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Scattery Lagoon, County Clare O.S. Q 974 527

O.S. Discovery Sheet 63



Conservation Designation: Scattery Island SAC 002165, pNHA 001911

General description:

Situated on Scattery Island in the River Shannon, 2.5km southwest of Kilrush, Co. Clare. A small (10ha), shallow, “estuarine” natural **sedimentary lagoon** with a cobble/shingle barrier. A relatively large natural inlet allows most tides to enter through the barrier, and salinity is generally high, ranging from 29-32psu at the time of sampling (18-21/9/03).



Figure 33.1 Location map of Scattery Lagoon.

Scattery Lagoon was surveyed in 2003 as part of a PhD study (Oliver 2005) and used in a biological classification of Irish coastal lagoons. At this time, the vegetation was surveyed by C. Roden (Roden 2004). Four stations were selected for the sampling of aquatic fauna and flora (Figure 32.2, Table 31.1)

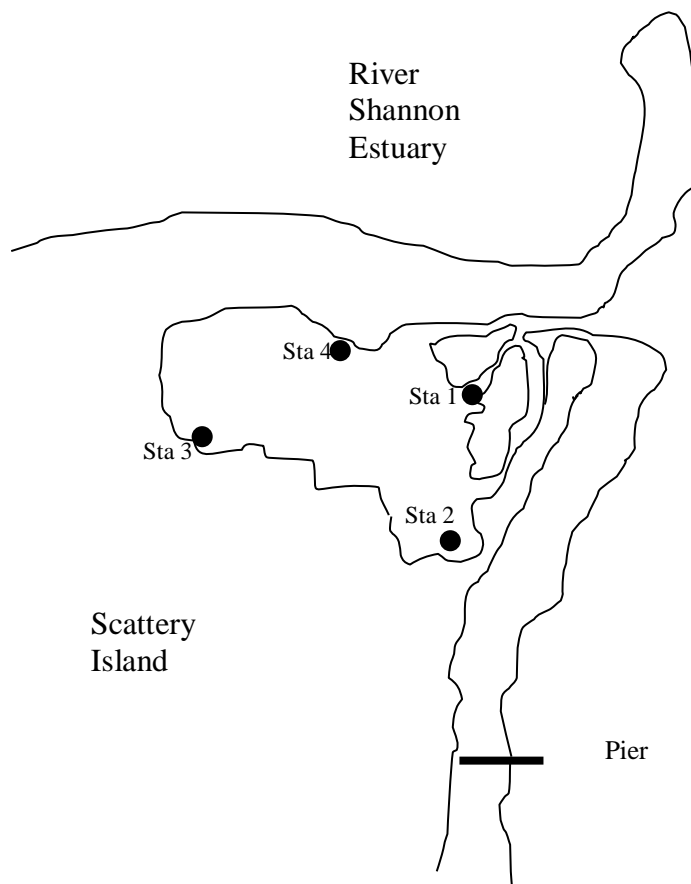


Figure 33.2 Sampling stations used at Scattery lagoon from 18-21/9/03.

Flora

A total of 22 floral taxa were recorded at Scattery Island lagoon of which 10 were identified to species (Table 33.1). Most of these are common marine algae but much of the lagoon, which is not bare mud, is dominated by one species, *Chaetomorpha linum*, which is regarded as lagoonal specialist:

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.

None of the plants recorded in Scattery lagoon are rare, and being an “estuarine type” lagoon much of the bed of the lagoon consists of bare mud. However, the large cover of *C. linum* makes it typically lagoonal. Based on aquatic vegetation the site is therefore regarded as of **moderate conservation value** as a lagoon.

Table 33.1 Percentage cover of vegetation and bare ground in Scatterry Island lagoon on 18-21/8/02 with salinity, depth of water, and type of substratum. Species in bold text are lagoonal specialists.

		Station 1	Station 2	Station 3	Station 4
Salinity(psu0		29	30	32	32
Depth(cm)		0-50	0-50	0-50	0-50
Substratum		stones, gravel	soft mud, cobbles on shoreline	soft mud	gravel and mud
Percentage cover:					
Chlorophyta	<i>Chaetomorpha linum</i>	1	20	20	50
	<i>Cladophora</i> sp.	5	20	20	5
	<i>Codium</i> sp.	2	2		2
	<i>Dictyota dichotoma</i>	5			
	<i>Enteromorpha</i> sp.	2	5	5	1
	<i>Ulva</i> sp.	5	1		
Chrysophyta	<i>Vaucheria</i> sp.	1		1	1
Phaeophyta	<i>Ascophyllum nodosum</i>			1	
	<i>Fucus serratus</i>	20	10	2	2
	<i>Fucus spiralis</i>	2	2	2	
	<i>Fucus vesiculosus</i>	30	1	2	
	<i>Pelvetia canaliculata</i>	1		2	
Rhodophyta	<i>Ceramium</i> sp.	2			
	<i>Chondrus crispus</i>	5			2
	<i>Corallina</i> sp.	2			
	<i>Gracilaria verrucosa</i>	1	5	5	2
	<i>Laurencia hybrida</i>	1			
	<i>Lithothamnion</i> sp.	2			
	<i>Plocamium cartilaginum</i>	1	1		
	<i>Polysiphonia</i> sp.	5	10		
Angiosperms	<i>Spartina</i> sp.	1	1	1	
Bare ground		5	20	40	35

Fauna

Scatterry Island lagoon is relatively rich in fauna, with a total of 48 taxa recorded, of which 45 were identified to species (Table 33.2). Most of these taxa are relatively common marine animals, but four species are regarded as lagoonal specialists, and one (*J. forsmanni*) appears to be rare:

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.

Jaera forsmanni was recorded at Raffeen and Kilmore L. (Co. Cork), Drongawn L. (Kerry), Aibhnín, L. Fhada and L. Fhada upper pools (Connemara). The only previous record for this, probably under-recorded species was for L. Hyne, Co. Cork in De Grave and Holmes (1998).

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.

Table 33.2 Faunal taxa recorded at stations in Scatterry lagoon 18-21/8/02.

SW = mean of 3x 30 second sweeps, Sed = mean of 3 x 0.005m² 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 otherwise notable species.

		Sta 1			Sta 2				Sta 3				Sta 4			
		SW	Sed	Ab	SW	Sed	L.T.	Ab	SW	Sed	L.T.	Ab	SW	Sed	L.T.	Ab
Porifera	<i>Halichondria panicea</i>			c												
Cnidaria	<i>?Anthopleura</i>			o				o								
	<i>Laomedea angulata</i>			o				o				o				
Nemertea	<i>Lineus ruber</i>			o				o			1	r				
Annelida	<i>Arenicola marina</i>			o				o				c				
	<i>Capitella capitata</i>			o				o				o				c
	<i>Janua pagenstecheri</i>			o				o				o				
	<i>Scoloplos armiger</i>		2.3	o		8.3		c		2.3		o		1.7		c
	<i>Spirorbis spirorbis</i>			o				o				o				c
	<i>Tubificoides benedii</i>			c	24.7			c								c
	<i>Heterochaeta costata</i>			o				o								r
	<i>Tubifex</i> indet			c				c		2.3		o		8.0		c
Crustacea																
	Mysidacea <i>Praunus flexuosus</i>				38.7		5	c	0.3		27	o	16.7		2	c
	Isopoda <i>Idotea chelipes</i>	8.0		o	34.3		12	c					64.7		46	c
	<i>Idotea baltica</i>							o								
	<i>Jaera forsmanni</i>			o												
	Amphipoda indet	19.7		c	4.0	0.3	3	o					4.3		1	c
	<i>Apherusa jurinei</i>	0.3		r	0.3			r					0.3			r
	<i>Corophium volutator</i>				0.7		1	o		17.7		c				
	<i>Gammarus locusta</i>	12.0		c	2.7			c				o	4.0		1	c
	<i>Melita palmata</i>	3.3		c												
	Decapoda <i>Carcinus maenas</i>	1.3		c	0.3			c				c				c
	<i>Crangon crangon</i>											o				c
	<i>Palaemonetes varians</i>	1.3		o	5.7		1	o								
Insecta	Chironomidae	3.3	2.3	o	1.0	16.7		c	2.7			o		46.3		c
Mollusca	<i>Akera bullata</i>			c		0.7		c				c		0.3		c
	<i>Cerastoderma glaucum</i>			o				o				o				c
	<i>Gibbula umbilicalis</i>	0.7		c				c								
	<i>Hydrobia ulvae</i>	24.3		c	67.7			c	17.0			c	1.0			c
	<i>Lepidochitona cinerea</i>			o												
	<i>Littorina obtusata</i>	6.7		c								o				c
	<i>Littorina littorea</i>	2.7		o												
	<i>Littorina saxatilis</i>			o												c
	<i>Macoma baltica</i>		0.7	o										0.3		r
	<i>Mytilus edulis</i>			r								r				
	<i>Patella vulgata</i>			o												
	<i>Rissoa membranacea</i>	0.3		r												
	<i>Tapes decussata</i>		0.3	o												
Bryozoa	<i>Alcyonidium gelatinosum</i>			c												
	<i>Bowerbankia gracilis</i>			o				o				o				
	<i>Conopeum seurati</i>							o								
	<i>Electra pilosa</i>			o												
	<i>Kirchenpaueri pinnata</i>							o								
Pisces	<i>Atherina presbyter</i>								0.3		1	o				
	<i>Gasterosteus aculeatus</i>				0.7			o								
	Mugilidae							o								c
	<i>Pleuronectes flesus</i>							o								
	<i>Pollachius pollachius</i>							r								
	<i>Pomatoschistus microps</i>			o				o								c

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.

The aquatic fauna of Scatterry lagoon is relatively rich and comprised largely of common marine species, reflecting the high salinity of the site and combination of both hard and soft substrates. There is however an important lagoonal element with four lagoonal specialist species and one apparently rare crustacean (*J. forsmanni*). Based on this fauna, the site is regarded as of **moderate conservation value** as a lagoon.

Summary

Scatterry Island lagoon is small and is potentially vulnerable to storm damage, but it is an interesting natural **sedimentary lagoon**, with a cobble/shingle barrier. The lagoon is "**estuarine**" in nature with much of the bed of the lagoon consisting of bare mud, but dominated in places by the lagoonal specialist alga *Chaetomorpha linum*. The fauna is mostly marine but with a relatively large number of taxa (48) four of which are lagoonal specialist species and one other (*J. forsmanni*) is an apparently rare species. Overall, conservation value as a coastal lagoon is rated as high, due to the barrier and the fact that the biota is largely dominated by *Chaetomorpha* with *Idotea chelipes* and *Cerastoderma glaucum*.

Overall Conservation Value = High

Conservation Status Assessment (from Oliver 2007)

Impacts	Natural damage to cobble barrier may destroy lagoon habitat. Erosion.
Conservation Status	Unfavourable-Inadequate

Further Information

Listed as a lagoon by Healy *et al.* 1997, and Healy 2003. Surveyed in 2002 as part of a PhD study (Oliver 2005, Roden 2004), and used in a biological classification of Irish coastal lagoons and in the Conservation Status Assessment (Oliver 2007). Otherwise, no further information available.

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