

4.21

Toormore Lagoon, County Cork O.S. V 844 306

O.S. Discovery Sheet 88

**Conservation Designation:** NONE**General description:**

Situated at Ballyrisode Bridge, 1km west of Toormore and 4km northeast of Goleen. A very small (<1ha) **artificial lagoon** formed behind a causeway carrying a road constructed across a tidal inlet, ranging in salinity at the time of sampling (22-23/10/05) from 19.8-30.3 32.6 psu.

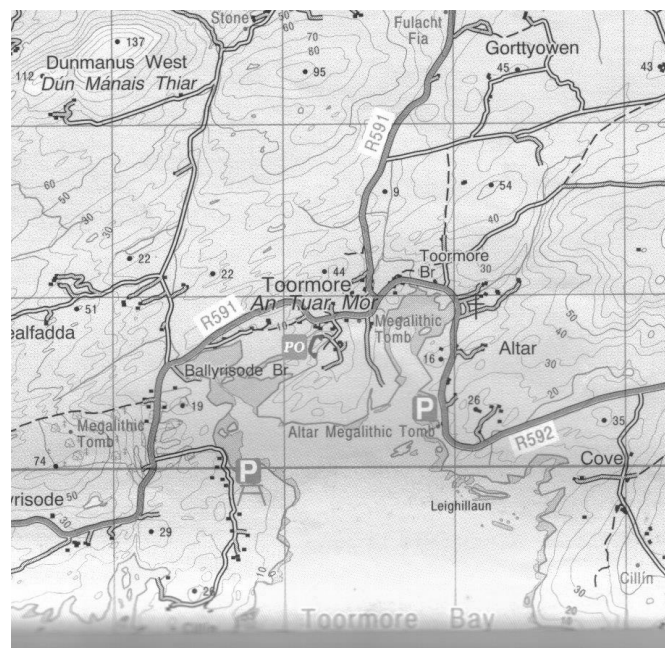


Figure 21.1 Location map of Toormore lagoon.

Toormore lagoon was surveyed on 22-23/10/05 for aquatic fauna and flora. Four stations were selected for sampling at this time (Figure 21.2, Table 21.1)

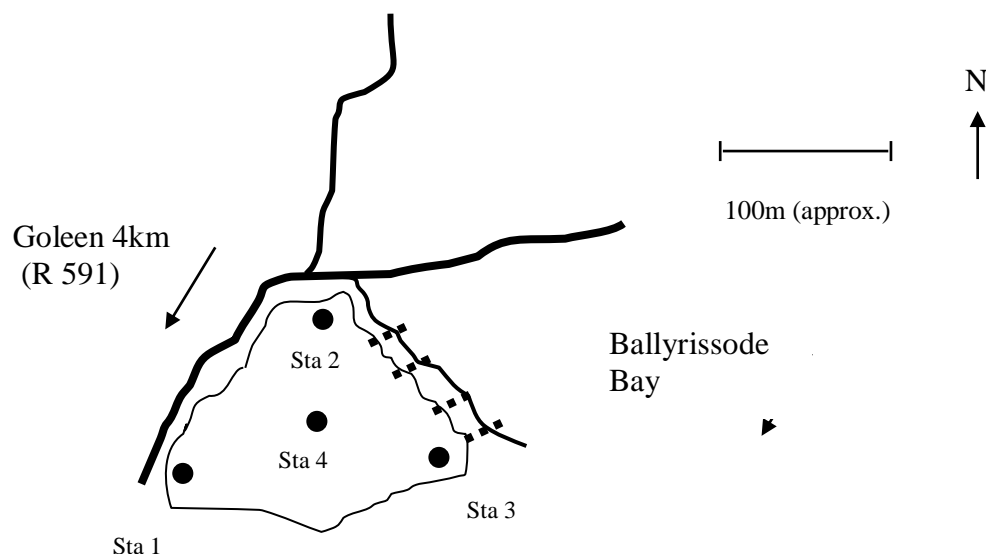


Figure 21.2 Sampling stations used at Toormore lagoon 22-23/10/05.

Flora

Toormore lagoon is an “estuarine” lagoon and most of the bed of the lagoon is bare mud, but in these sheltered conditions there is quite an extensive bed of *Ruppia maritima* in the central area. A total of 9 floral taxa were recorded (Table 21.1), most of which are common estuarine algae, but two species are lagoonal specialists:

Table 21.1 Percentage cover of aquatic flora recorded at Toormore lagoon, Co. Cork 22-23/10/05, with salinity, temperature, water depth and type of substratum. Text in bold indicates lagoonal specialist species.

	Sta 1	Sta 2	Sta 3	Sta 4
GPS position	V 84248 30466	V 84348 30599		
Salinity (psu) surface	27.8	26.1	19.8	
Salinity (psu) at depth			30.3	
Temperature at surface	15.5	13.8	12.9	
Temperature at depth			13.9	
Depth (cm)	0-30	0-30	0-50	0-50
Substratum	soft mud, occ. shells & stones	soft mud, occ. shells & stones	soft mud, occ. shells & stones	soft mud, occ. shells & stones
Percentage cover				
Algae				
Chlorophyceae				
<i>Chaetomorpha linum</i>	+			
<i>Cladophora</i> sp.	5	1	1	1
<i>Enteromorpha</i> sp.	+	2	2	2
<i>Ulva</i> sp.	+	+		
Phaeophyceae				
<i>Ascophyllum nodosum</i>	+	+	2	1
<i>Fucus vesiculosus</i>	+	+	1	
Rhodophyceae				
<i>Bostrychia scorpioides</i>	+	+	1	+
Angiosperms				
<i>Juncus</i> sp.	50	5	40	
<i>Ruppia maritima</i>	+	5	+	50
Bare soft mud	50	90	60	45
Stones	1	1	1	

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.

Toormore is a very small artificial lagoon, but botanically, the presence of two lagoonal specialist species is enough to regard it as of **moderate conservation value** as a lagoon.

Fauna

A total of 29 faunal taxa were recorded at Toormore lagoon, of which 22 were identified to species (Table 22.2). Most of these are common estuarine taxa but three species (also relatively common) are regarded as lagoonal specialists.

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

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.

Toormore lagoon is a very small artificial lagoon, but three of the species recorded are lagoonal specialists. All of these are relatively common in lagoonal habitats in Ireland, but it is one of the few sites in the country where large (mature) specimens of the “lagoon cockle”, *C. glaucum* have been found. For this reason, the site is regarded as of **moderate conservation value**.

Table 21.2 Aquatic fauna recorded at sampling stations in Toormore lagoon, Co. Cork 22/10/05. 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 rare species.

		Sta 1			Sta 2			Sta 3			Sta 4 (centre)	
		SW	Seds	LT	Ab	SW	LT	Ab	SW	LT	Ab	Ab
Cnidaria	<i>Obelia</i> sp.				o							
Nematoda	indet.		1	1	o							
Annelida												
	Polychaeta <i>Arenicola</i> agg.							o			c	c
	<i>Nereis diversicolor</i>	1			r							c
	Spionidae indet.	1			o							
Crustacea												
	Copepoda Harpacticoida indet.		1	63	c			o				
	Cirripedia <i>Chthamalus montagui</i>							o				
	<i>Elminius modestus</i>				o	o			o			
	Mysidacea <i>Neomysis integer</i>	2		1	o	o		o		o		o
	<i>Praunus flexuosus</i>											o
	Isopoda <i>Asellus aquaticus</i>			1	r							
	<i>Idotea emarginata</i>				r	r		o	r	1	o	
	<i>Jaera</i> sp.										o	
	<i>Lekanesphaera hookeri</i>	12		1	o							
	Amphipoda indet.	2		1	c	o	1	o	r	5	o	
	<i>Melita palmata</i>				o		1	r		2	o	
	Decapoda <i>Carcinus maenas</i>				o			c			c	c
	<i>Palaemon elegans</i>	3		3	o		2	o	o	1	o	o
	<i>Palaemon serratus</i>						2	o				
	<i>Palaemonetes varians</i>	8		2	c			o	o		o	c
Insecta												
	Diptera Chironomidae indet.	6	1		o			o				o
Mollusca												
	Gastropoda <i>Hydrobia ulvae</i>											
	Bivalvia <i>Anomia ephippium</i>											
	<i>Cerastoderma glaucum</i>				o			o			o	
	<i>Modiolula phaseolina</i>							o				
	<i>Mytilus edulis</i>											
Bryozoa	<i>Bowerbankia gracilis</i>							o				
Teleostei												
	Mugilidae indet.				a			o			o	c
	<i>Pleuronectes flesus</i>				o			c			c	c
	<i>Pomatoschistus microps</i>			1	c			c		4	c	c

Summary

Toormore lagoon is a very small "**estuarine**", **artificial lagoon** with a relatively low number of taxa (9 floral, 29 faunal) most of which are typically estuarine species but with a small suite of typically lagoonal species (2 floral and 3 faunal), all of which are also relatively common. However, it is like a miniature coastal lagoon, with the lagoon plants *C. linum* and *R. maritima*, and is one of the few sites in the country where large (mature) specimens of the "lagoon cockle", *C. glaucum* have been found. For this reason, overall the site is regarded as of **moderate conservation value** as a coastal lagoon.

Overall Conservation Value = Moderate

Conservation Status Assessment (from Oliver 2007)	
Impacts	Moderate eutrophication in small, shallow lagoon but significant tidal flushing.
Conservation Status	Unfavourable-Inadequate

Further Information
Listed as a lagoon by Healy <i>et al.</i> 1997, Healy 2003 and Oliver 2005 and included in the Conservation Status Assessment (Oliver 2007).

References:

- Bamber, R.N. 1997. Assessment of saline lagoons within Special Areas of Conservation. *English Nature Research Reports* No. 235.
- Barnes, R.S.K. 1989. Coastal lagoons of Britain: an overview and conservation appraisal. *Biological Conservation* **49**: 295–313.
- 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
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