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Turreen Lough (Rinvile), County Galway O.S. M 363 232
O.S. Discovery Sheet 46



Conservation Designation: Galway Bay complex SAC 000268, pNHA 000268

General description:

Turreen Lough is a small (3ha), shallow (<1m) natural “saltmarsh lagoon” with an artificial sluiced inlet, situated 2.5km southwest of Oranmore, Co. Galway on the south side of Oranmore Bay. Salinity probably varies considerably but measured 12.5-16.7psu at the time of sampling (14/10/06).

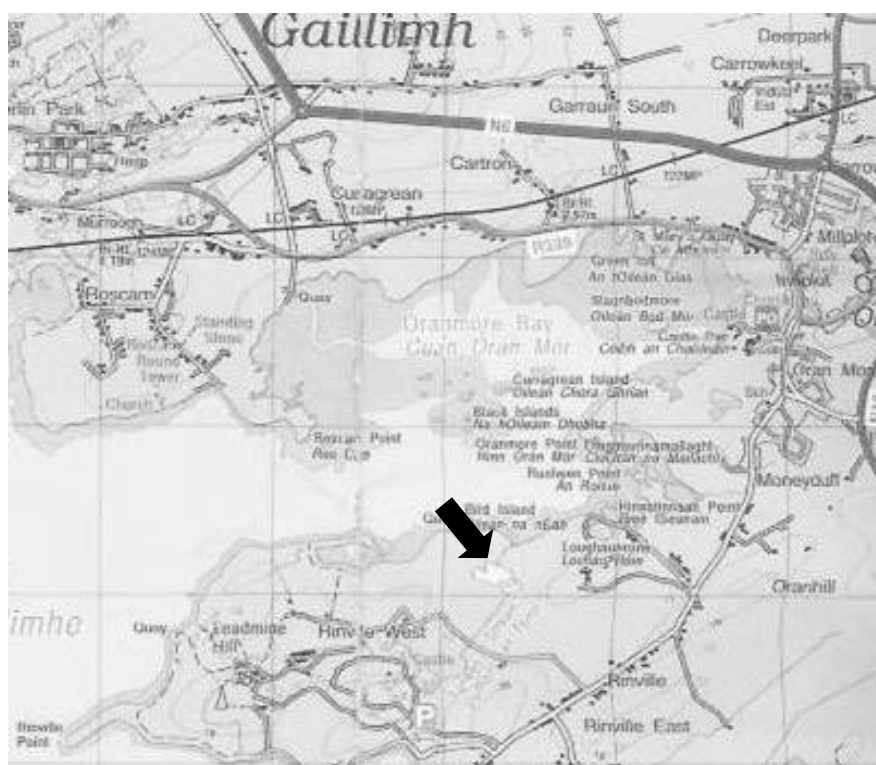


Figure 51.1 Location map of Turreen Lough (Rinvile).

Turreen Lough was surveyed on 14/10/06 for aquatic fauna and flora. Three stations were selected for sampling at this time (Figure 51.2, Table 51.1)

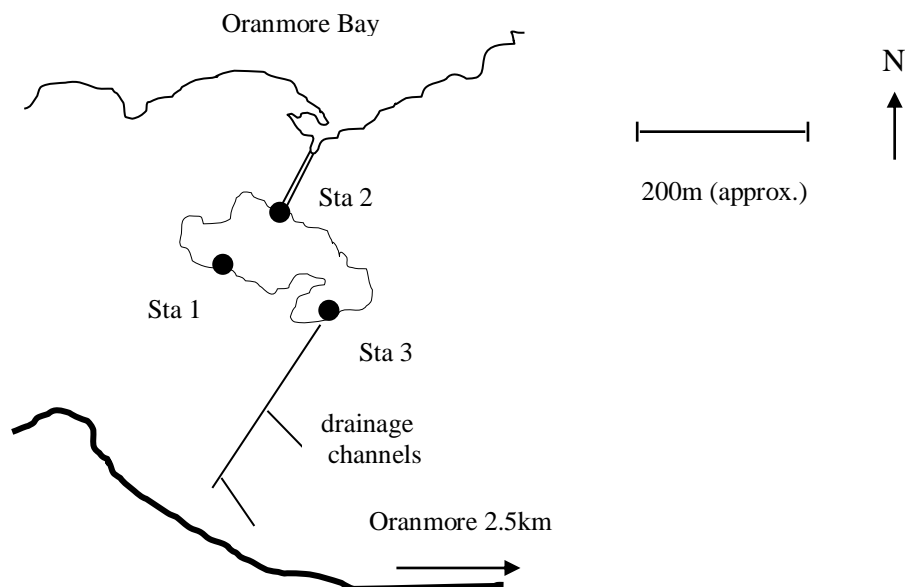


Figure 51.2 Sampling stations used at Turreen Lough on 14/10/06.

Flora

Turreen Lough is an “estuarine” lagoon and much of the bed of the lagoon is bare mud (Table 51.1). Only 12 floral taxa were recorded on 14/10/06, most of which are common marine algae, but two species are lagoonal specialists.

Table 51.1 Positions of sampling stations in Turreen Lough with hydrological variables (salinity, temperature and depth of water) type of substratum and percent cover of vegetation and bare ground. Species in bold text are lagoonal specialists.

	Sta 1	Sta 2	Sta 3
GPS position	M 36211 23090	M 36306 23187	M 36375 23017
Salinity (psu)	15.8	16.7	12.5
Temperature	15.2	14.3	16.7
Depth (cm)	0-20	0-40	0-30
Substratum	soft mud	soft mud, stones	soft mud, occasional stones
Percentage cover			
Algae			
Chlorophyceae			
<i>Chaetomorpha linum</i>	50	10	50
<i>Cladophora</i> sp.		+	+
<i>Enteromorpha</i> sp.		+	+
<i>Ulva</i> sp.		+	+
Phaeophyceae			
<i>Ascophyllum nodosum</i>		5	+
<i>Fucus vesiculosus</i>		+	
Rhodophyceae			
<i>Ceramium</i> sp.		+	
<i>Chondrus crispus</i>		5	
<i>Gracilaria verrucosa</i>	+	2	+
<i>Polyides rotunda</i>		+	
<i>Polysiphonia ?elongata</i>		+	
Angiosperms			
<i>Ruppia maritima</i>	+	+	2
Bare soft mud	50	40	50
Stones		30	+

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%).

The lagoon is not very impressive, but the two dominant species (*C. linum*, *R. maritima*) are both lagoonal specialists. Based on this vegetation, the site is regarded as of **moderate conservation value** as a coastal lagoon.

Fauna

The fauna of Turreen Lough is quite rich with a total of 34 taxa recorded, most of which are common marine or estuarine animals, but also with a small suite of four lagoonal specialists and one apparently rare species (*Jaera ischiosetosa*) (Table 51.2). Only the shells of *Cerastoderma glaucum* were found, but is likely that spat attach to vegetation in the lagoon at least in some years.

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.

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.

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.

Jaera ischiosetosa Isopod crustacean recorded at 12 sites from West Cork to Donegal. The only previous record appears to be for L. Hyne. Co. Cork (Goss Custard *et al.* 1979).

The aquatic fauna of Turreen Lough is relatively rich and characteristically lagoonal with five lagoonal specialists. Based on this fauna, the site is regarded as of **moderate conservation value** as a coastal lagoon.

Table 51.2 Faunal taxa recorded at stations in Turreen Lough on 14/10/06.

r = rare, o = occasional, c = common, a = abundant . Species in bold text are lagoonal specialist or rare species.

			Sta 1	Sta 2	Sta 3
Cnidaria		<i>Obelia dichotoma</i>	r	a	
Nematoda		indet.	r		r
Annelida	Polychaeta	<i>Manayunkia estuarina</i>			c
		<i>Nereis diversicolor</i>	o	c	o
		<i>Pomatoceros triqueter</i>		o	
	Oligochaeta	Tubificidae indet.	o		c
Crustacea	Ostracoda	indet.			o
	Copepoda	Harpacticoidea indet.			r
	Cirripedia	<i>Elminius modestus</i>		o	
	Tanaidacea	<i>Tanais dulongi</i>		r	c
	Mysidacea	<i>Neomysis integer</i>	r		c
		<i>Praunus flexuosus</i>		c	
	Isopoda	<i>Idotea chelipes</i>	a	a	c
		<i>Jaera ischiosetosa</i>	c	a	c
	Amphipoda	<i>Corophium volutator</i>	a	r	c
		<i>Gammarus ?salinus</i>	c	c	c
		<i>Gammarus ?zaddachi</i>			r
		<i>Melita palmata</i>	c	o	
<i>Microdeutopus gryllotalpa</i>		o	c	c	
<i>Carcinus maenas</i>			o		
Decapoda	<i>Palaemon elegans</i>		o		
	<i>Palaemon serratus</i>		o		
	<i>Palaemonetes varians</i>	r	o	c	
Insecta	Diptera	Tipulid	r		
Mollusca	Gastropoda	<i>Hydrobia ulvae</i>	o	o	
		<i>Littorina littorea</i>		c	
	Opisthobranchia	<i>Phytia myosotis</i>			r
	Bivalvia	<i>Cerastoderma glaucum</i>		shells	
		<i>Modiolula phaseolina</i>		o	
		<i>Mytilus edulis</i>		c	
		<i>Tapes rhomboides</i>		r	
Bryozoa		<i>Conopeum seurati</i>	o	a	c
Pisces		<i>Gasterosteus aculeatus</i>		c	o
		<i>Gobius niger</i>		r	
		<i>Pomatoschistus microps</i>		o	r

Summary

Turreen Lough is a small, shallow “saltmarsh” lagoon with a relatively rich biota, comprised mostly of marine or estuarine species, but with a small suite of lagoonal specialists (2 floral, four faunal) and one apparently rare species (*J. ischiosetosa*), although this animal is small and may simply be under-recorded. Overall, it is an interesting lagoon and rated as of **moderate conservation value**.

Overall Conservation Value = Moderate

Conservation Status Assessment (from Oliver 2007)

Impacts	Moderate eutrophication in shallow lagoon but significant tidal flushing. Poaching by cattle in some areas. Silting up.
Conservation Status	Unfavourable-Inadequate

Further Information

Listed as a lagoon by Healy *et al.* 1997, Healy 2003 and Oliver 2005 and included in the Conservation Status Assessment (Oliver 2007).

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