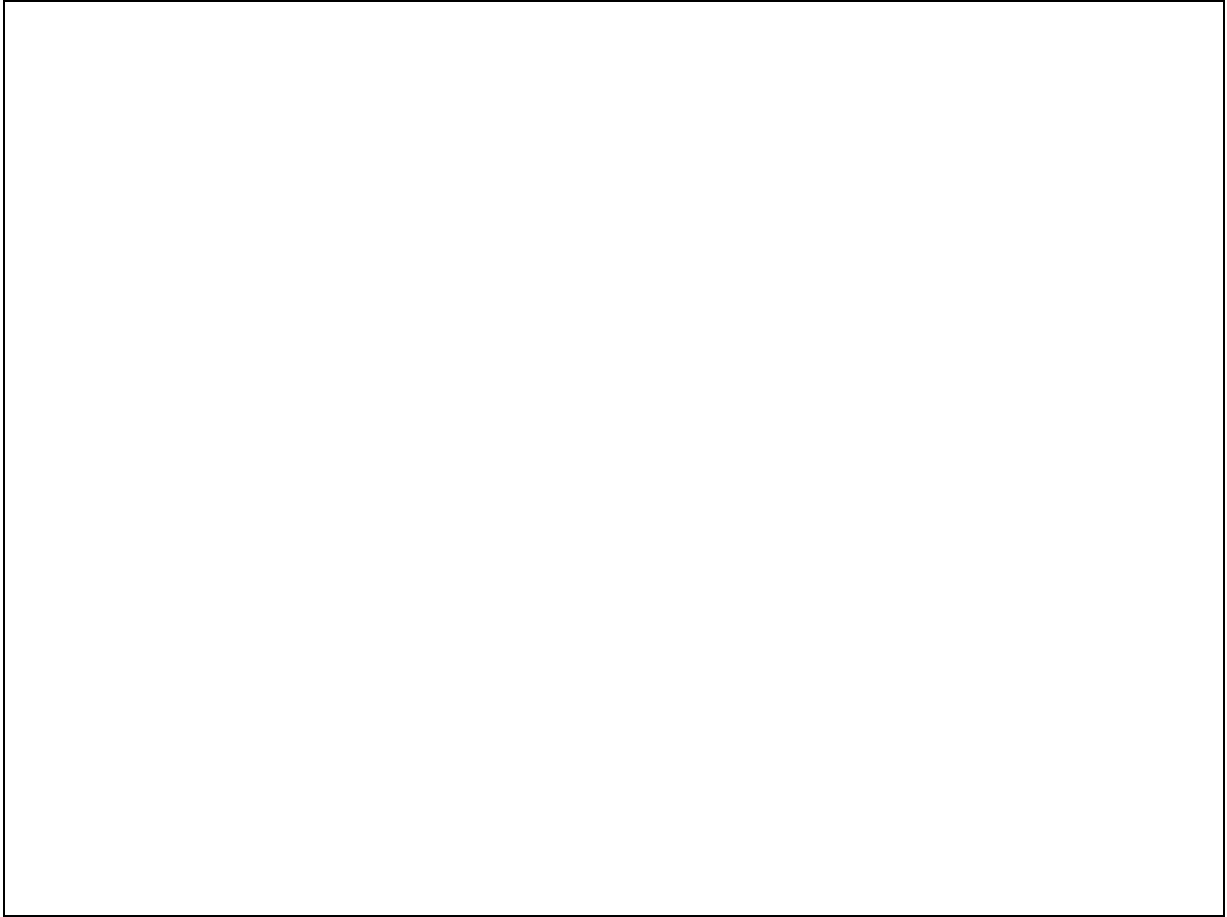


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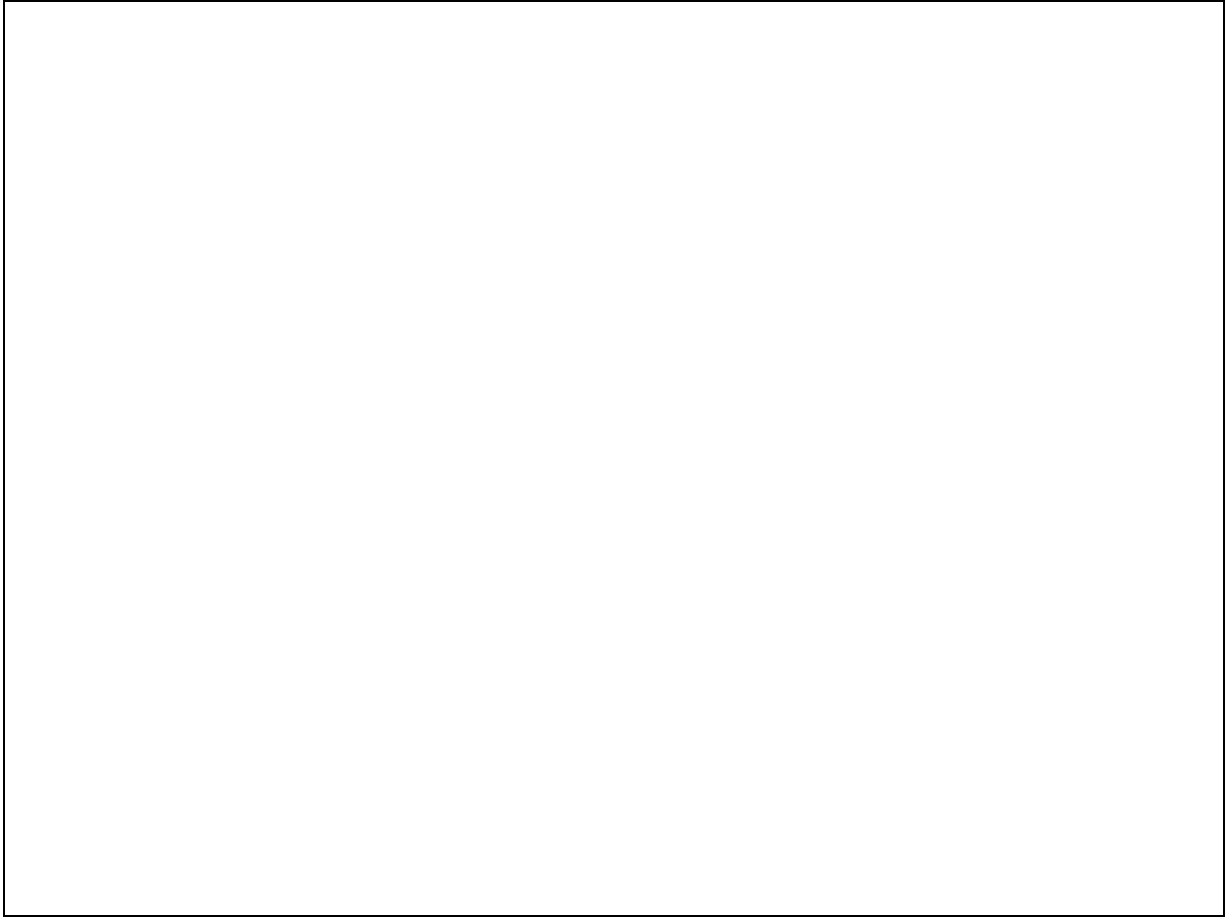


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<b>Scientific name</b>	<i>Carex rostrata</i> swamp
<b>Common name</b>	Bottle Sedge swamp
<b>Community code</b>	FW3C

### Vegetation

This community consists of glaucous, usually dense beds of *Carex rostrata*. No other species is more than occasional in the community as a whole, therefore further details on the vegetation are described under sub-communities.

### Ecology

This vegetation type occurs around the margins of mesotrophic and slightly dystrophic lakes and pools. Stands have also been recorded in turloughs. It may also be found in poor fens and in upland flushes amongst blanket bog and wet heath.

### Sub-communities

Two distinct sub-communities are described. In the *Phragmites australis* – *Equisetum fluviatile* sub-community (FW3Ci) of mesotrophic lakes, *Carex rostrata*, growing in standing water, may be the only species present. Some sparse cover of *Phragmites australis* or *Equisetum fluviatile* is occasional. Less often found are *Typha latifolia*, *Mentha aquatica*, *Menyanthes trifoliata* and *Schoenoplectus lacustris*. In the rarer *Sphagnum subsecundum* agg. – *Potamogeton polygonifolius* sub-community (FW3Cii) of acidic fens and flushes, *Carex rostrata* grows through a quaking carpet of *Sphagnum*.

### Similar communities

Sub-community FW3Ci is related to the FE2D *Carex rostrata* – *Menyanthes trifoliata* mire community. In that assemblage, however, *Menyanthes trifoliata* and other marsh and fen species, such as *Galium palustre*, *Potentilla palustris*, *Agrostis stolonifera* and *Hydrocotyle vulgaris*, are more likely to be recorded. Some confusion could arise between FW3Cii and the FE2E *Menyanthes trifoliata* – *Sphagnum recurvum* agg. mire, which also combines *Carex rostrata* with high *Sphagnum* cover, but in the present community *Menyanthes* and *Sphagnum recurvum* agg. are typically absent.

### Records and distribution

#### Number of records (all)

Clearly assigned:	76
Transitional:	16
Total:	92

#### Number of records (mapped)

2001-2020:	27
1986-2000:	43
1971-1985:	22
Pre-1971:	0
Total:	92

#### Number of hectads (by most recent time period)

2001-2020:	14
1986-2000:	16
1971-1985:	13
Pre-1971:	0
Total:	43

#### Number of hectads (records in each time period)

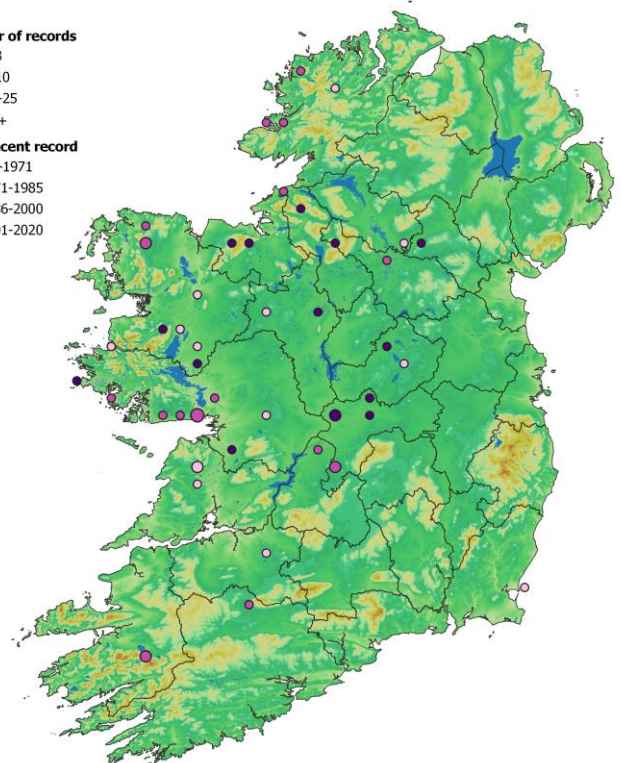
2001-2020:	14
1986-2000:	16
1971-1985:	16
Pre-1971:	0

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synopsis table (n = 68)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Carex rostrata</i>	V	3-(7)-10	<i>Calliergonella cuspidata</i>	I	3-(7)-8
<i>Equisetum fluviatile</i>	II	2-(3)-8	<i>Cardamine pratensis</i>	I	+- (2)-3
<i>Phragmites australis</i>	II	2-(2)-5	<i>Eleocharis palustris</i>	I	2-(3)-3
<i>Menyanthes trifoliata</i>	II	2-(3)-5	<i>Narthecium ossifragum</i>	I	3-(3)-5
<i>Typha latifolia</i>	II	2-(4)-7	<i>Nymphaea alba</i>	I	2-(4)-5
<i>Eriophorum angustifolium</i>	II	2-(3)-5	<i>Potentilla palustris</i>	I	2-(2)-5
<i>Molinia caerulea</i>	I	1-(2)-7	<i>Ranunculus flammula</i>	I	3-(3)-3
<i>Potamogeton polygonifolius</i>	I	2-(3)-8	<i>Alisma plantago-aquatica</i>	I	2-(3)-6
<i>Mentha aquatica</i>	I	1-(2)-7	<i>Caltha palustris</i>	I	1-(2)-2
<i>Schoenoplectus lacustris</i>	I	2-(2)-7	<i>Carex echinata</i>	I	1-(3)-5
<i>Sphagnum subsecundum</i> agg.	I	2-(5)-10	<i>Sparganium erectum</i>	I	2-(2)-4
<i>Agrostis stolonifera</i>	I	2-(2)-4	<i>Warnstorfia fluitans</i>	I	3-(4)-4
<i>Carex viridula</i>	I	2-(5)-7	<i>Eleocharis multicaulis</i>	I	3-(5)-5
<i>Carex nigra</i>	I	2-(4)-7	<i>Hydrocotyle vulgaris</i>	I	2-(3)-3
<i>Hippuris vulgaris</i>	I	2-(3)-4	<i>Hypericum elodes</i>	I	7-(7)-7
<i>Juncus articulatus</i>	I	2-(4)-5	<i>Juncus acutiflorus</i>	I	+- (1)-2
<i>Juncus bulbosus</i>	I	+- (2)-3	<i>Lemna trisulca</i>	I	4-(5)-7
<i>Lemna minor</i>	I	2-(2)-3	<i>Littorella uniflora</i>	I	2-(5)-5
<i>Potamogeton natans</i>	I	2-(3)-4	<i>Rorippa nast.-aquaticum</i> agg.	I	2-(2)-2
<i>Sphagnum cuspidatum</i>	I	3-(9)-9	<i>Utricularia minor</i>	I	2-(5)-5

#### Affinities

GHI: FS1 Reed and large sedge swamps / PF3 Transition mire and quaking bog

ZM: PA Scheuchzerio palustris-Caricetea fuscae Tx. 1937 (35.3%) / OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (26.5%) / IA Alnetea glutinosae Br.-Bl. et Tx. ex Westhoff et al. 1946 (25.0%)

EUNIS: C3.29 Water-fringing large sedge communities / D2.331 Acidocline bottle sedge quaking mires

NVC: S9 *Carex rostrata* swamp (61.0%)

Annex I:7140 Transition mires

#### Proxy environmental data

Light: 7.8 Reaction: 4.4 Wetness: 9.8 Fertility: 2.6 Salinity: 0.0

#### Conservation value

This is a swamp community of medium species richness in terms of plants (species/4 m<sup>2</sup> = 7.8, n = 36). Some examples of sub-community FW3Ci form part of the priority EU HD Annex I habitat 3180 Turloughs\*. Stands of FW3Cii are likely to correspond to habitat 7140 Transition mires. In addition, the EU HD Annex II species Desmoulin's whorl snail (*Vertigo moulinsiana*) has been recorded from multiple stands of this vegetation.

#### Management

This community is typically unmanaged. Threats include eutrophication and drainage.

#### Key references

Conaghan, J. (2000) An assessment of the conservation value of blanket bog landscape to the west of Galway city. (unpublished). The Heritage Council, Kilkenny

Long, M.P., Brophy, J.T. (2019) Monitoring of sites and habitat for three Annex II species of whorl snail (*Vertigo*). *Irish Wildlife Manuals* No. 104. National Parks and Wildlife Service, Dublin.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin





Photo 1. FW3C *Carex rostrata* swamp, Fin Lough, Offaly (J. Brophy, November 2014)



Photo 2. FW3C *Carex rostrata* swamp, Fin Lough, Offaly (J. Brophy, November 2014)



<b>Scientific name</b>	<i>Schoenoplectus lacustris</i> swamp
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<b>Common name</b>	Common Club-rush swamp
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<b>Community code</b>	FW3D
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### Vegetation

This is species-poor swamp community in which *Schoenoplectus lacustris* typically dominates, forming dense beds. No other species is frequent. *Phragmites australis* occurs occasionally and can be abundant, less often the beds will contain some stems of *Equisetum fluviatile* or *Sparganium erectum*. Floating on the water may be found leaves of *Nuphar lutea* or *Potamogeton natans*, or perhaps, some *Lemna minor*.

### Ecology

This community has been recorded predominantly from mesotrophic lakes and pools. Less frequently it has been found in oligotrophic lakes and in rivers.

### Sub-communities

No sub-communities are currently described.

### Similar communities

This community is related to FW2G *Schoenoplectus lacustris* – *Sparganium erectum* swamp. In that riverine assemblage, however, *Schoenoplectus lacustris* is less dominant, and *Sparganium erectum*, *Apium nodiflorum* and *Phalaris arundinacea* are more frequent.

### Records and distribution

#### Number of records (all)

Clearly assigned:	52
Transitional:	3
Total:	55

#### Number of records (mapped)

2001-2020:	11
1986-2000:	31
1971-1985:	7
Pre-1971:	4
Total:	53

#### Number of hectads (by most recent time period)

2001-2020:	6
1986-2000:	6
1971-1985:	4
Pre-1971:	0
Total:	16

#### Number of hectads (records in each time period)

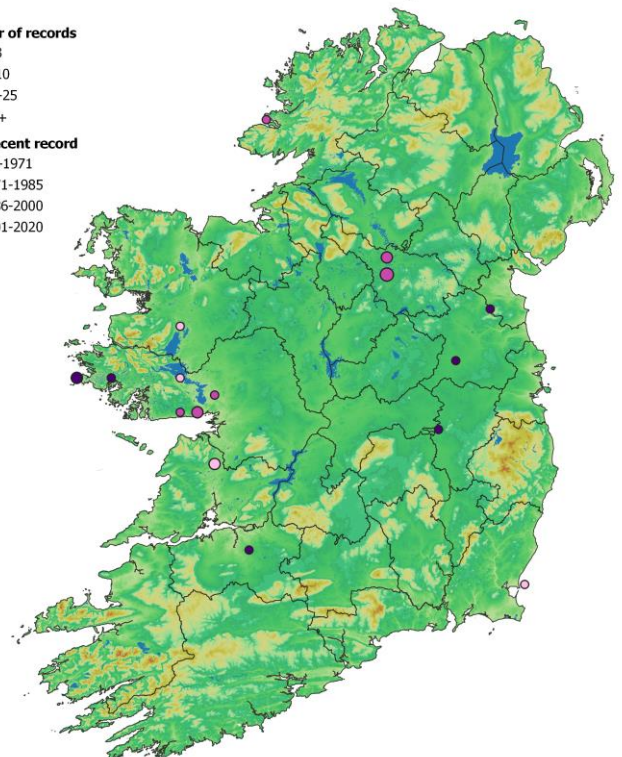
2001-2020:	6
1986-2000:	7
1971-1985:	7
Pre-1971:	1

#### Number of records

- 1-3
- 4-10
- 11-25
- 26+

#### Most recent record

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synopsis table (n = 49)

Species	Frequency	Cover		Species	Frequency	Cover	
	(from I-V)	min	(med) max		(from I-V)	min	(med) max
<i>Schoenoplectus lacustris</i>	V	4-	(7)-10	<i>Fontinalis antipyretica</i>	I	+-	(+)-+
<i>Phragmites australis</i>	II	2-	(3)-5	<i>Iris pseudacorus</i>	I	1-	(3)-3
<i>Nuphar lutea</i>	II	2-	(5)-7	<i>Lemna trisulca</i>	I	+-	(1)-2
<i>Potamogeton natans</i>	II	+-	(3)-5	<i>Phalaris arundinacea</i>	I	1-	(3)-3
<i>Equisetum fluviatile</i>	I	2-	(3)-8	<i>Potamogeton gramineus</i>	I	2-	(3)-3
<i>Lemna minor</i>	I	+-	(3)-3	<i>Rumex hydrolapathum</i>	I	8-	(8)-8
<i>Sparganium erectum</i>	I	+-	(3)-5	<i>Potamogeton lucens</i>	I	2-	(2)-2
<i>Callitriche stagnalis</i>	I	+-	(+)-2	<i>Potamogeton pectinatus</i>	I	2-	(2)-2
<i>Eriocaulon aquaticum</i>	I	3-	(3)-7	<i>Potamogeton perfoliatus</i>	I	2-	(2)-2
<i>Juncus bulbosus</i>	I	3-	(4)-7	<i>Potamogeton pusillus</i>	I	+-	(+)-+
<i>Mentha aquatica</i>	I	+-	(2)-3	<i>Potentilla palustris</i>	I	5-	(5)-5
<i>Menyanthes trifoliata</i>	I	3-	(3)-3	<i>Ranunculus flammula</i>	I	2-	(2)-2
<i>Myriophyllum alterniflorum</i>	I	3-	(3)-8	<i>Ranunculus peltatus</i>	I	1-	(1)-1
<i>Persicaria amphibia</i>	I	3-	(7)-7	<i>Ranunculus trichophyllus</i>	I	2-	(2)-2
<i>Sparganium angustifolium</i>	I	3-	(3)-5	<i>Rorippa nast.-aquaticum</i> agg.	I	+-	(+)-+
<i>Typha latifolia</i>	I	2-	(3)-5	<i>Scorpidium scorpioides</i>	I	2-	(2)-2
<i>Alisma plantago-aquatica</i>	I	2-	(4)-5	<i>Sparganium emersum</i>	I	3-	(3)-3
<i>Baldellia ranunculoides</i>	I	2-	(3)-3	<i>Spartina</i> agg.	I	3-	(3)-3
<i>Berula erecta</i>	I	+-	(5)-7	<i>Sphagnum squarrosum</i>	I	7-	(7)-7
<i>Eleocharis palustris</i>	I	2-	(3)-3	<i>Utricularia australis/vulgaris</i>	I	3-	(3)-3

#### Affinities

GHI: FS1 Reed and large sedge swamps

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (83.7%)

EUNIS: C3.22 *Scirpus lacustris* beds

NVC: S8a *Scirpus lacustris* ssp. *lacustris* swamp *Scirpus lacustris* ssp. *lacustris* sub-community (76.1%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 7.8 Reaction: 6.7 Wetness: 10.8 Fertility: 5.7 Salinity: 0.1

#### Conservation value

This is a relatively species-poor community (species/4 m<sup>2</sup> = 3.8, n = 28). *Eriocaulon aquaticum* can occur here however and has a strictly limited national distribution.

#### Management

This community is typically unmanaged, although traditionally some lake beds would have been cut for rushwork. Threats include eutrophication and drainage.

#### Key references

Conaghan, J. (1999) The vegetation, ecology and conservation of the Lough Oughter lake system, Co. Cavan. (unpublished). The Heritage Council, Kilkenny.

Conaghan, J. (2000) An assessment of the conservation value of blanket bog landscape to the west of Galway city. (unpublished). The Heritage Council, Kilkenny

van Groenendael, J., Hochstenbach, S.M.H., van Mansfeld, M., Roozen, A.J.M., Westhoff, V. (1982) The influence of the sea on the vegetation of lakes in southwest Connemara. *Journal of Life Sciences - Royal Dublin Society* 3, 221-242.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

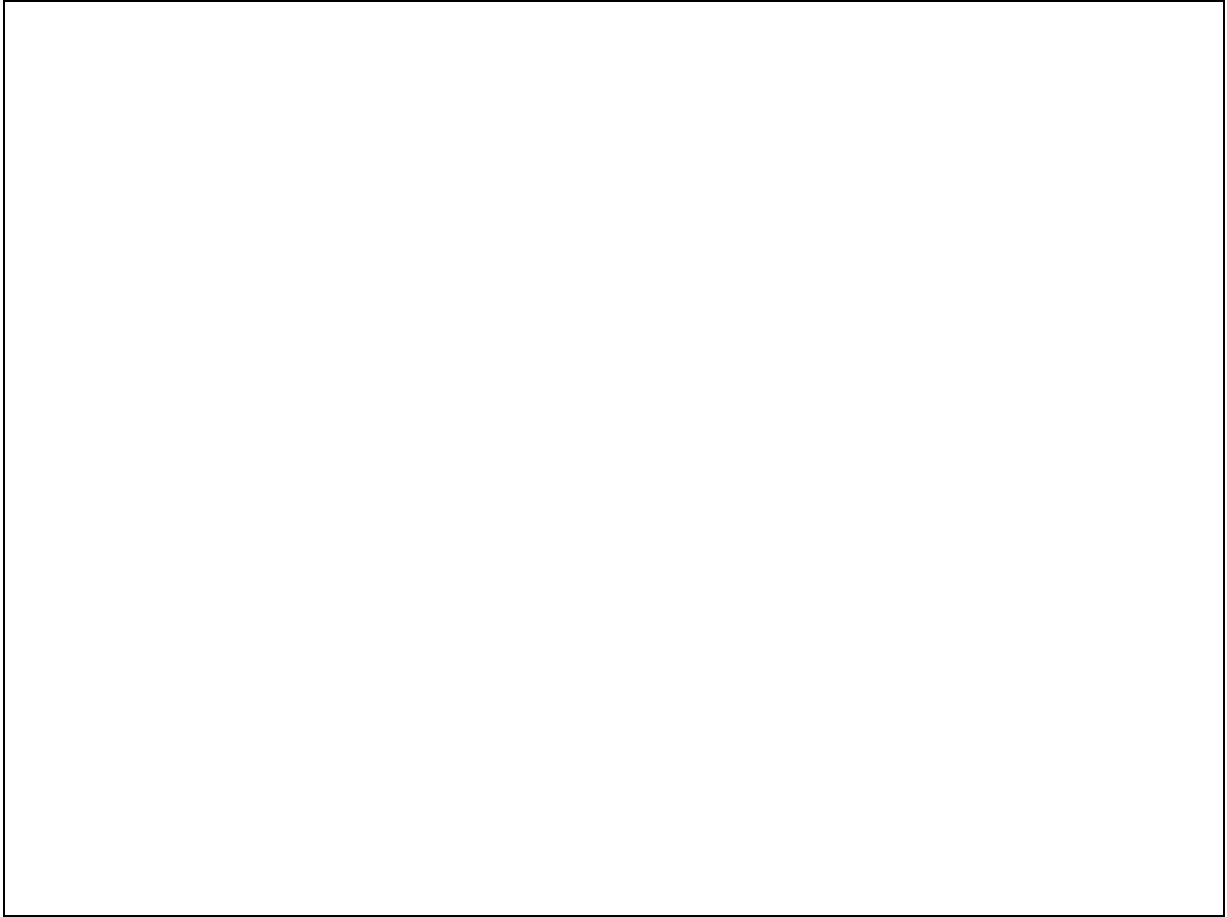


Photo required

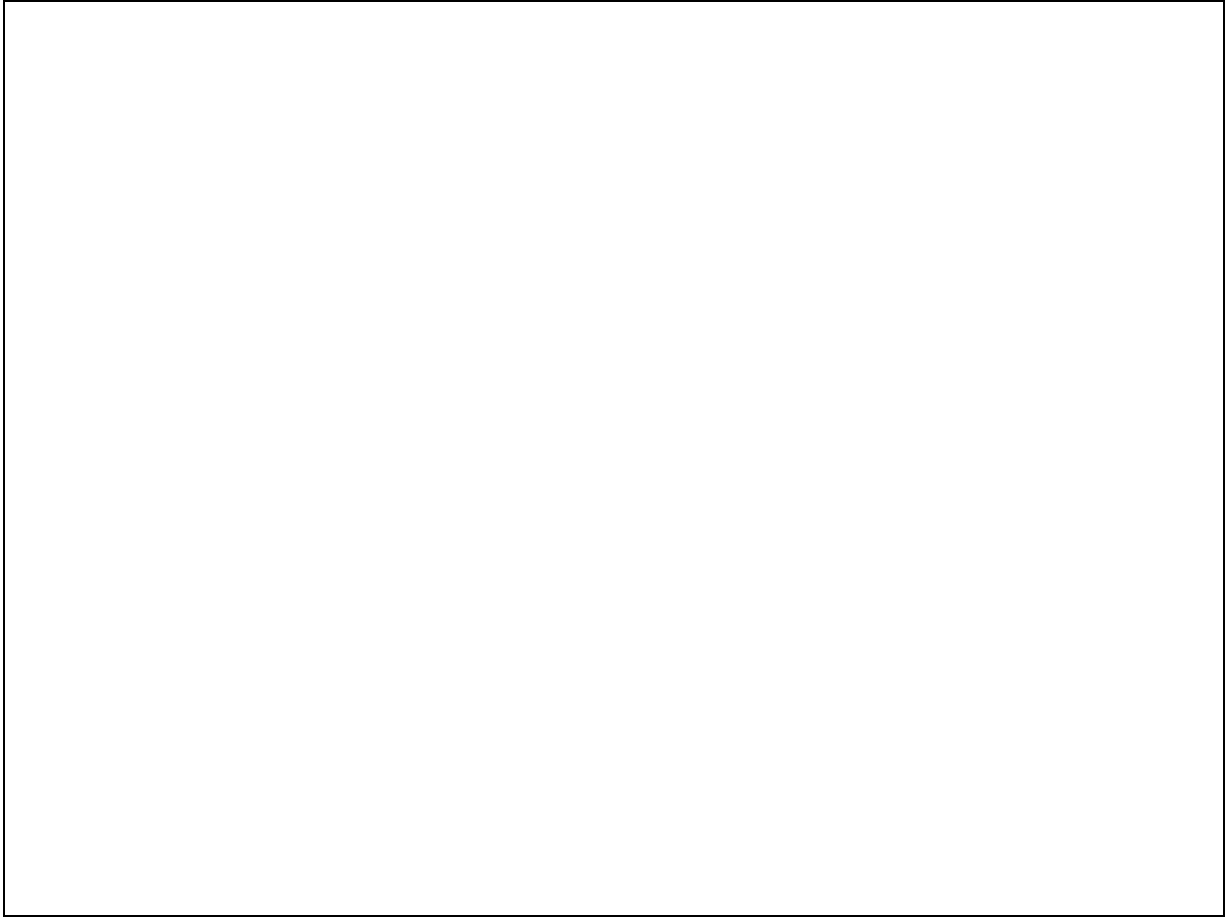


Photo required



<b>Scientific name</b>	<i>Phragmites australis</i> – <i>Equisetum fluviatile</i> swamp
<b>Common name</b>	Common Reed – Water Horsetail swamp
<b>Community code</b>	FW3E

### Vegetation

These are dense reed beds dominated by *Phragmites australis* which is joined only rarely by other tall swamp species such *Typha latifolia* and *Sparganium erectum*. *Equisetum fluviatile* frequently occurs in an understory, where occasionally one may find *Mentha aquatica*, *Menyanthes trifoliata* or *Agrostis stolonifera*.

### Ecology

This swamp community is found in fairly basic and mildly eutrophic waters fringing lakes and lagoons.

### Sub-communities

No sub-communities are currently described.

### Similar communities

*Phragmites* is found, perhaps unsurprisingly, in most of the communities in the FW3 *Phragmites australis* – *Cladium mariscus* group. It seldom, however, dominates the vegetation as strongly as it does here in this community

### Records and distribution

#### Number of records (all)

Clearly assigned:	156
Transitional:	9
Total:	165

#### Number of records (mapped)

2001-2020:	27
1986-2000:	102
1971-1985:	35
Pre-1971:	1
Total:	165

#### Number of hectads (by most recent time period)

2001-2020:	7
1986-2000:	32
1971-1985:	8
Pre-1971:	1
Total:	48

#### Number of hectads (records in each time period)

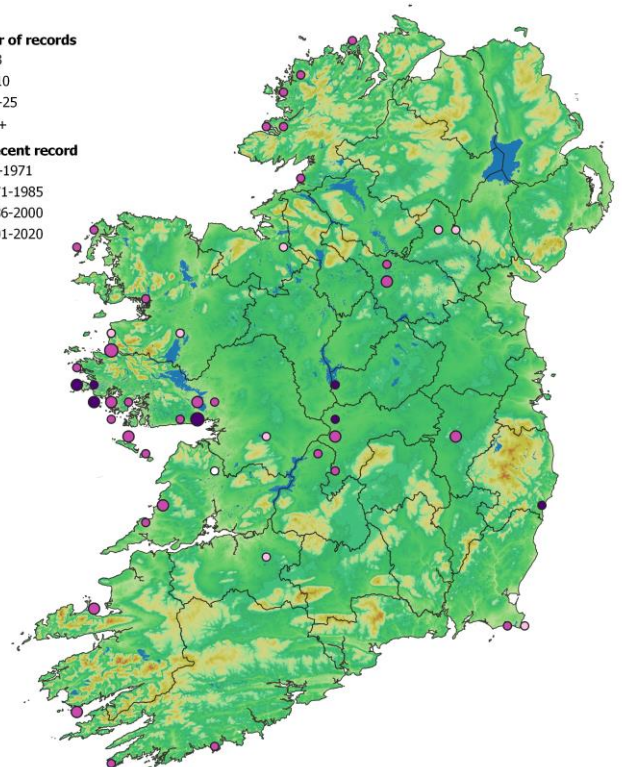
2001-2020:	7
1986-2000:	35
1971-1985:	12
Pre-1971:	1

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



**Synoptic table (n = 114)**

Species	Frequency	Cover	Species	Frequency	Cover
	(from I-V)	min (med) max		(from I-V)	min (med) max
<i>Phragmites australis</i>	V	5-(8)-10	<i>Caltha palustris</i>	I	+-(3)-3
<i>Equisetum fluviatile</i>	III	+-(3)-7	<i>Hippuris vulgaris</i>	I	2-(2)-4
<i>Mentha aquatica</i>	II	+-(2)-7	<i>Schoenoplectus tabernaemontani</i>	I	3-(3)-5
<i>Menyanthes trifoliata</i>	II	2-(4)-9	<i>Calystegia sepium</i>	I	+-(5)-8
<i>Agrostis stolonifera</i>	II	2-(3)-9	<i>Carex lasiocarpa</i>	I	3-(5)-8
<i>Carex rostrata</i>	II	+-(3)-7	<i>Filipendula ulmaria</i>	I	+-(2)-8
<i>Typha latifolia</i>	I	1-(2)-5	<i>Juncus bulbosus</i>	I	2-(3)-8
<i>Galium palustre</i>	I	+-(2)-7	<i>Potamogeton polygonifolius</i>	I	2-(3)-5
<i>Lemna minor</i>	I	2-(3)-7	<i>Potentilla palustris</i>	I	1-(2)-8
<i>Sparganium erectum</i>	I	+-(2)-4	<i>Carex nigra</i>	I	+-(2)-3
<i>Calliergonella cuspidata</i>	I	+-(4)-10	<i>Lythrum salicaria</i>	I	+-(3)-5
<i>Epilobium hirsutum</i>	I	+-(4)-8	<i>Potamogeton natans</i>	I	2-(3)-3
<i>Lycopus europaeus</i>	I	2-(3)-7	<i>Berula erecta</i>	I	2-(8)-8
<i>Cardamine pratensis</i>	I	2-(3)-5	<i>Brachythecium rutabulum</i>	I	2-(3)-5
<i>Iris pseudacorus</i>	I	+-(3)-3	<i>Kindbergia praelonga</i>	I	2-(3)-5
<i>Schoenoplectus lacustris</i>	I	+-(2)-3	<i>Ranunculus lingua</i>	I	2-(2)-3
<i>Bolboschoenus maritimus</i>	I	2-(3)-7	<i>Rubus fruticosus</i> agg.	I	1-(5)-7
<i>Epilobium palustre</i>	I	+-(2)-3	<i>Succisa pratensis</i>	I	2-(3)-3
<i>Hydrocotyle vulgaris</i>	I	1-(2)-5	<i>Utricularia australis/vulgaris</i>	I	2-(4)-7
<i>Apium nodiflorum</i>	I	2-(3)-7	<i>Valeriana officinalis</i>	I	+-(1)-2

**Affinities**

GHI: FS1 Reed and tall sedge swamps

ZM: IA Alnetea glutinosae Br.-Bl. et Tx. ex Westhoff et al. 1946 (49.1%) / OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (45.6%)

EUNIS: C3.2111 Freshwater *Phragmites* beds

NVC: S4 *Phragmites australis* swamp and reed-beds (56.3%)

Annex I: No significant correspondence

**Proxy environmental data**

Light: 7.1 Reaction: 6.7 Wetness: 9.7 Fertility: 5.6 Salinity: 1.5

**Conservation value**

This is a swamp community of medium species richness (species/4 m<sup>2</sup> = 6.9, n = 75). Stands of FW3E may occur fringing lagoons corresponding to the priority EU HD Annex I habitat 1150 Lagoons\*.

**Management**

These reeds beds maybe exploited locally on a small scale for reed harvesting. Threats to this community include eutrophication and drainage.

**Key references**

Brock, T., Frigge, P., van der Ster, H. (1978) A vegetation study of the pools and surrounding wetlands in the Dooaghry area, Co. Mayo, Republic of Ireland. (unpublished). Laboratory of Geobotany, Catholic University of Nijmegen, The Netherlands.

Crawford, I., Bleasdale, A., Conaghan, J. (1998) BIOMAR survey of Irish machair sites 1996. Volume 2: Plant communities. *Irish Wildlife Manuals* No. 4. Dúchas, The Heritage Service, Dublin.

Conaghan, J. (1999) The vegetation, ecology and conservation of the Lough Oughter lake system, Co. Cavan. (unpublished). The Heritage Council, Kilkenny.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin





Photo 1. FW3E *Phragmites australis* – *Equisetum fluviatile* swamp, Menlough, Galway (J. Martin, September 2014)



Photo 2. FW3E *Phragmites australis* – *Equisetum fluviatile* swamp, Menlough, Galway (F. O'Neill, August 2014)



<b>Scientific name</b>	<i>Filipendula ulmaria</i> – <i>Valeriana officinalis</i> tall-herb swamp
<b>Common name</b>	Meadowsweet – Valerian tall-herb swamp
<b>Community code</b>	FW3F

### Vegetation

This is a rather variable assemblage of swampy ground which can be dominated by number of different species but plentiful *Filipendula ulmaria* is a constant feature. It is frequently joined by the tall forb species *Valeriana officinalis* and less often by *Iris pseudacorus*, *Lythrum salicaria*, *Lysimachia vulgaris* or *Angelica sylvestris*. In addition several graminoids may be present. *Phragmites australis*, *Carex disticha* and *Agrostis stolonifera* are frequent and the following species are all occasional: *Festuca arundinacea*, *Phalaris arundinacea*, *Molinia caerulea*, *Festuca rubra*, *Juncus effusus* and *Holcus lanatus*. *Equisetum fluviatile* occurs on the damper ground. Through the diverse flora may be found clambering stems of *Vicia cracca*, *Galium palustre* or *Lathyrus pratensis*. There may be a sparse bryophyte layer with *Calliergonella cuspidata* the most frequent species.

### Ecology

This community is likely to be found on periodically inundated, fairly fertile and base-rich ground close to lakes and rivers.

### Sub-communities

No sub-communities are currently described.

### Similar communities

The abundance of *Filipendula ulmaria* and other tall forb species set this community apart from the others in group FW3. The marsh-grassland communities, GL1B and GL2A, also exhibit an abundance of *Filipendula*, but they are of distinctly different structure, lacking the taller species commonly found here such as *Phragmites australis*.

### Records and distribution

#### Number of records (all)

Clearly assigned:	194
Transitional:	66
Total:	260

#### Number of records (mapped)

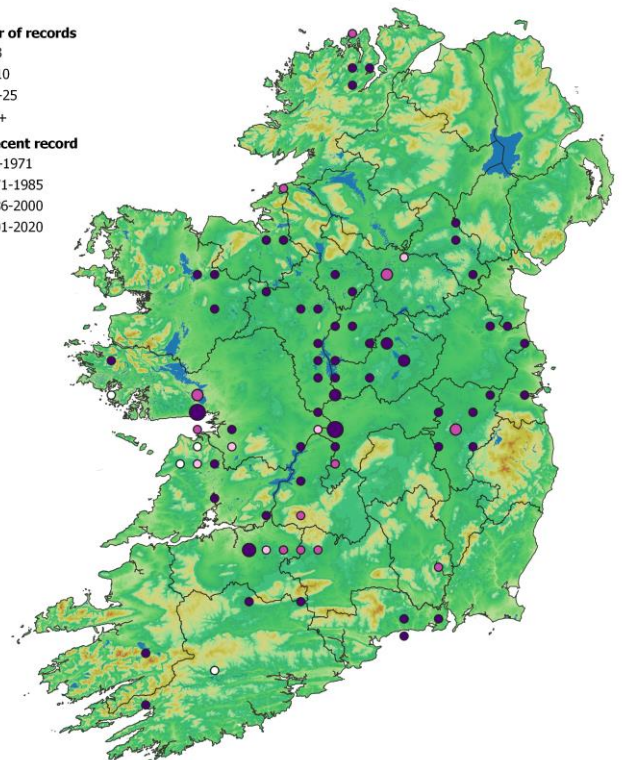
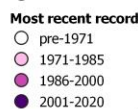
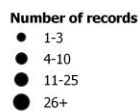
2001-2020:	117
1986-2000:	116
1971-1985:	17
Pre-1971:	6
Total:	256

#### Number of hectads (by most recent time period)

2001-2020:	56
1986-2000:	12
1971-1985:	5
Pre-1971:	4
Total:	77

#### Number of hectads (records in each time period)

2001-2020:	56
1986-2000:	18
1971-1985:	8
Pre-1971:	4



**Synoptic table (n = 144)**

Species	Frequency		Cover		Species	Frequency		Cover	
	(from I-V)		min	(med) max		(from I-V)		min	(med) max
<i>Filipendula ulmaria</i>	V		2-	(6)-10	<i>Angelica sylvestris</i>	I		+-	(3)-4
<i>Agrostis stolonifera</i>	III		+-	(3)-8	<i>Ranunculus repens</i>	I		+-	(3)-6
<i>Carex disticha</i>	III		2-	(4)-8	<i>Mentha aquatica</i>	I		+-	(3)-7
<i>Phragmites australis</i>	III		1-	(3)-8	<i>Carex lasiocarpa</i>	I		2-	(3)-5
<i>Valeriana officinalis</i>	III		1-	(4)-7	<i>Rumex acetosa</i>	I		+-	(2)-5
<i>Equisetum fluviatile</i>	III		+-	(3)-7	<i>Calliergonella cuspidata</i>	I		1-	(3)-8
<i>Vicia cracca</i>	II		+-	(3)-5	<i>Phleum pratense</i>	I		2-	(3)-8
<i>Festuca arundinacea</i>	II		1-	(5)-7	<i>Potentilla erecta</i>	I		+-	(3)-4
<i>Galium palustre</i>	II		+-	(3)-5	<i>Epilobium hirsutum</i>	I		3-	(4)-8
<i>Holcus lanatus</i>	II		1-	(3)-5	<i>Kindbergia praelonga</i>	I		+-	(2)-4
<i>Lysimachia vulgaris</i>	II		+-	(4)-5	<i>Anthoxanthum odoratum</i>	I		+-	(3)-5
<i>Lythrum salicaria</i>	II		+-	(3)-5	<i>Deschampsia cespitosa</i>	I		1-	(4)-7
<i>Phalaris arundinacea</i>	II		+-	(5)-10	<i>Carex panicea</i>	I		1-	(3)-5
<i>Lathyrus pratensis</i>	II		+-	(3)-5	<i>Dactylis glomerata</i>	I		1-	(4)-7
<i>Festuca rubra</i>	II		+-	(3)-7	<i>Juncus subnodulosus</i>	I		+-	(3)-7
<i>Arrhenatherum elatius</i>	II		+-	(4)-7	<i>Poa trivialis</i>	I		2-	(3)-6
<i>Iris pseudacorus</i>	II		+-	(3)-6	<i>Potentilla palustris</i>	I		+-	(3)-6
<i>Juncus effusus</i>	II		1-	(3)-7	<i>Carex nigra</i>	I		1-	(4)-7
<i>Molinia caerulea</i>	II		2-	(5)-8	<i>Rubus fruticosus</i> agg.	I		+-	(3)-7
<i>Poa pratensis/humilis</i>	I		+-	(3)-6	<i>Calystegia sepium</i>	I		+-	(4)-10

**Affinities**

GHI: FS2 Tall-herb swamps

ZM: CM Molinio-Arrhenatheretea Tx. 1937 (65.3%)

EUNIS: E5.412 Western nemoral river bank tall-herb communities dominated by *Filipendula*

NVC: M27 *Filipendula ulmaria*-*Angelica sylvestris* mire (53.5%)

Annex I:6430 Hydrophilous tall-herb swamp

**Proxy environmental data**

Light: 7.0 Reaction: 6.2 Wetness: 7.6 Fertility: 5.2 Salinity: 0.3

**Conservation value**

This is a species-rich community compared to other swamp types (species/4 m<sup>2</sup> = 13.1, n = 117), being transitional to wet grassland. Examples of this vegetation are likely to correspond with EU HD Annex I habitat 6430 Hydrophilous tall herb.

**Management**

Most of these stands are probably unmanaged but some drier types may be used for rough grazing. They are threatened by eutrophication of nearby waters, drainage and agricultural improvement.

**Key references**

O'Neill, F.H., Martin, J.R., Devaney, F.M., Perrin, P.M. (2013) The Irish Semi-natural Grasslands Survey 2007-2012. *Irish Wildlife Manuals* No. 78. National Parks and Wildlife Service, Dublin.

Mooney, E. (1991) A phytosociological and palaeoecological study of the wetlands of the Lower Corrib Basin, Co. Galway, Ireland. (Ph.D. thesis). National University of Ireland Galway.

Regan, S., Conaghan, J. (2016) Eco-hydrological investigation of Tory Hill fen SAC, Co. Limerick, Office of Public Works, Trim.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin





Photo 1. FW3F *Filipendula ulmaria* – *Valeriana officinalis* tall-herb swamp, River Corrib, Dangan, Galway  
(F. O'Neill, August 2014)



Photo 2. FW3F *Filipendula ulmaria* – *Valeriana officinalis* tall-herb swamp, River Corrib, Newcastle, Galway  
(J. Martin, August 2014)



<b>Scientific name</b>	<i>Equisetum fluviatile</i> – <i>Eleocharis palustris</i> swamp
<b>Common name</b>	Water Horsetail – Common Spike-rush swamp
<b>Community code</b>	FW3G

### Vegetation

The community comprises rather variable stands united by the presence of *Equisetum fluviatile*, whose cover tends to be rather low, due in part to the narrow and erect nature of the plant, but nevertheless this is the sole constant species. Only *Eleocharis palustris* is also frequent here. Occasionally, one may only find some *Sparganium erectum*, *Caltha palustris*, *Persicaria amphibia* or *Mentha aquatica* growing here and these can each be plentiful. Floating patches of *Lemna minor* may also occur amongst the horsetails.

### Ecology

This swamp community is found in fairly basic and mildly eutrophic waters fringing lakes.

### Sub-communities

No sub-communities are currently described.

### Similar communities

The high frequency of *Equisetum fluviatile* and scarcity of *Phragmites australis* help separate this vegetation type from the other communities in group FW3. From the FE2A *Equisetum fluviatile* – *Menyanthes trifoliata* mire the present community differs in the lesser presence of *Menyanthes trifoliata* and *Carex rostrata*.

### Records and distribution

#### Number of records (all)

Clearly assigned:	62
Transitional:	36
Total:	98

#### Number of records (mapped)

2001-2020:	23
1986-2000:	40
1971-1985:	30
Pre-1971:	4
Total:	97

#### Number of hectads (by most recent time period)

2001-2020:	15
1986-2000:	16
1971-1985:	7
Pre-1971:	3
Total:	41

#### Number of hectads (records in each time period)

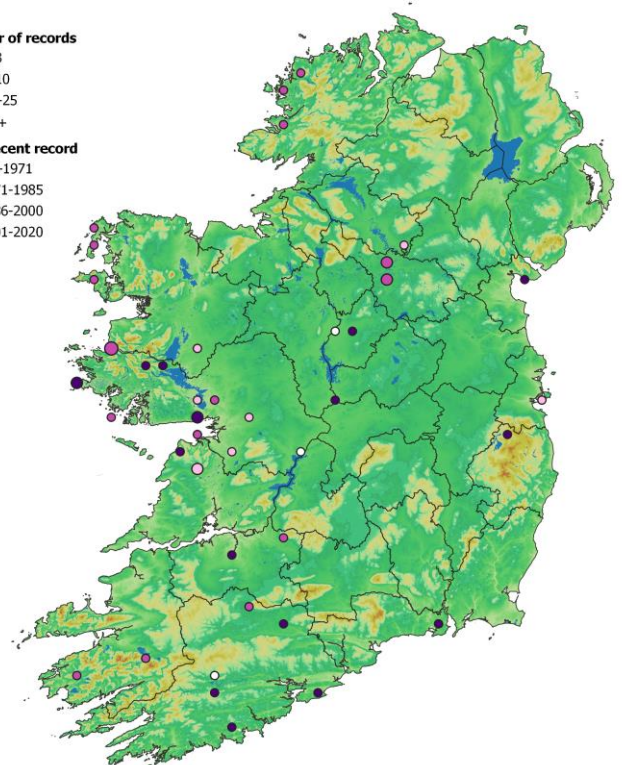
2001-2020:	15
1986-2000:	17
1971-1985:	9
Pre-1971:	3

#### Number of records

- 1-3
- 4-10
- 11-25
- 26+

#### Most recent record

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synoptic table (n = 52)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Equisetum fluviatile</i>	V	2-(3)-8	<i>Carex vesicaria</i>	I	3-(6)-9
<i>Eleocharis palustris</i>	III	2-(3)-7	<i>Hippuris vulgaris</i>	I	2-(2)-5
<i>Sparganium erectum</i>	II	2-(4)-9	<i>Hydrocotyle vulgaris</i>	I	2-(2)-3
<i>Caltha palustris</i>	II	1-(3)-5	<i>Iris pseudacorus</i>	I	2-(4)-8
<i>Persicaria amphibia</i>	II	2-(5)-8	<i>Elodea canadensis</i>	I	2-(2)-3
<i>Mentha aquatica</i>	II	2-(3)-5	<i>Potamogeton pectinatus</i>	I	2-(3)-3
<i>Carex nigra</i>	II	2-(3)-7	<i>Utricularia australis/vulgaris</i>	I	2-(3)-5
<i>Phragmites australis</i>	II	2-(3)-5	<i>Galium palustre</i>	I	2-(2)-8
<i>Agrostis stolonifera</i>	I	+(2)-5	<i>Leptodictyum riparium</i>	I	2-(3)-4
<i>Lemna minor</i>	I	1-(2)-5	<i>Baldellia ranunculoides</i>	I	3-(3)-3
<i>Menyanthes trifoliata</i>	I	2-(2)-3	<i>Berula erecta</i>	I	5-(6)-8
<i>Typha latifolia</i>	I	1-(3)-5	<i>Cicuta virosa</i>	I	3-(3)-5
<i>Alisma plantago-aquatica</i>	I	2-(3)-5	<i>Lemna trisulca</i>	I	3-(3)-5
<i>Lythrum salicaria</i>	I	2-(2)-5	<i>Potentilla palustris</i>	I	2-(3)-5
<i>Myriophyllum spicatum</i>	I	2-(3)-9	<i>Ranunculus aquatilis</i>	I	2-(8)-9
<i>Potamogeton bertholdii</i>	I	2-(3)-8	<i>Ranunculus flammula</i>	I	2-(3)-3
<i>Potamogeton natans</i>	I	2-(2)-3	<i>Potentilla anserina</i>	I	2-(3)-3
<i>Schoenoplectus lacustris</i>	I	2-(3)-3	<i>Ranunculus lingua</i>	I	2-(4)-4
<i>Apium nodiflorum</i>	I	2-(3)-3	<i>Rumex hydrolapathum</i>	I	2-(4)-5
<i>Carex rostrata</i>	I	2-(3)-4	<i>Vicia cracca</i>	I	+(3)-3

#### Affinities

GHI: FS1 Reed and large sedge swamps

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (55.8%)

EUNIS: C3.247 Water horsetail beds

NVC: S8 *Scirpus lacustris* ssp. *lacustris* swamp (44.6%), but also S10a *Equisetum fluviatile* swamp *Equisetum fluviatile* sub-community (41.7%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 7.4 Reaction: 6.1 Wetness: 9.8 Fertility: 5.0 Salinity: 0.2

#### Conservation value

This is a swamp community of medium species richness (species/4 m<sup>2</sup> = 7.3, n = 27) and is a naturally occurring feature of lake margins.

#### Management

These swamp stands are essentially unmanaged. The main threats to them are through lake eutrophication and drainage.

#### Key references

Brock, T., Frigge, P., van der Ster, H. (1978) A vegetation study of the pools and surrounding wetlands in the Dooaghry area, Co. Mayo, Republic of Ireland. (unpublished). Laboratory of Geobotany, Catholic University of Nijmegen, The Netherlands.

Conaghan, J. (1999) The vegetation, ecology and conservation of the Lough Oughter lake system, Co. Cavan. (unpublished). The Heritage Council, Kilkenny.

Mooney, E. (1991) A phytosociological and palaeoecological study of the wetlands of the Lower Corrib Basin, Co. Galway, Ireland. (Ph.D. thesis). National University of Ireland Galway.

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**Synopsis author(s):** P.M. Perrin

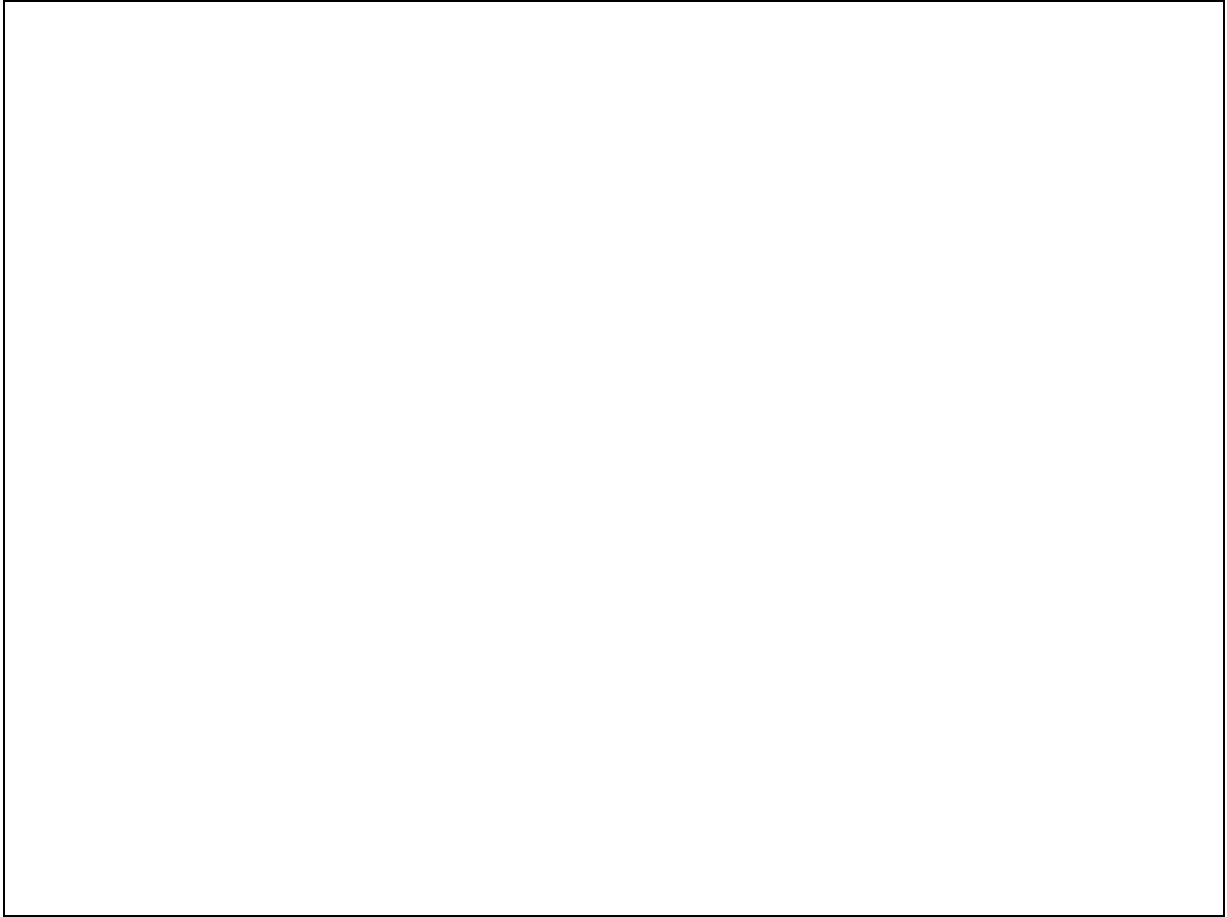


Photo required

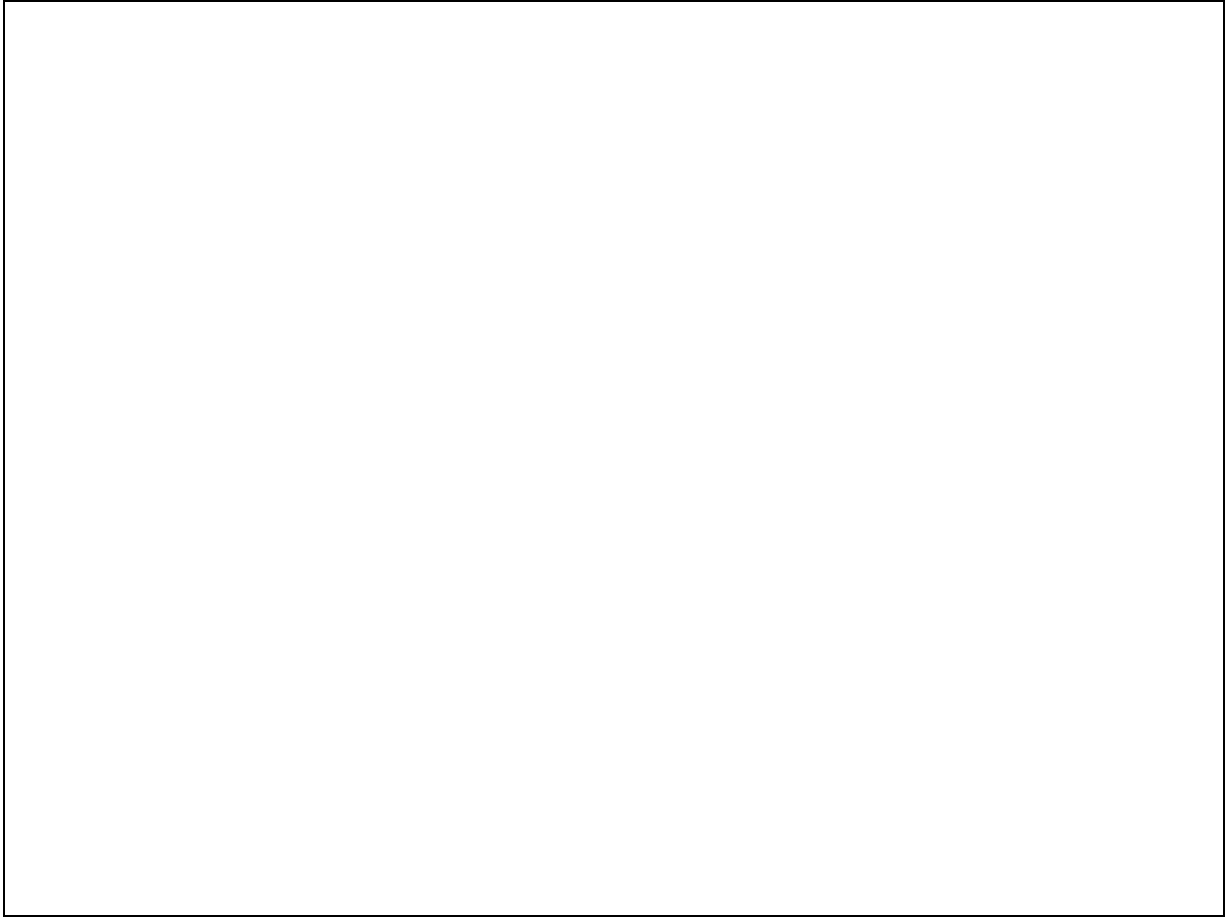


Photo required

<b>Scientific name</b>	<i>Cladium mariscus</i> – <i>Phragmites australis</i> swamp
<b>Common name</b>	Great Fen-sedge – Common Reed swamp
<b>Community code</b>	FW3H

### Vegetation

This community comprises typically rather species-poor, dense stands of *Cladium mariscus*. *Phragmites australis* is also a constant species here but is usually clearly subordinate to *Cladium*. No other species is frequent, but careful searching between the saw-toothed leaves may occasionally reveal some plants of *Equisetum fluviatile*, *Menyanthes trifoliata* or *Mentha aquatica*. Infrequently, tussocks of *Molinia caerulea* and *Schoenus nigricans* may occur. There is usually very little in the way of a bryophyte layer.

### Ecology

These stands occur in rather nutrient-poor but strongly alkaline conditions, in a variety of habitats, including lake margins, fens and flushed areas of bog.

### Sub-communities

No sub-communities are currently described.

### Similar communities

This is a distinct community which should be easily recognised.

### Records and distribution

#### Number of records (all)

Clearly assigned:	127
Transitional:	6
Total:	133

#### Number of records (mapped)

2001-2020:	53
1986-2000:	26
1971-1985:	31
Pre-1971:	20
Total:	130

#### Number of hectads (by most recent time period)

2001-2020:	11
1986-2000:	8
1971-1985:	6
Pre-1971:	1
Total:	26

#### Number of hectads (records in each time period)

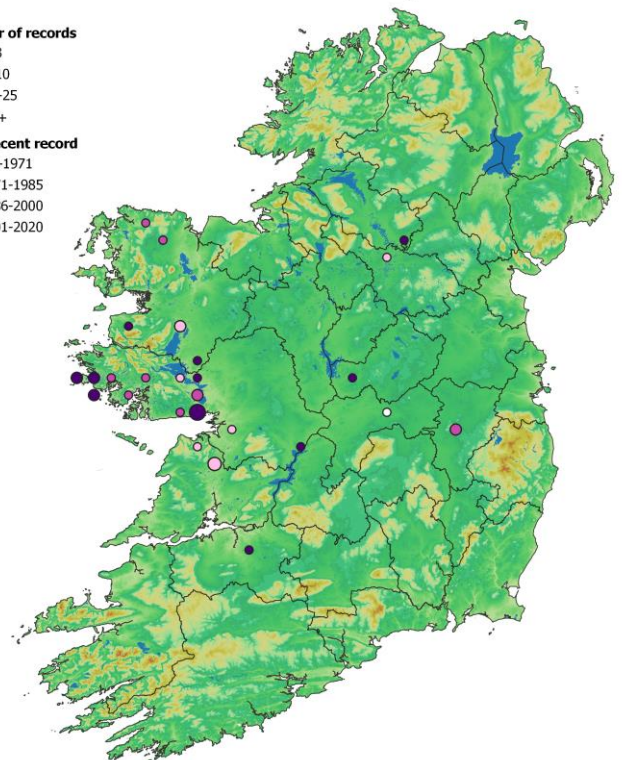
2001-2020:	11
1986-2000:	11
1971-1985:	12
Pre-1971:	5

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



**Synoptic table (n = 117)**

Species	Frequency	Cover	Species	Frequency	Cover
	(from I-V)	min (med) max		(from I-V)	min (med) max
<i>Cladium mariscus</i>	V	5-(9)-10	<i>Carex viridula</i>	I	1-(2)-4
<i>Phragmites australis</i>	V	1-(3)-8	<i>Nymphaea alba</i>	I	2-(3)-7
<i>Equisetum fluviatile</i>	II	+- (3)-7	<i>Utricularia intermedia</i>	I	2-(3)-5
<i>Menyanthes trifoliata</i>	II	1-(3)-5	<i>Utricularia minor</i>	I	1-(2)-5
<i>Mentha aquatica</i>	II	+- (2)-5	<i>Valeriana officinalis</i>	I	+- (1)-3
<i>Galium palustre</i>	I	+- (2)-4	<i>Eleocharis multicaulis</i>	I	1-(3)-5
<i>Schoenus nigricans</i>	I	2-(3)-7	<i>Eriocaulon aquaticum</i>	I	3-(3)-7
<i>Molinia caerulea</i>	I	+- (3)-8	<i>Kindbergia praelonga</i>	I	1-(2)-4
<i>Potentilla palustris</i>	I	+- (2)-4	<i>Lycopus europaeus</i>	I	2-(2)-4
<i>Carex lasiocarpa</i>	I	1-(3)-5	<i>Cardamine pratensis</i>	I	2-(2)-3
<i>Hydrocotyle vulgaris</i>	I	+- (3)-5	<i>Carex disticha</i>	I	1-(3)-3
<i>Juncus subnodulosus</i>	I	2-(3)-3	<i>Carex elata</i>	I	1-(4)-5
<i>Lysimachia vulgaris</i>	I	1-(3)-7	<i>Carex rostrata</i>	I	1-(2)-5
<i>Agrostis stolonifera</i>	I	1-(2)-5	<i>Scorpidium scorpioides</i>	I	2-(2)-5
<i>Lythrum salicaria</i>	I	+- (2)-7	<i>Typha latifolia</i>	I	1-(1)-4
<i>Myrica gale</i>	I	2-(3)-5	<i>Epilobium palustre</i>	I	+- (2)-3
<i>Ranunculus flammula</i>	I	1-(2)-3	<i>Lemna trisulca</i>	I	1-(3)-5
<i>Calliergonella cuspidata</i>	I	+- (2)-5	<i>Salix cinerea</i>	I	+- (2)-8
<i>Angelica sylvestris</i>	I	1-(2)-3	<i>Sparganium erectum</i>	I	2-(3)-4
<i>Filipendula ulmaria</i>	I	1-(2)-7	<i>Succisa pratensis</i>	I	2-(2)-3

**Affinities**

GHI: FS1 Reed and large sedge swamps  
 ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (93.2%)  
 EUNIS: C3.28 Riparian *Cladium mariscus* beds / D5.24 Fen *Cladium mariscus* beds  
 NVC: S2 *Cladium mariscus* swamp (68.3%)  
 Annex I: 7210 *Cladium fens*\*

**Proxy environmental data**

Light: 7.8 Reaction: 7.4 Wetness: 9.8 Fertility: 4.0 Salinity: 0.2

**Conservation value**

Open, diverse stands of *Cladium mariscus* swamp and denser stands occurring adjacent to other types of fen, fen-meadow or tall-herb swamps, correspond in Ireland with the priority EU HD Annex I habitat 7210 *Cladium fen*\*. Low diversity, closed stands occurring in isolation are not deemed to correspond. Species/4 m<sup>2</sup> = 7.0, n = 73.

**Management**

These stands are typically unmanaged. The main threats are from peat extraction, infilling, drainage and reclamation.

**Key references**

Ivimey-Cook, R.B., Proctor, M.C.F. (1964) The plant communities of the Burren, Co. Clare. *Proceedings of the Royal Irish Academy. Section B: Biological, Geological, and Chemical Science* 64, 211–302.  
 van Groenendael, J., Hochstenbach, S.M.H., van Mansfeld, M., Roozen, A.J.M., Westhoff, V. (1982) The influence of the sea on the vegetation of lakes in southwest Connemara. *Journal of Life Sciences - Royal Dublin Society* 3, 221–242.  
 Mooney, E. (1991) A phytosociological and palaeoecological study of the wetlands of the Lower Corrib Basin, Co. Galway, Ireland. (Ph.D. thesis). National University of Ireland Galway.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin





Photo 1. FW3H *Cladium mariscus* – *Phragmites australis* swamp, River Corrib, Newcastle, Galway  
(J. Martin, September 2014)



Photo 2. FW3H *Cladium mariscus* – *Phragmites australis* swamp, Coolagh, Galway (J. Martin, September 2014)



<b>Scientific name</b>	<i>Schoenoplectus tabernaemontani</i> swamp
<b>Common name</b>	Grey Club-rush swamp
<b>Community code</b>	FW3I

### Vegetation

The tall grey stems of *Schoenoplectus tabernaemontani* dominated this swamp community. Occasionally, there is patchy cover of *Phragmites australis*, *Agrostis stolonifera* or *Samolus valerandi*, most likely towards the landward edge of the stand, but all other species are scarce.

### Ecology

These stands have been recorded predominantly from lagoons and coastal lakes, but also, infrequently, from estuaries

### Sub-communities

No sub-communities are currently described.

### Similar communities

This is a distinct community which should be easily recognised.

### Records and distribution

#### Number of records (all)

Clearly assigned:	68
Transitional:	4
Total:	72

#### Number of records (mapped)

2001-2020:	2
1986-2000:	55
1971-1985:	13
Pre-1971:	2
Total:	72

#### Number of hectads (by most recent time period)

2001-2020:	1
1986-2000:	22
1971-1985:	3
Pre-1971:	1
Total:	27

#### Number of hectads (records in each time period)

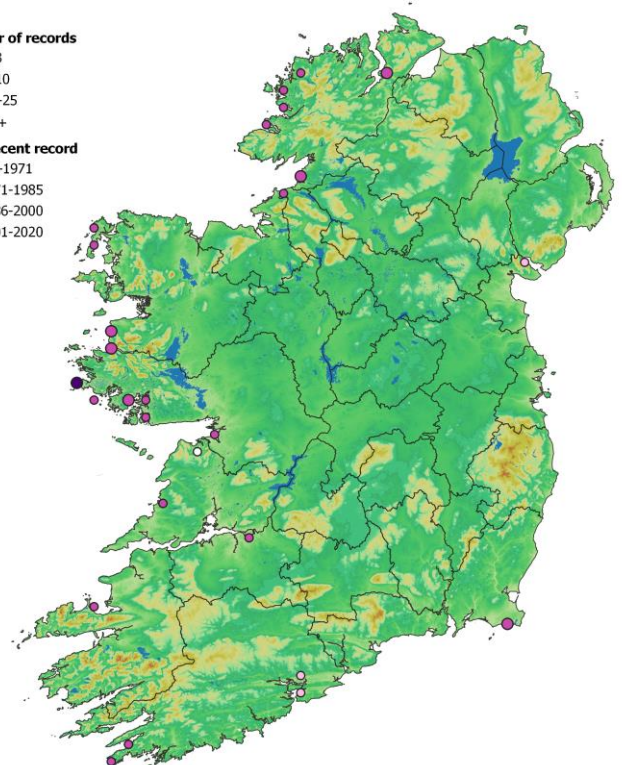
2001-2020:	1
1986-2000:	23
1971-1985:	6
Pre-1971:	1

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synoptic table (n = 45)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Schoenoplectus tabernaemontani</i>	V	4-(7)-10	<i>Berula erecta</i>	I	2-(4)-5
<i>Agrostis stolonifera</i>	II	2-(4)-7	<i>Brachythecium rutabulum</i>	I	3-(4)-4
<i>Phragmites australis</i>	II	2-(3)-4	<i>Carex extensa</i>	I	4-(4)-5
<i>Samolus valerandi</i>	II	1-(3)-5	<i>Carex viridula</i>	I	2-(2)-2
<i>Bolboschoenus maritimus</i>	I	2-(3)-5	<i>Equisetum fluviatile</i>	I	3-(4)-4
<i>Eleocharis palustris</i>	I	3-(3)-5	<i>Glaux maritima</i>	I	3-(3)-4
<i>Galium palustre</i>	I	2-(2)-3	<i>Hippuris vulgaris</i>	I	2-(3)-3
<i>Potamogeton pectinatus</i>	I	3-(3)-4	<i>Hydrocotyle vulgaris</i>	I	4-(5)-6
<i>Cardamine pratensis</i>	I	2-(3)-3	<i>Iris pseudacorus</i>	I	2-(2)-2
<i>Eleocharis uniglumis</i>	I	2-(5)-8	<i>Juncus gerardii</i>	I	3-(3)-3
<i>Juncus articulatus</i>	I	2-(3)-3	<i>Lemna minor</i>	I	4-(5)-5
<i>Mentha aquatica</i>	I	2-(3)-4	<i>Lythrum salicaria</i>	I	2-(2)-2
<i>Ranunculus flammula</i>	I	2-(3)-3	<i>Myosotis laxa</i>	I	2-(3)-3
<i>Ruppia maritima/cirrhosa</i>	I	2-(2)-3	<i>Myriophyllum spicatum</i>	I	3-(3)-3
<i>Oenanthe lachenalii</i>	I	2-(3)-4	<i>Pedicularis palustris</i>	I	2-(3)-4
<i>Potamogeton coloratus</i>	I	+-(3)-3	<i>Triglochin maritimum</i>	I	3-(4)-5
<i>Potamogeton natans</i>	I	3-(3)-5	<i>Typha latifolia</i>	I	2-(2)-2
<i>Triglochin palustre</i>	I	2-(3)-3	<i>Schoenus nigricans</i>	I	3-(3)-3
<i>Anagallis tenella</i>	I	1-(2)-3	<i>Scorpidium scorpioides</i>	I	6-(6)-6
<i>Baldellia ranunculoides</i>	I	2-(2)-3	<i>Utricularia australis/vulgaris</i>	I	2-(2)-2

#### Affinities

GHI: FS1 Reed and large sedge swamps

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (95.6%)

EUNIS: A5.544 Vegetation of brackish waters dominated by *Scirpus lacustris* or *Scirpus tabernaemontani* / C3.27 Halophile *Scirpus*, *Bolboschoenus* and *Schoenoplectus* beds

NVC: S20 *Scirpus lacustris* ssp. *tabernaemontani* swamp (63.2%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 8.5    Reaction: 7.6    Wetness: 9.7    Fertility: 6.4    Salinity: 2.5

#### Conservation value

This is a low diversity plant community (species/4 m<sup>2</sup> = 5.5, n = 15). Stands may occur fringing lagoons corresponding to the priority EU HD Annex I habitat 1150 Lagoons\*.

#### Management

These swamp stands are essentially unmanaged. The main threats to them are through eutrophication and drainage.

#### Key references

Brock, T., Frigge, P., van der Ster, H. (1978) A vegetation study of the pools and surrounding wetlands in the Dooaghry area, Co. Mayo, Republic of Ireland. (unpublished). Laboratory of Geobotany, Catholic University of Nijmegen, The Netherlands.

Crawford, I., Bleasdale, A., Conaghan, J. (1998) BIOMAR survey of Irish machair sites 1996. Volume 2: Plant communities. *Irish Wildlife Manuals* No. 4. Dúchas, The Heritage Service, Dublin.

Roden, C.M. (1998) A survey of the flora and vegetation of sixteen Irish coastal lagoons. Part Three of 1998 lagoon survey (unpublished). Dúchas, The Heritage Service, Dublin.

**Synopsis version:** V2.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin

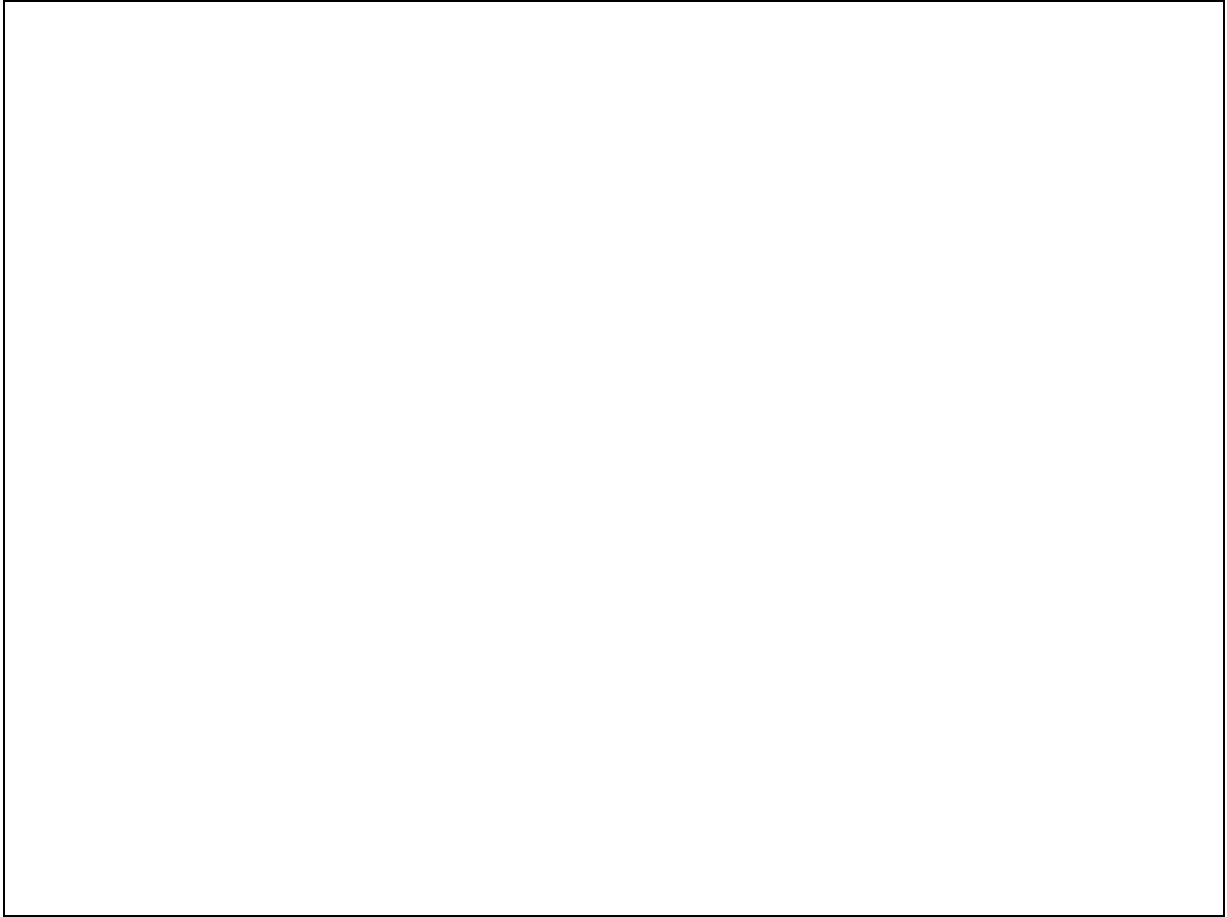


Photo required

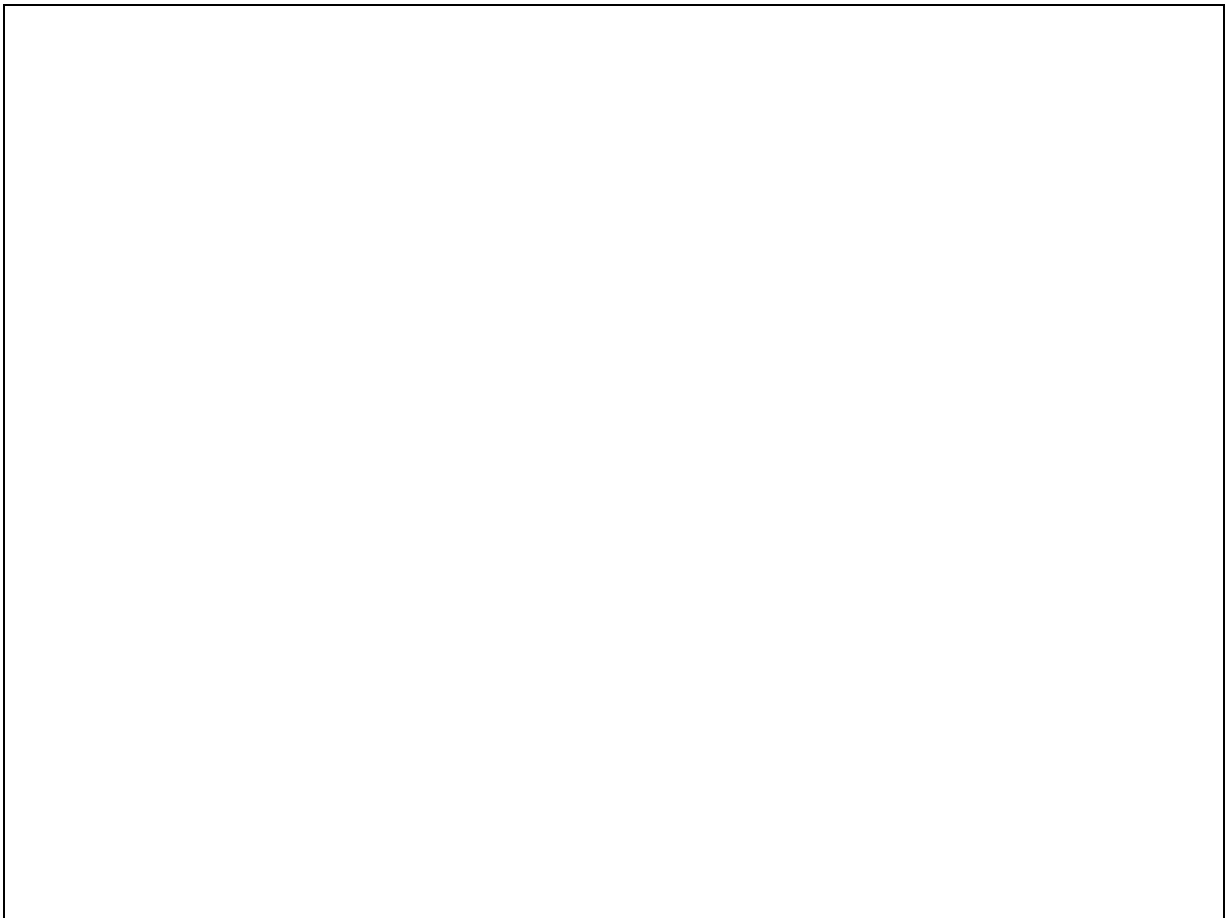


Photo required



<b>Scientific name</b>	<i>Carex elata</i> swamp
<b>Common name</b>	Tufted-sedge swamp
<b>Community code</b>	FW3J

### Vegetation

Tussocks of *Carex elata* dominate this rather species-poor swamp community. Usually growing alongside the sedge will be a few reeds (*Phragmites australis*) and frequent companions are *Equisetum fluviatile*, *Galium palustre* and *Mentha aquatica*. Less often there will be some cover of other sedges (*Carex panicea*, *Carex lasiocarpa*, *Carex viridula*), rushes (*Juncus subnodulosus*, *Juncus articulatus*) or tall herbs (*Lythrum salicaria*, *Filipendula ulmaria*). Bryophytes are scarce.

### Ecology

These stands occur in the lowlands along the margins of mesotrophic lakes and wet woodlands and in base-rich fens.

### Sub-communities

No sub-communities are currently described.

### Similar communities

This is a distinct community which should be easily recognised.

### Records and distribution

#### Number of records (all)

Clearly assigned:	29
Transitional:	2
Total:	31

#### Number of records (mapped)

2001-2020:	9
1986-2000:	5
1971-1985:	10
Pre-1971:	5
Total:	29

#### Number of hectads (by most recent time period)

2001-2020:	6
1986-2000:	3
1971-1985:	6
Pre-1971:	1
Total:	16

#### Number of hectads (records in each time period)

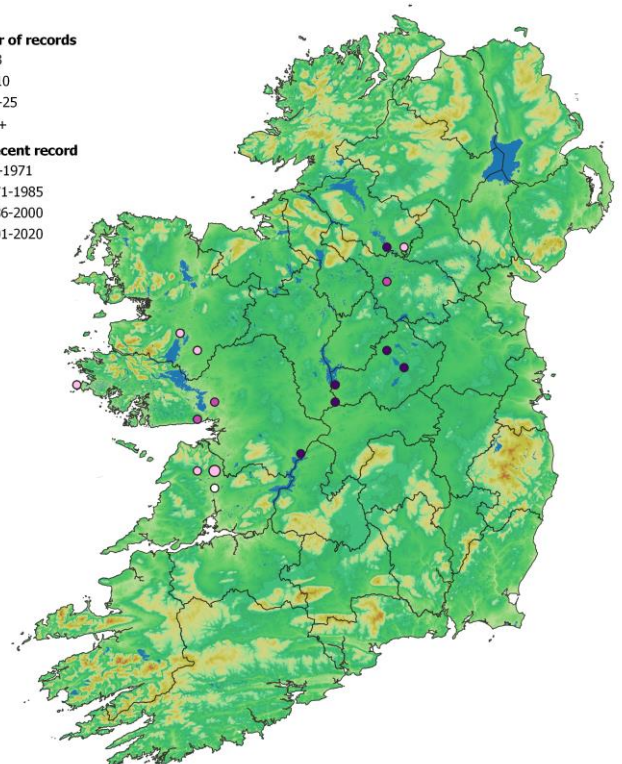
2001-2020:	6
1986-2000:	3
1971-1985:	6
Pre-1971:	2

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synoptic table (n = 24)

Species	Frequency		Cover		Species	Frequency		Cover	
	(from I-V)		min	(med) max		(from I-V)		min	(med) max
<i>Carex elata</i>	V		6-(8)	9	<i>Bryum pseudotriquetrum</i>	I		1-(3)	4
<i>Phragmites australis</i>	IV		1-(3)	7	<i>Calliergonella cuspidata</i>	I		2-(4)	5
<i>Equisetum fluviatile</i>	III		2-(3)	5	<i>Carex rostrata</i>	I		3-(4)	7
<i>Galium palustre</i>	III		2-(3)	3	<i>Iris pseudacorus</i>	I		3-(3)	4
<i>Mentha aquatica</i>	III		2-(3)	3	<i>Lathyrus palustris</i>	I		3-(4)	5
<i>Lythrum salicaria</i>	II		2-(3)	4	<i>Lysimachia vulgaris</i>	I		+(3)	4
<i>Carex panicea</i>	II		2-(3)	5	<i>Phalaris arundinacea</i>	I		2-(3)	5
<i>Caltha palustris</i>	II		+(2)	3	<i>Potentilla anserina</i>	I		2-(3)	3
<i>Juncus subnodulosus</i>	II		3-(5)	5	<i>Scorpidium scorpioides</i>	I		2-(3)	7
<i>Ranunculus flammula</i>	II		2-(2)	3	<i>Calliergon giganteum</i>	I		5-(5)	5
<i>Carex lasiocarpa</i>	II		1-(3)	5	<i>Cardamine pratensis</i>	I		1-(2)	3
<i>Filipendula ulmaria</i>	II		2-(4)	5	<i>Eleocharis multicaulis</i>	I		2-(3)	3
<i>Hydrocotyle vulgaris</i>	II		2-(3)	5	<i>Juncus bulbosus</i>	I		3-(3)	3
<i>Ranunculus repens</i>	II		+(2)	3	<i>Lycopus europaeus</i>	I		2-(3)	4
<i>Carex viridula</i>	II		2-(2)	5	<i>Potamogeton coloratus</i>	I		1-(2)	4
<i>Juncus articulatus</i>	II		1-(2)	3	<i>Potentilla palustris</i>	I		2-(3)	5
<i>Menyanthes trifoliata</i>	II		2-(4)	5	<i>Potamogeton gramineus</i>	I		2-(3)	3
<i>Agrostis stolonifera</i>	I		2-(3)	3	<i>Potamogeton natans</i>	I		3-(4)	5
<i>Angelica sylvestris</i>	I		2-(2)	3	<i>Schoenoplectus lacustris</i>	I		2-(3)	3
<i>Baldellia ranunculoides</i>	I		2-(2)	2	<i>Sium latifolium</i>	I		2-(2)	2

#### Affinities

GHI: FS1 Reed and large sedge swamps

ZM: IA Alnetea glutinosae Br.-Bl. et Tx. ex Westhoff et al. 1946 (45.8%) / OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (33.3%)

EUNIS: D5.2151 Tufted sedge tussocks

NVC: S2b *Cladium mariscus* swamp and sedge-beds *Menyanthes trifoliata* sub-community (48.3%), but also S1 *Carex elata* swamp (41.9%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 7.2 Reaction: 6.6 Wetness: 9.6 Fertility: 4.6 Salinity: 0.1

#### Conservation value

This is a species-rich plant community (species/4 m<sup>2</sup> = 13.4, n = 16) that can support the EU HD Annex II species Desmoulin's whorl snail (*Vertigo moulinsiana*).

#### Management

These swamp stands are essentially unmanaged. The main threats to them are through eutrophication and drainage.

#### Key references

Ivimey-Cook, R.B., Proctor, M.C.F. (1964) The plant communities of the Burren, Co. Clare. *Proceedings of the Royal Irish Academy. Section B: Biological, Geological, and Chemical Science* 64, 211–302.

van Groenendael, J., Hochstenbach, S.M.H., van Mansfeld, M., Roozen, A.J.M., Westhoff, V. (1982) The influence of the sea on the vegetation of lakes in southwest Connemara. *Journal of Life Sciences - Royal Dublin Society* 3, 221–242.

Long, M.P., Brophy, J.T. (2019) Monitoring of sites and habitat for three Annex II species of whorl snail (*Vertigo*). *Irish Wildlife Manuals* No. 104. National Parks and Wildlife Service, Dublin.

Synopsis version: V1.0

Synopsis date: April 2021

Synopsis author(s): P.M. Perrin





Photo 1. FW3J *Carex elata* swamp, Lough Owel, Westmeath (J. Brophy, October 2014)



Photo 2. FW3J *Carex elata* swamp, Lough Owel, Westmeath (J. Brophy, October 2014)



<b>Scientific name</b>	<i>Carex paniculata</i> swamp
<b>Common name</b>	Greater Tussock-sedge swamp
<b>Community code</b>	FW3K

### Vegetation

The large tussocks of *Carex paniculata* tend to dominate this swamp community giving it a distinctive physiognomy. Other constant species are *Holcus lanatus* and *Potentilla palustris*. Frequently associates are *Rumex acetosa*, *Galium palustre*, *Juncus effusus* and some strands of *Kindbergia praelonga*.

### Ecology

These stands have largely been recorded from flush systems within blanket bog and fens where conditions are circumneutral and moderately fertile.

### Sub-communities

No sub-communities are currently described.

### Similar communities

This is a distinct community which should be easily recognised.

### Records and distribution

#### Number of records (all)

Clearly assigned:	21
Transitional:	11
Total:	32

#### Number of records (mapped)

2001-2020:	1
1986-2000:	23
1971-1985:	8
Pre-1971:	0
Total:	32

#### Number of hectads (by most recent time period)

2001-2020:	1
1986-2000:	9
1971-1985:	5
Pre-1971:	0
Total:	15

#### Number of hectads (records in each time period)

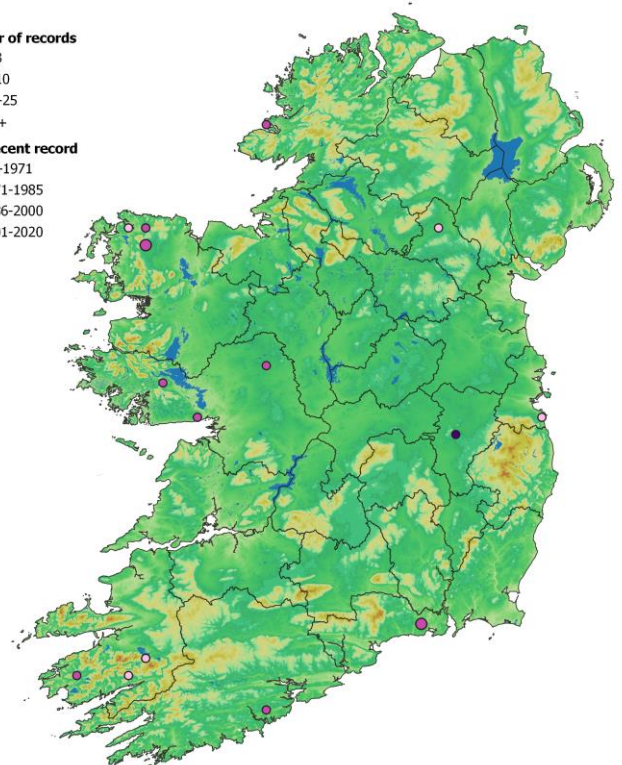
2001-2020:	1
1986-2000:	9
1971-1985:	6
Pre-1971:	0

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020





### Synoptic table (n = 15)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Carex paniculata</i>	V	5-(8)-9	<i>Menyanthes trifoliata</i>	I	5-(5)-8
<i>Holcus lanatus</i>	IV	2-(5)-8	<i>Phragmites australis</i>	I	2-(2)-3
<i>Potentilla palustris</i>	IV	3-(5)-9	<i>Potentilla erecta</i>	I	3-(3)-5
<i>Rumex acetosa</i>	III	2-(3)-5	<i>Ranunculus acris</i>	I	3-(3)-5
<i>Galium palustre</i>	III	2-(3)-3	<i>Senecio jacobaea</i>	I	2-(3)-3
<i>Juncus effusus</i>	III	2-(3)-8	<i>Typha latifolia</i>	I	3-(3)-5
<i>Kindbergia praelonga</i>	III	2-(5)-5	<i>Carex nigra</i>	I	2-(3)-3
<i>Angelica sylvestris</i>	II	1-(4)-7	<i>Crepis paludosa</i>	I	3-(4)-5
<i>Cardamine pratensis</i>	II	3-(3)-5	<i>Equisetum palustre</i>	I	2-(3)-3
<i>Equisetum fluviatile</i>	II	3-(4)-5	<i>Galium uliginosum</i>	I	3-(3)-3
<i>Filipendula ulmaria</i>	II	4-(5)-7	<i>Hydrocotyle vulgaris</i>	I	2-(4)-5
<i>Mentha aquatica</i>	II	3-(3)-5	<i>Juncus acutiflorus</i>	I	2-(6)-8
<i>Ranunculus flammula</i>	II	2-(3)-5	<i>Lophocolea bidentata</i>	I	5-(6)-7
<i>Succisa pratensis</i>	II	2-(3)-5	<i>Lotus pedunculatus</i>	I	5-(6)-7
<i>Carex rostrata</i>	II	2-(3)-8	<i>Ranunculus bulbosus</i>	I	3-(3)-3
<i>Epilobium palustre</i>	II	3-(3)-7	<i>Ranunculus repens</i>	I	2-(3)-3
<i>Molinia caerulea</i>	II	3-(4)-8	<i>Rubus fruticosus</i> agg.	I	3-(6)-8
<i>Plantago lanceolata</i>	II	2-(3)-5	<i>Senecio aquaticus</i>	I	3-(3)-3
<i>Calliergonella cuspidata</i>	I	3-(3)-5	<i>Valeriana officinalis</i>	I	2-(3)-3
<i>Caltha palustris</i>	I	3-(5)-5	<i>Viola palustris</i>	I	2-(3)-3

#### Affinities

GHI: FS1 Reed and large sedge swamps

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (46.7%) / OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (40.0%)

EUNIS: D5.216 Greater tussock sedge tussocks

NVC: W1 *Salix cinerea-Galium palustre* woodland (52.2%), but also S3 *Carex paniculata* swamp (50.9%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 6.6 Reaction: 5.6 Wetness: 8.1 Fertility: 4.8 Salinity: 0.0

#### Conservation value

This is a relatively species-rich swamp community, but with relatively low recognised conservation value.

#### Management

These swamp stands are essentially unmanaged. The main threats to them are through eutrophication, peat extraction and drainage.

#### Key references

Farrell, C. (2001) An ecological study of intact and industrial cutaway Atlantic blanket bog at Bellacorick, north-west Mayo. (Ph.D. thesis). University College Dublin.

Lockharte, N. (1991) Phytosociological and ecological studies of lowland blanket bog flushes in West Galway and North Mayo. (Ph.D. thesis). National University of Ireland Galway.

Poutsma, J. (1999) Fenor Bog: vegetation survey and management plan. (unpublished). Irish Peatland Conservation Council, Dublin.

**Synopsis version:** V1.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin



Photo 1. FW3K *Carex paniculata* swamp, Derrygoolin North, Loughatorick Bog, Galway (O. Daly, September 2020)

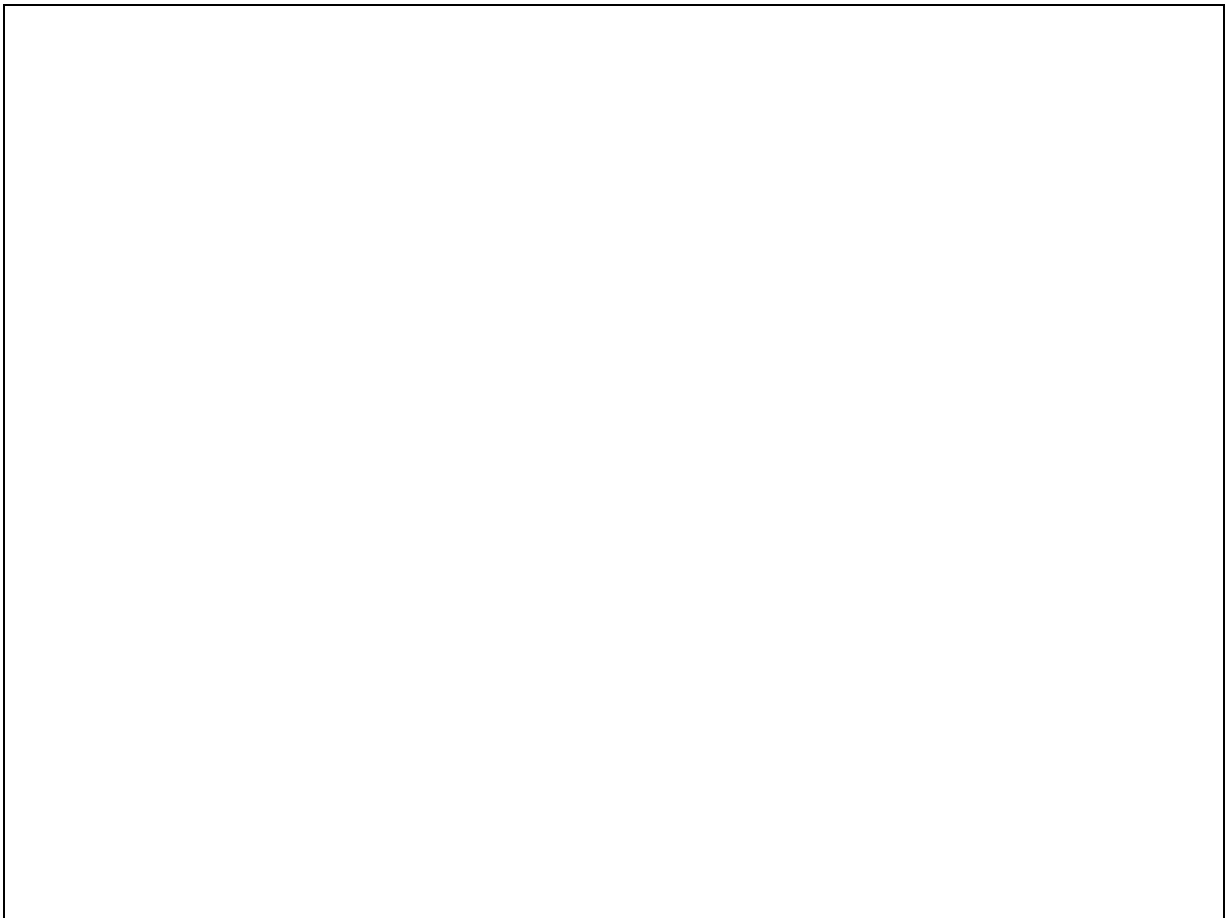


Photo required

<b>Scientific name</b>	<i>Glyceria maxima</i> swamp
<b>Common name</b>	Reed Sweet-grass swamp
<b>Community code</b>	FW3L

### Vegetation

The tall shoots of *Glyceria maxima* strongly dominate this emergent swamp community forming dense stands. No other species are constants but frequently found here are *Agrostis stolonifera*, *Epilobium hirsutum* and *Iris pseudacorus*.

### Ecology

These stands occur in the lowlands along the margins of lakes, ditches and canals.

### Sub-communities

No sub-communities are currently described.

### Similar communities

This is a distinct community which should be easily recognised.

### Records and distribution

#### Number of records (all)

Clearly assigned:	30
Transitional:	3
Total:	33

#### Number of records (mapped)

2001-2020:	9
1986-2000:	24
1971-1985:	0
Pre-1971:	0
Total:	33

#### Number of hectads (by most recent time period)

2001-2020:	6
1986-2000:	3
1971-1985:	0
Pre-1971:	0
Total:	9

#### Number of hectads (records in each time period)

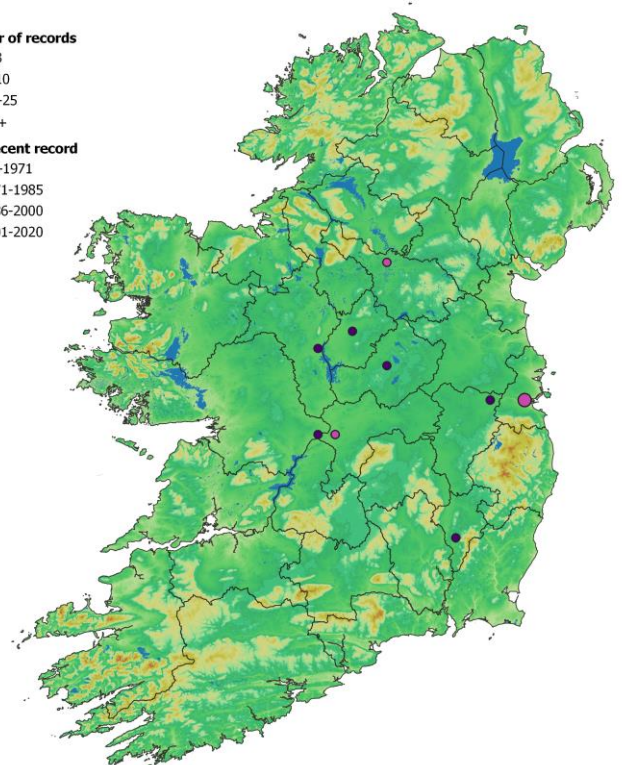
2001-2020:	6
1986-2000:	3
1971-1985:	0
Pre-1971:	0

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020





### Synoptic table (n = 9)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Glyceria maxima</i>	V	7-(8)-10	<i>Stellaria palustris</i>	I	2-(2)-2
<i>Agrostis stolonifera</i>	III	+- (5)-5	<i>Urtica dioica</i>	I	4-(4)-4
<i>Epilobium hirsutum</i>	III	4-(4)-5	<i>Valeriana officinalis</i>	I	2-(2)-2
<i>Iris pseudacorus</i>	III	4-(7)-8			
<i>Equisetum fluviatile</i>	II	1-(2)-4			
<i>Galium palustre</i>	II	2-(3)-4			
<i>Lemna minor</i>	II	+- (3)-3			
<i>Menyanthes trifoliata</i>	II	+- (3)-3			
<i>Phalaris arundinacea</i>	II	4-(4)-4			
<i>Alnus glutinosa</i>	I	7-(7)-7			
<i>Berula erecta</i>	I	4-(4)-4			
<i>Carex disticha</i>	I	5-(5)-5			
<i>Equisetum palustre</i>	I	1-(1)-1			
<i>Filipendula ulmaria</i>	I	1-(1)-1			
<i>Lychnis flos-cuculi</i>	I	+- (+)-+			
<i>Mentha aquatica</i>	I	4-(4)-4			
<i>Persicaria maculosa</i>	I	2-(2)-2			
<i>Ranunculus repens</i>	I	1-(1)-1			
<i>Rorippa amphibia</i>	I	5-(5)-5			
<i>Sparganium erectum</i>	I	3-(3)-3			

#### Affinities

GHI: FS1 Reed and large sedge swamps

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (100.0%)

EUNIS: C3.251 Sweetgrass beds

NVC: S5 *Glyceria maxima* swamp (56.9%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 7.0 Reaction: 6.8 Wetness: 9.5 Fertility: 7.4 Salinity: 0.2

#### Conservation value

This is a species-poor plant community but it can support the EU HD Annex II species Desmoulin's whorl snail (*Vertigo moulinsiana*).

#### Management

These swamp stands are essentially unmanaged. The main threats to them are through eutrophication and drainage.

#### Key references

Long, M.P., Brophy, J.T. (2019) Monitoring of sites and habitat for three Annex II species of whorl snail (*Vertigo*). *Irish Wildlife Manuals* No. 104. National Parks and Wildlife Service, Dublin.

Conaghan, J. (1999) The vegetation, ecology and conservation of the Lough Oughter lake system, Co. Cavan. (unpublished). The Heritage Council, Kilkenny.

O'Neill, F.H., Martin, J.R., Devaney, F.M., Perrin, P.M. (2013) The Irish Semi-natural Grasslands Survey 2007-2012. *Irish Wildlife Manuals* No. 78. National Parks and Wildlife Service, Dublin.

**Synopsis version:** V1.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin





Photo 1. FW3L *Glyceria maxima* swamp, Louisa Bridge, Kildare (J. Brophy, October 2014)



Photo 2. FW3L *Glyceria maxima* swamp, Kildallan Bridge, Westmeath (J. Brophy, October 2016)



<b>Scientific name</b>	<i>Typha latifolia</i> swamp
<b>Common name</b>	Bulrush swamp
<b>Community code</b>	FW3M

### Vegetation

This tall, emergent swamp community consists of dense stands of *Typha latifolia* with its iconic dark brown seed heads. No other species are constants and the only other plants frequently found are duckweeds (*Lemna minor*, *Lemna trisulca*) floating on the surface of the water. Now and then one will spot some minor growth of other emergents such as *Eleocharis palustris*, *Equisetum fluviatile*, *Phragmites australis* or – the true bulrush – *Schoenoplectis lacustris*.

### Ecology

These stands occur in the lowlands along the margins of lakes, ditches and canals.

### Sub-communities

No sub-communities are currently described.

### Similar communities

This is a distinct community which should be easily recognised.

### Records and distribution

#### Number of records (all)

Clearly assigned:	13
Transitional:	2
Total:	15

#### Number of records (mapped)

2001-2020:	3
1986-2000:	10
1971-1985:	2
Pre-1971:	0
Total:	15

#### Number of hectads (by most recent time period)

2001-2020:	2
1986-2000:	7
1971-1985:	1
Pre-1971:	0
Total:	10

#### Number of hectads (records in each time period)

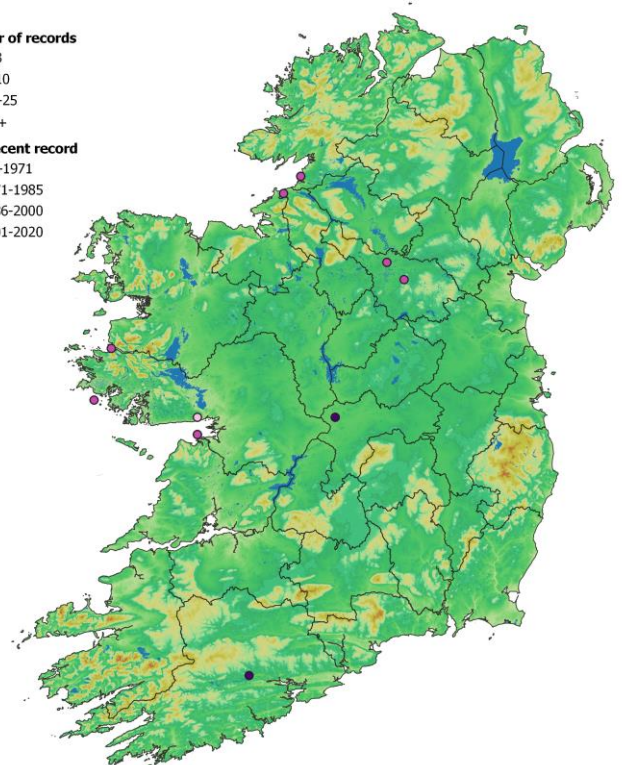
2001-2020:	2
1986-2000:	7
1971-1985:	2
Pre-1971:	0

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synopsis table (n = 10)

Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Typha latifolia</i>	V	5-(8)-9			
<i>Lemna minor</i>	III	2-(7)-8			
<i>Lemna trisulca</i>	II	2-(3)-3			
<i>Eleocharis palustris</i>	I	3-(3)-3			
<i>Equisetum fluviatile</i>	I	2-(3)-3			
<i>Hippuris vulgaris</i>	I	2-(3)-3			
<i>Phragmites australis</i>	I	2-(3)-3			
<i>Schoenoplectus lacustris</i>	I	2-(2)-2			
<i>Carex rostrata</i>	I	4-(4)-4			
<i>Carex viridula</i>	I	3-(3)-3			
<i>Cicuta virosa</i>	I	3-(3)-3			
<i>Elodea canadensis</i>	I	2-(2)-2			
<i>Eriophorum angustifolium</i>	I	5-(5)-5			
<i>Menyanthes trifoliata</i>	I	3-(3)-3			
<i>Phalaris arundinacea</i>	I	5-(5)-5			
<i>Potamogeton natans</i>	I	3-(3)-3			
<i>Schoenoplectus tabernaemontani</i>	I	2-(2)-2			

#### Affinities

GHI: FS1 Reed and large sedge swamps

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (100.0%)

EUNIS: C3.231 *Typha latifolia* beds / D5.131 *Typha latifolia* beds normally without free-standing water

NVC: S12a *Typha latifolia* swamp *Typha latifolia* sub-community (74.9%)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 7.8 Reaction: 6.9 Wetness: 10.1 Fertility: 6.6 Salinity: 0.0

#### Conservation value

This is a species-poor plant community (species/4 m<sup>2</sup> = 3.1, n = 7) but it can support the EU HD Annex II species Desmoulin's whorl snail (*Vertigo moulinsiana*).

#### Management

These swamp stands are essentially unmanaged. The main threats to them are through eutrophication and drainage.

#### Key references

Crawford, I., Bleasdale, A., Conaghan, J. (1998) BIOMAR survey of Irish machair sites 1996. Volume 2: Plant communities. *Irish Wildlife Manuals* No. 4. Dúchas, The Heritage Service, Dublin.

Ní Bhriain, B. (1999) A study of a turlough in the Burren, Co. Clare in its agricultural context. (B.Sc. Thesis). National University of Ireland Galway.

**Synopsis version:** V1.0

**Synopsis date:** April 2021

**Synopsis author(s):** P.M. Perrin





Photo 1. FW3M *Typha latifolia* swamp, Fin Lough, Offaly (J. Brophy, November 2014)



Photo 2. FW3M *Typha latifolia* swamp, Fin Lough, Offaly (J. Brophy, November 2014)



<b>Scientific name</b>	<i>Iris pseudacorus</i> beds
<b>Common name</b>	Yellow Iris beds
<b>Community code</b>	FW3N

### Vegetation

This community comprises species-poor, dense beds of *Iris pseudacorus* with its tall, broad leaves and large yellow flowers. Beneath there is likely to be some growth of *Agrostis stolonifera*, but no other species are constants. Occasional plants, characteristic of wet grasslands, are *Holcus lanatus*, *Potentilla anserina*, *Filipendula ulmaria*, *Poa trivialis* and *Ranunculus repens*.

### Ecology

*Iris* beds occur in a range of wet, fertile habitats including ditches, lake margins, dune slacks and poorly draining grassland, including soakways through coastal grassland.

### Sub-communities

No sub-communities are currently described.

### Similar communities

Whilst *Iris* is a feature of several swamp communities and can also occur scattered across wet grassland, *Iris* usually does not dominate as strongly elsewhere as it does within the FW3N community.

### Records and distribution

#### Number of records (all)

Clearly assigned:	64
Transitional:	12
Total:	76

#### Number of records (mapped)

2001-2020:	32
1986-2000:	30
1971-1985:	9
Pre-1971:	5
Total:	76

#### Number of hectads (by most recent time period)

2001-2020:	21
1986-2000:	18
1971-1985:	3
Pre-1971:	4
Total:	46

#### Number of hectads (records in each time period)

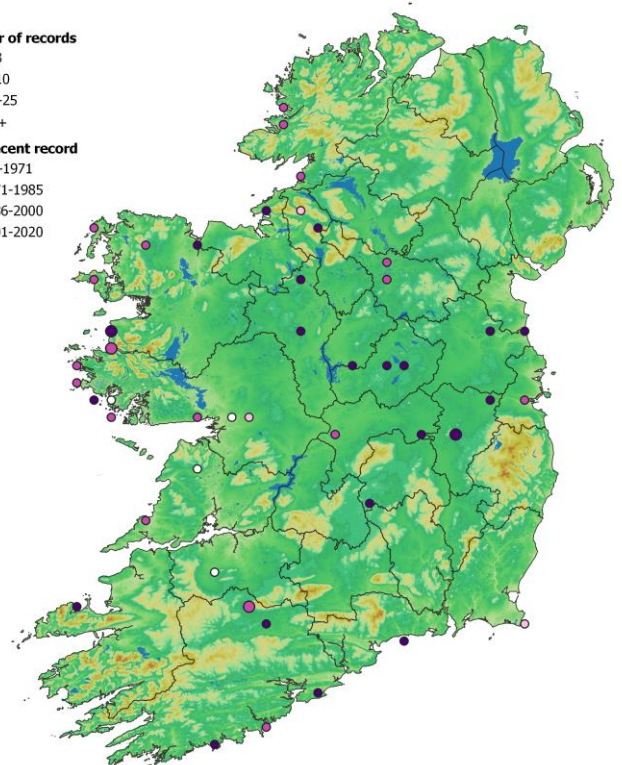
2001-2020:	21
1986-2000:	19
1971-1985:	5
Pre-1971:	4

**Number of records**

- 1-3
- 4-10
- 11-25
- 26+

**Most recent record**

- pre-1971
- 1971-1985
- 1986-2000
- 2001-2020



### Synoptic table (n = 53)

Synoptic table (n = 53)					
Species	Frequency (from I-V)	Cover min (med) max	Species	Frequency (from I-V)	Cover min (med) max
<i>Iris pseudacorus</i>	V	5-(8)-9	<i>Rumex acetosa</i>	I	1-(2)-7
<i>Agrostis stolonifera</i>	IV	1-(4)-7	<i>Urtica dioica</i>	I	+-(3)-3
<i>Holcus lanatus</i>	II	2-(3)-6	<i>Cardamine pratensis</i>	I	1-(2)-3
<i>Potentilla anserina</i>	II	+-(3)-7	<i>Equisetum palustre</i>	I	1-(4)-5
<i>Filipendula ulmaria</i>	II	2-(4)-8	<i>Ranunculus acris</i>	I	2-(3)-5
<i>Poa trivialis</i>	II	2-(4)-8	<i>Trifolium pratense</i>	I	2-(2)-4
<i>Ranunculus repens</i>	II	+-(3)-8	<i>Alopecurus pratensis</i>	I	1-(4)-5
<i>Calliergonella cuspidata</i>	I	1-(4)-6	<i>Anthoxanthum odoratum</i>	I	2-(4)-7
<i>Equisetum fluviatile</i>	I	1-(3)-5	<i>Carex hirta</i>	I	2-(2)-4
<i>Mentha aquatica</i>	I	1-(3)-5	<i>Cirsium arvense</i>	I	+-(4)-4
<i>Brachythecium rutabulum</i>	I	2-(2)-5	<i>Equisetum arvense</i>	I	2-(3)-4
<i>Festuca rubra</i>	I	2-(5)-6	<i>Hydrocotyle vulgaris</i>	I	2-(3)-3
<i>Lathyrus pratensis</i>	I	+-(2)-4	<i>Phalaris arundinacea</i>	I	3-(3)-4
<i>Trifolium repens</i>	I	1-(3)-5	<i>Veronica beccabunga</i>	I	2-(3)-5
<i>Apium nodiflorum</i>	I	2-(3)-7	<i>Veronica chamaedrys</i>	I	2-(3)-3
<i>Carex acutiformis</i>	I	+-(4)-8	<i>Persicaria maculosa</i>	I	1-(2)-4
<i>Eleocharis palustris</i>	I	2-(3)-3	<i>Rumex conglomeratus</i>	I	2-(3)-3
<i>Juncus effusus</i>	I	2-(3)-7	<i>Senecio aquaticus</i>	I	+-(2)-2
<i>Rorippa nast.-aquaticum</i> agg.	I	2-(4)-5	<i>Sparganium erectum</i>	I	2-(3)-5
<i>Galium palustre</i>	I	2-(3)-5	<i>Typha latifolia</i>	I	3-(3)-5

#### Affinities

GHI: FS2 Tall-herb swamps

ZM: OD Phragmito-Magnocaricetea Klika in Klika et Novák 1941 (66.0) / CM Molinio-Arrhenatheretea Tx. 1937 (34.0%)

EUNIS: C3.24B Iris beds

NVC: MG13 *Agrostis stolonifera*-*Alopecurus geniculatus* grassland (50.5%), but also MG10c *Holcus lanatus*-*Juncus effusus* rush-pasture *Iris pseudacorus* sub-community (47.0%) and see account of species-poor *Iris pseudacorus* swamp in Rodwell et al. (p. 30, 2000)

Annex I: No significant correspondence

#### Proxy environmental data

Light: 7.0 Reaction: 6.1 Wetness: 8.1 Fertility: 5.8 Salinity: 0.7

#### Conservation value

This community does not correspond to EU HD Annex I habitat 6430 Hydrophilous tall-herb swamp due to the lack of tall-herb diversity, but it can support the Annex II species Desmoulin's whorl snail (*Vertigo moulinsiana*). Species diversity is high compared to other swamp types (species/4 m<sup>2</sup> = 11.0, n = 33).

#### Management

The main threat to these beds is likely to be agricultural improvement as *Iris* is viewed as an undesirable plant of pastures and meadows by some landowners, who may seek to control it using a combination of rolling and spraying.

#### Key references

Long, M.P., Brophy, J.T. (2019) Monitoring of sites and habitat for three Annex II species of whorl snail (*Vertigo*). *Irish Wildlife Manuals* No. 104. National Parks and Wildlife Service, Dublin.

Rodwell, J.S., Dring, J.C., Averis, A.B.G., Proctor, M.C.F., Malloch, A.J.C., Schaminée, J.H.J., Dargie, T.C.D. (2000) Review of coverage of the National Vegetation Classification, JNCC Report 302. JNCC, Peterborough.

Synopsis version: V1.0

Synopsis date: April 2021

Synopsis author(s): P.M. Perrin





Photo 1. FW3N *Iris pseudacorus* beds, Dooaghtry, Mayo (J. Brophy, June 2014)



Photo 2. FW3N *Iris pseudacorus* beds, Coolteige, Roscommon (K. Duffy/J. Martin, July 2007)