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Portavaud, Ballysadare Bay (2) County Sligo O.S. G 582 341
O.S. Discovery Sheet 25



Conservation Designation:

NONE

General description:

A small (6ha), shallow (1m) **natural “saltmarsh” lagoon**, linked by a channel running under the road to a lower salinity extension of the lagoon. The lagoons are situated 12km northwest of Ballysadare, Co. Sligo. Salinity measured 1.8-3.5psu in the western pool and 16.9 in the eastern pool at the time of sampling (9/11/05).

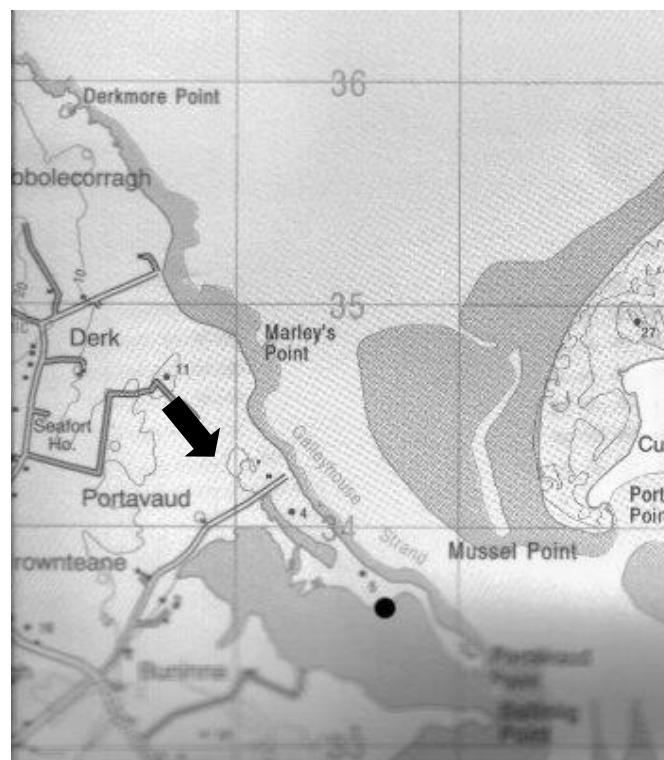


Figure 77.1 Location map of Portavaud lagoons, Ballysadare Bay (2).

Portavaud lagoons surveyed on 9/11/05 for aquatic fauna and flora. Four stations were selected for sampling at this time (Figure 77.2, Table 77.1)

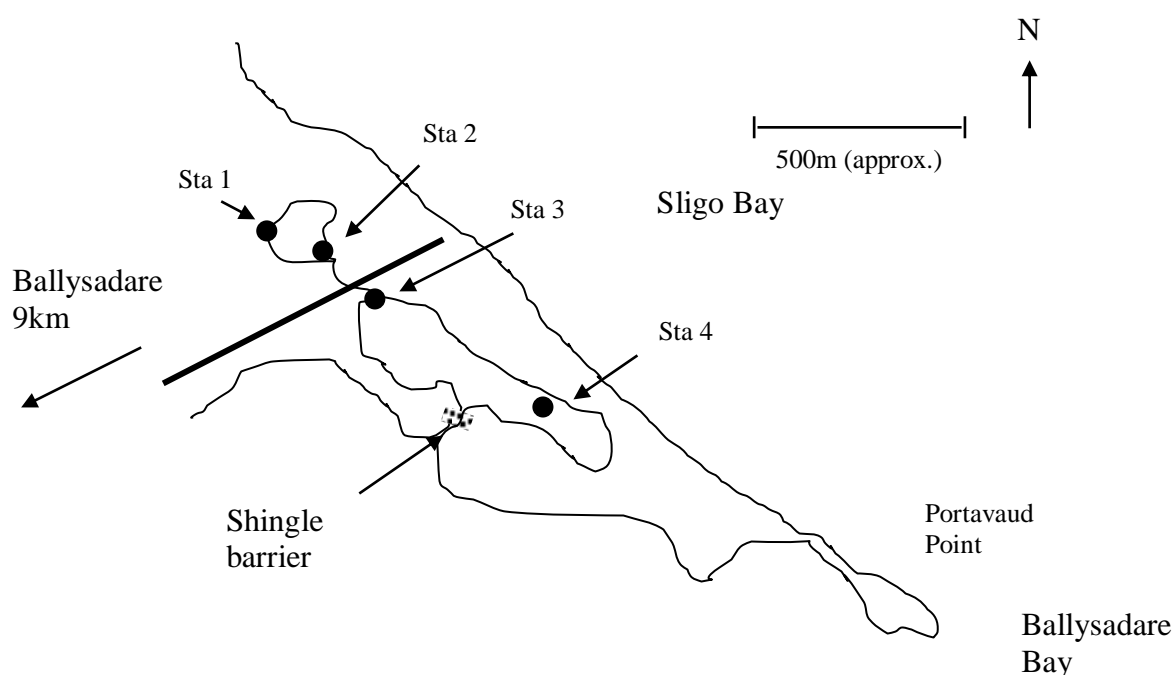


Figure 77.2 Sketch map of sampling stations used at Portavaud lagoons 9/11/05.

Flora

A total of 13 floral taxa were recorded at Portavaud lagoons on 9/11/05, most of which are common marine algae (Table 77.1), but two species are regarded as lagoonal specialists.

Table 77.1 Positions of sampling stations in Portavaud lagoons, 9/11/05 with salinity, temperature, depth of water and type of substratum and percentage cover of vegetation and bare ground. Species in bold text are lagoonal specialists.

		Sta 1	Sta 2	Sta 3	Sta 4
GPS position		G 57991 34342	G 58010 34220	G 58151 34141	G 58414 33920
Salinity(psu)		1.8	2.6-3.5	3.5	16.9
Temperature		9.0	6.3-6.6	8.7	7.3
Depth(cm)		0-20	0-30	0-50	0-50
Substratum		Mud and stones	Mud and stones	Stones, mud	Sand, stones, shells
Percentage cover:					
Chlorophyta	<i>Chaetomorpha linum</i>				10
	<i>Cladophora</i> sp.				10
	<i>Enteromorpha</i> sp.			2	
	<i>Ulva</i> sp.			5	
Phaeophyta	<i>Ascophyllum nodosum</i>				5
	<i>Fucus serratus</i>				1
	<i>Fucus vesiculosus</i>				2
	<i>Pelvetia canaliculata</i>				1
Rhodophyta	<i>Chondrus crispus</i>				1
	<i>Gracilaria gracilis</i>				1
	<i>Polysiphonia</i> sp.				5
Xanthophyta	<i>Vaucheria</i> sp.				2
Angiosperms	<i>Ruppia cirrhosa</i>	5	2		1
Bare ground	Mud	90	95	90	60
	Stones	5	3	5	10

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. *Ruppia maritima* appears to be the more common of the species and was found at 41 of the lagoons surveyed (47%). *Ruppia 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. *R. cirrhosa* was only identified at 23 lagoons (26%), but species was not determined at 12 sites.

(There are records from this site of *Chondrocanthus acicularis*, *Cladophora vagabunda*, *Fucus ceranoides*, *F. spiralis*, *Plocamium cartilaginum*, *Polysiphonia nigrescens*, *Ulothrix flacca*, *Spartina* sp. and “microbial crust” from an unknown source)

Two lagoonal specialists *R. cirrhosa* and *C. linum* were recorded at this site in 2005. More extensive beds of these two species may occur at depth in the western pool but no underwater observations were made. Based on vegetation, Portavaud lagoons are regarded as of **moderate conservation value** as coastal lagoons.

Fauna

Faunistically, when taken together the two pools at Portavaud are interesting with a total of 31 taxa recorded (Table 77.2), reflecting the salinity gradient from one pool to the other. Most of these species are common “estuarine” or low salinity species, but five are regarded as lagoonal specialists. All of these, however, are relatively common in lagoonal habitats 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%).

None of the other faunal species appear to be of particularly high conservation interest.

Palaemonetes varians Decapod crustacean listed as a lagoonal specialist in the U.K. by Barnes (1989) and Bamber (1997), but apparently is no longer regarded as such. Although found in estuaries, this species appears to be far more characteristic of lagoons in Ireland, found in 64 of the 87 lagoons surveyed (73.6%) and may require a lagoonal environment for reproduction. Therefore, it remains on the proposed list of lagoonal specialists for Ireland.

Sigara stagnalis Hemipteran insect (water-boatman). A common lagoonal specialist found at 36 of the 87 (41.4%) lagoons 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.

The species list for Portavaud lagoons is relatively high for such a small area, reflecting the salinity gradient from one pool to the other. The western pool is less saline, with large numbers of the lagoonal specialists *P. varians*, *L. hookeri* and *S. stagnalis*. The eastern pool is more “estuarine”, but still with a small suite of lagoonal species. Five lagoonal specialists were recorded in 2005 and based on aquatic fauna the site is rated as of **moderate conservation value**.

Table 77.2 Faunal taxa recorded at stations in Portavaud lagoons 8-9/11/05.

L.T. = Light trap, r = rare, o = occasional, c = common, a = abundant. Species in bold text are lagoonal specialists.

		Sampling stations							
		Sta 1	LT 1	Sta 2	LT 2	Sta 3	LT 3	Sta 4	LT 4
Nemertea	indet.								o
Nematoda	Nematoda indet.		2		7		o		
Cnidaria	<i>Obelia</i> sp.								c
Annelida									
	Polychaeta <i>Arenicola</i> agg.						a		a
	<i>Capitella capitata</i>						o		
	<i>?Fabriciola stellata</i>						o		
	<i>Janua pagenstecheri</i>								o
	<i>Nereis diversicolor</i>						o		o
	<i>Pygospio elegans</i>								0
	Oligochaeta Tubificidae indet.	c		o		c			
Crustacea									
	Ostracoda Ostracoda indet.	o	3	c	21				o
	Copepoda Harpacticoida indet.			o	1				
	Mysidacea <i>Neomysis integer</i>	o	23	o	1	o	6	o	
	<i>Praunus flexuosus</i>	r		o		c	55	a	3
	Isopoda <i>Idotea chelipes</i>	o		o		c	40	o	1
	<i>Lekanesphaera hookeri</i>	c	35	a	39				o
	Amphipoda <i>Corophium volutator</i>					c			
	<i>Melita palmata</i>								o
	<i>Gammarus ?finmarchicus</i>				4	o			c
	<i>Gammarus zaddachi</i>	o	1	c		c	3	a	21
	Decapoda <i>Carcinus maenas</i>					c			c
	<i>Palaemon elegans</i>								o
	<i>Palaemonetes varians</i>	c	28	a	350	c	23	c	1
Insecta									
	Heteroptera <i>Sigara stagnalis</i>	o	6	c					
	Diptera Chironomidae indet.	a		a		c		o	
Mollusca									
	Gastropoda <i>Littorina saxatilis</i>								c
	<i>Potamopyrgus antipodarum</i>			o	7				
	Bivalvia <i>Mytilus edulis</i>								o
Bryozoa	<i>Conopeum seurati</i>			c		o			c
Pisces									
	<i>Gasterosteus aculeatus</i>	o	2	o	1				
	<i>Pleuronectes flesus</i>					c			c

Summary

Portavaud is small **natural “saltmarsh” lagoon**, linked by a channel running under the road to a lower salinity extension of the lagoon. The species list is relatively high for such a small area, reflecting the salinity gradient from one pool to the other, with 13 floral and 31 faunal taxa recorded, of which 7 species (2 floral, 5 faunal) are lagoonal specialists. None of the recorded species are rare, and the lagoonal specialists recorded are relatively common in lagoonal habitats in Ireland. Overall conservation value is rated as moderate.

Overall Conservation Value = Moderate

Conservation Status Assessment (from Oliver 2007)	
Impacts	One pool naturally eutrophic. Accumulation of organic material. Erosion.
Conservation Status	Unfavourable-Inadequate

Further Information

Listed as a lagoon by Healy *et al.* (1997), Healy (2003) and Oliver (2005), but not surveyed until 2005. Included in the Conservation Status Assessment (Oliver 2007). Otherwise, no further information available.

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