

4.61

**Loch Doire Bhanbh, County Galway O.S. L 961 384**  
O.S. Discovery Sheet 45



**Conservation Designation:** Connemara Bog complex SAC 002034, pNHA 002034

**General description:**

A very small (1ha), relatively shallow (3m) **natural “saltmarsh” lagoon**, situated on the northern shore of Camus Bay, 15km northeast of Kilkieran, Co. Galway. Ranging in salinity at the time of sampling (10/08/2002) from 20-25psu.

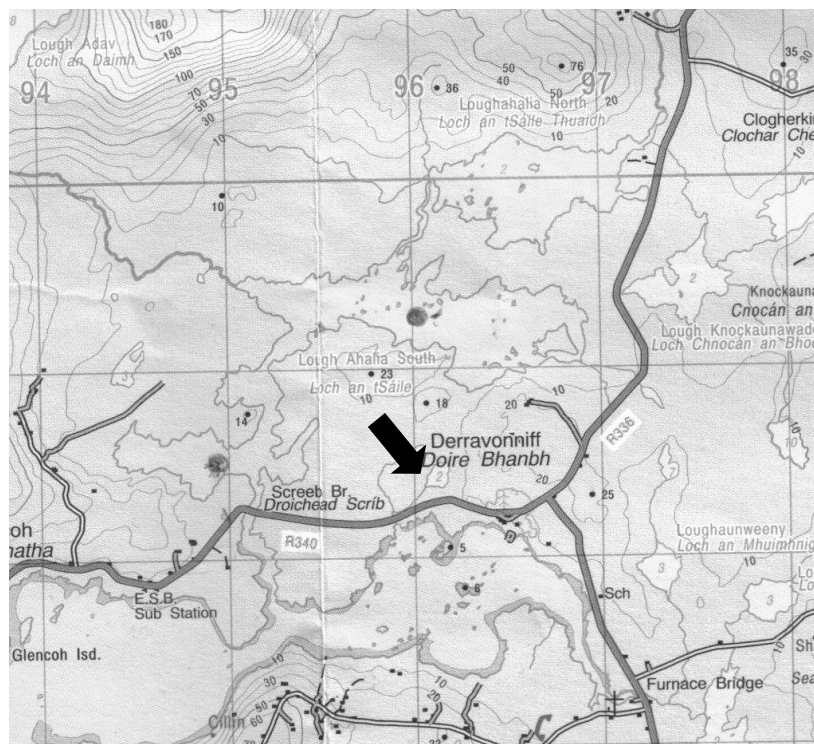


Figure 61.1 Location map of L. Doire Bhanbh.

L. Doire Bhanbh was surveyed in 2002 as part of a PhD study and used in a biological classification of Irish coastal lagoons (Oliver 2005). Four stations were selected for the sampling of aquatic fauna and flora (Figure 61.2 Table 61.1)

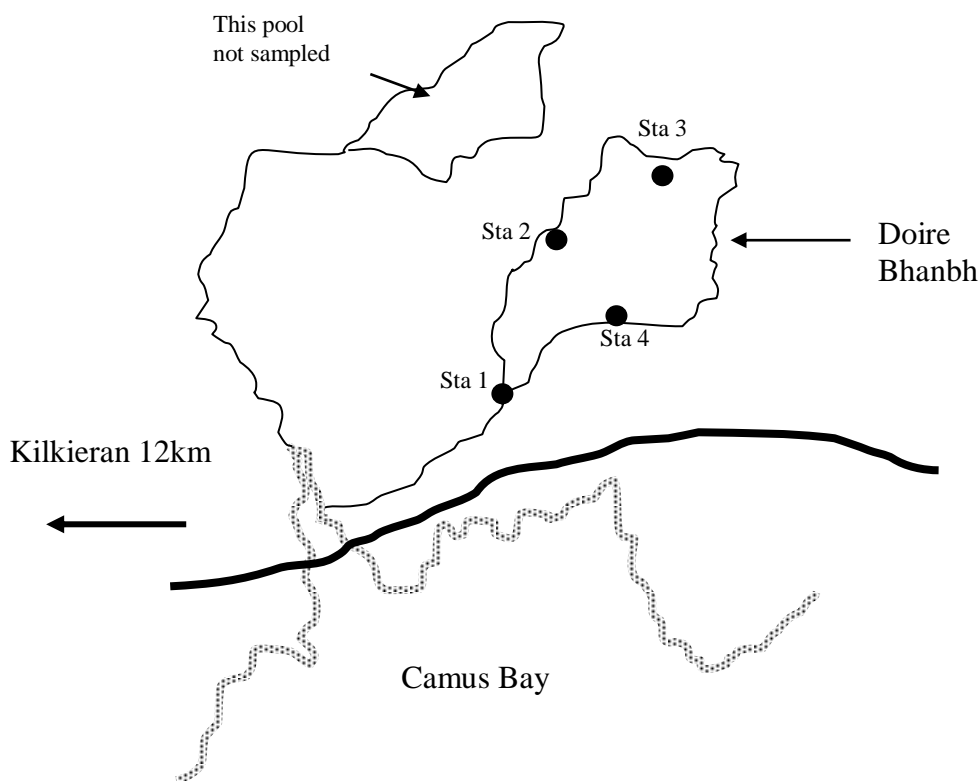


Figure 61.2 Sampling stations used at Doire Bhanbh on 10/08/2002.

### Flora

Only 9 floral taxa were recorded at Doire Bhanbh (Table 62.1), but three of these are lagoonal specialists, one of which is a rare charophyte. Two other species (*Zostera marina*, *Fucus ceranoides*) are not particularly rare but are only found in relatively few lagoons.

Table 62.1 Percentage cover of vegetation in Doire Bhanbh on 10/08/02 with salinity, depth of water and type of substratum. Species in bold text are "lagoonal specialists" or rare species.

		Station 1	Station 2	Station 3	Station 4
Salinity(psu)		25	25	22	20
Depth(cm)		300	100	100	100
Substratum		sand	soft peat	sand, rock	soft peat
<b>Percentage cover:</b>					
Chlorophyta	<b><i>Chaetomorpha linum</i></b>	10	90	30	30
	<i>Cladophora sp.</i>	10	2	1	20
	<i>Enteromorpha</i>	0	0	1	0
	<i>Fucus ceranoides</i>	10	5	30	5
Charophyta	<b><i>Lamprothamnion papulosum</i></b>	0	2	0	2
Angiosperms	<i>Potamogeton pectinatus</i>	0	5	5	5
	<b><i>Ruppia sp.</i></b>	5	5	5	30
	<i>Phragmites australis</i>	5	5	10	5
	<b><i>Zostera marina</i></b>	20	0	0	0

*Lamprothamnium papulosum* was known from only three sites in Ireland before 1996 (Hatch and Healy 1998). As a result of the surveys it was relocated at two of these sites (Lady's Island L., Co. Wexford, L. Murree, Co. Clare), but not at Tacumshin L., Co. Wexford. It is also now known from a total of 14 lagoon sites, most of which are clustered in Connemara, but there are also new records from the North Slob, Co. Wexford, L. Bofin, Co. Galway and Maghery, Co. Donegal. This species is listed in the Red Data Book for Britain and Ireland (Stewart and Church 1992). Although recorded from the Baltic to the Mediterranean and Black Sea and also South Africa, it is believed to be declining in Europe. There are only five recent records from the south of England, but there are 12 important sites in the Outer Hebrides (Bamber et al. 2001b). These Irish locations are very important in European terms, and it is especially encouraging to have found new sites.

*Chaetomorpha linum*. There is some doubt about the taxonomic status of the unattached lagoonal form of this species, and it was recorded by Hatch and Healy (1998) as *C. mediterranea*. It is a common, characteristic alga of semi-isolated Irish lagoons, recorded at 49 of the 87 (56.3%) lagoons surveyed.

*Ruppia* spp. are the most characteristic aquatic plant taxa of Irish coastal lagoons. The species are hard to distinguish when not flowering, and remain uncertain at some sites, but *Ruppia* of one species or the other (*R. maritima*, *R. maritima* var *brevirostris*, *R. cirrhosa*) was found at 62 of the 87 lagoons (71.3%) surveyed, and is one of the most useful indicators of coastal lagoon status.

The *Ruppia* in Doire Bhanbh was not identified specifically, but is assumed to be *R. maritima*, which appears to be the more common of the species and was found at 41 of the lagoons surveyed (47%). *R. cirrhosa* is believed to tolerate higher salinities than the former species and to be less common, but neither of these statements is clearly supported in Irish lagoons and the two species were often found growing together. *Ruppia cirrhosa* was only identified at 23 lagoons (26%), but species was not determined at 12 sites. *R. maritima* var *brevirostris* was only positively identified at two sites (Ballyteige, Co. Wexford and Inch L., Co. Donegal).

*Fucus ceranoides* was recorded at 18 of the higher salinity lagoons, on all parts of the coastline.

Doire Bhanbh is very small but the vegetation is very interesting, and dominated by lagoonal specialist species, one of which is a rare charophyte, *Lamprothamnium papulosum*. Based on aquatic vegetation the site is rated as of **high conservation value**.

## Fauna

Only 17 faunal taxa were recorded in Doire Bhanbh when sampled on 10/08/02 (Table 61.2), but six of them are lagoonal specialists. Most of these "specialists" are relatively common in lagoonal habitats, but one (*Littorina tenebrosa*) is rare in Ireland.

*Idotea chelipes* is a common, lagoonal, isopod crustacean, often found in association with the lagoonal form of *Chaetomorpha linum*. Found at 23 of the 87 (26.4%) lagoons surveyed, mostly at relatively high salinity.

*Lekanesphaera hookeri* is a common lagoonal isopod crustacean, found at 37 of the 87 lagoons surveyed (42.5%).

*Hydrobia ventrosa*. Gastropod mollusc commonly found in brackish lagoons and ditches and generally not on the open coast. Recorded at 18 of the 87 (20.7%) lagoons surveyed up to 2006.

*Littorina "tenebrosa"* Gastropod mollusc recorded on the North Slob and in a brackish pool close to L. Murree, Co. Clare and at seven lagoons in Co. Galway. These are the only known sites in Ireland. The status of this taxon is still uncertain but specimens appear to be morphologically and ecologically distinct from *L. saxatilis*.

*Cerastoderma glaucum* Bivalve mollusc. A common lagoonal specialist found at 30 of the 87 lagoons (34.5%) surveyed.

*Conopeum seurati* Bryozoan recorded at 49 of the 87 lagoons surveyed (56.3%), but is not listed in a recent review of Irish marine Bryozoa (Wyse Jackson 1991). Either the species is under-recorded or is truly a lagoonal specialist.

Relatively few faunal taxa were recorded in Doire Bhanbh, but a large proportion of these are lagoonal specialists, and one of these is rare. Based on aquatic fauna, the site is rated as of **high conservation value**.

Table 61.2 Faunal taxa recorded at stations in Doire Bhanbh on 10/08/02.

SWm = mean of 3x 30 second sweeps, Sedm = mean of 3 x 0.005m<sup>2</sup> diameter sediment cores, L.T. = Light trap, **Ab** = overall abundance of all sampling methods, including visual searches. r = rare, o = occasional, c = common, a = abundant. Species in bold text are lagoonal specialists or rare species.

		Sta 1			Sta 2			Sta 3			Sta 4			
		SWm	L.T.	Ab	Sedm	L.T.	Ab	SWm	Sedm	L.T.	Ab	SWm	L.T.	Ab
<b>Annelida</b>	<i>Nereis diversicolor</i>				0.3		r		0.7		o			
<b>Nemertea</b>	indet											0.3		o
<b>Crustacea</b>														
	Isopoda <i>Idotea chelipes</i>	1.3	1	o	16		o	4.0	7.0		c	3.3	12	c
	<i>Lekanesphaera hookeri</i>	27.0	7	c	56		c	19.3	48.0		c	6.7	3	c
	<i>Tanaïs dulongi</i>	0.3		r										
	Mysid <i>Praunus flexuosus</i>	3.0	4	o	235		c	1.7	3.0		o	11.7	19	c
	Amphipoda indet	7.7	1	c	1		r	5.7	1.0	7.0	c	4.0		c
	<i>Corophium volutator</i>				6		o	0.7	21.0		o	0.7		o
	<i>Gammarus salinus</i>	3.0		c										
	<i>Gammarus zaddachi</i>	0.3		r	1		r	2.7	4.0		c	1.3		o
	<i>Melita palmata</i>	3.7	1	c				0.3	2.0		o	0.7		o
<b>Insecta</b>														
	Diptera Chironomidae	0.7		o	1.0		o	5.7	0.3		c	7.0		c
<b>Mollusca</b>														
	Gastropoda <i>Hydrobia ventrosa</i>	2.0	1	o				11.7	2.7	11.0	c	12.0	13	c
	<i>Littorina "tenebrosa"</i>	21.3		c	3		a	93.0	15.0		c	69.7	4	c
	Bivalvia <i>Cerastoderma glaucum</i>							1.0			o	1.7		o
	<i>Mytilus edulis</i>	0.7		o								0.3		r
<b>Bryozoa</b>	<i>Conopeum seurati</i>			o			o				o			
<b>Pisces</b>	<i>Gasterosteus aculeatus</i>	0.3	2	o	1		r	1.7	12.0		o	5.3	1	c

### Summary

Doire Bhanbh is a very small natural "saltmarsh" lagoon, with a low number of both floral and faunal taxa recorded, but a high proportion of lagoonal specialists (3 floral, 6 faunal), at least two of which, the charophyte *Lamprothamnium papulosum* and the mollusc *Littorina "tenebrosa"* are rare, both in Ireland and Europe. Although small and geomorphologically not very interesting, both aquatic fauna and flora are of high conservation value. Overall conservation value is therefore rated as high.

**Overall Conservation Value = High**

### Conservation Status Assessment (from Oliver 2007)

Impacts Natural eutrophication in small lagoon but significant tidal flushing.  
Accumulation of organic material.

Conservation Status **Favourable**

### Further Information

Listed as a lagoon by Healy *et al.* 1997, and Healy 2003. Surveyed in 2002/2003 as part of a PhD study (Oliver 2005) and used in a biological classification of Irish coastal lagoons and in the Conservation Status Assessment (Oliver 2007).

### References:

- Bamber, R.N, Gilliland, P.M. & Shardlow, M.E.A. 2001b. *Saline lagoons: a guide to their management and creation* (interim version). ISBN 1 85716573 X. Peterborough, English Nature.
- Hatch, P. & Healy, B. 1998. Aquatic vegetation of Irish coastal lagoons. *Bulletin of the Irish Biogeographical Society*. **21**: 2-21.
- Healy, B. 2003. Coastal Lagoons. In: *Wetlands of Ireland*. R. Otte (ed). Chapter 4. University College Dublin Press. Dublin. 44-78.
- Healy, B., Oliver, G.A., Hatch, P. & Good, J.A. 1997. *Coastal lagoons in the Republic of Ireland. Vol. 3. Inventory of lagoons and saline lakes*. Report to the National Parks and Wildlife Service, Dublin.
- Oliver, G.A. 2005. *Seasonal changes and Biological Classification of Irish Coastal Lagoons*. PhD Thesis. U.C.D., Dublin. Available on [www.irishlagoons.com](http://www.irishlagoons.com)
- Oliver, G.A. 2007. *Conservation status report: Coastal Lagoons (1150)*. Unpublished report to the National Parks and Wildlife Service, Dublin.
- Stewart, N.F. & Church, J.M. 1992. *Red Data Books of Britain and Ireland. Charophytes*. Joint Nature Conservation Committee and Office of Public Works, Dublin.
- Wyse Jackson, P.N. 1991. Distribution of Irish marine Bryozoa, together with biographical notes relating to the chief researchers in the group. *Bulletin of the Irish Biogeographical Society*. **14**: 129-18.