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Loch Ó Dheas, Tory Island, County Donegal O.S. B 844 464
O.S. Discovery Sheet 1



Conservation Designation: Tory Island SAC 002259, SPA 004073, pNHA 000193

General description:

A small (3ha), shallow (1.5m) **natural sedimentary lagoon** with a **cobble barrier**, situated 1km west of the pier at West Town on Tory Island, Co. Donegal. Salinity is generally low and apparently is used as a source of drinking water, and measured less than 1psu on 26-27/10/05 and 1.2psu on 12/8/06.

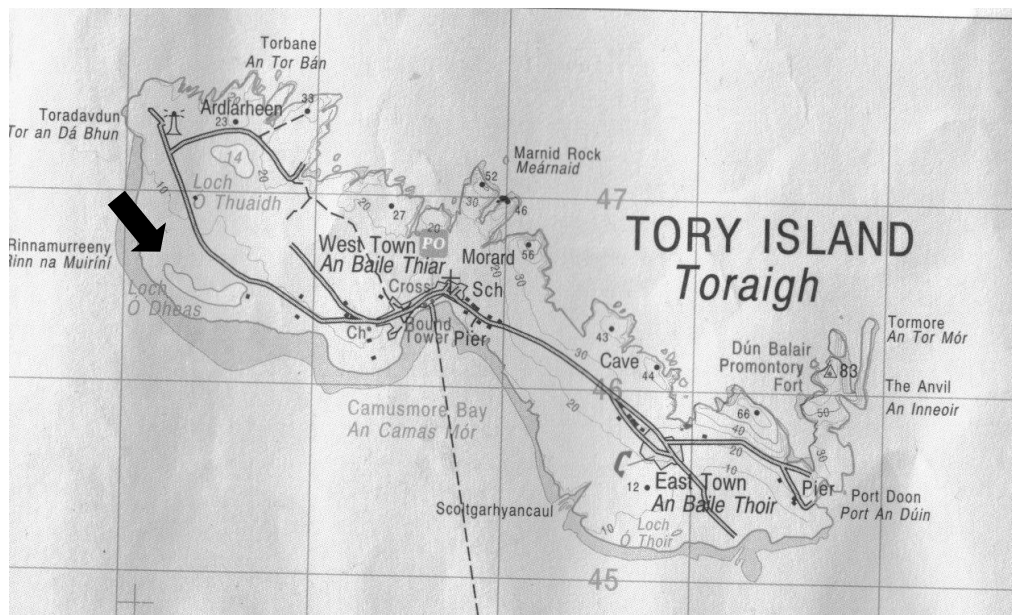


Figure 84.1 Location map of Loch Ó Dheas, Tory Island.

Loch Ó Dheas was surveyed on 26-27/10/05 and 12/8/06 for aquatic fauna and flora. Four stations were selected for sampling at this time (Figure 84.2, Table 84.1)

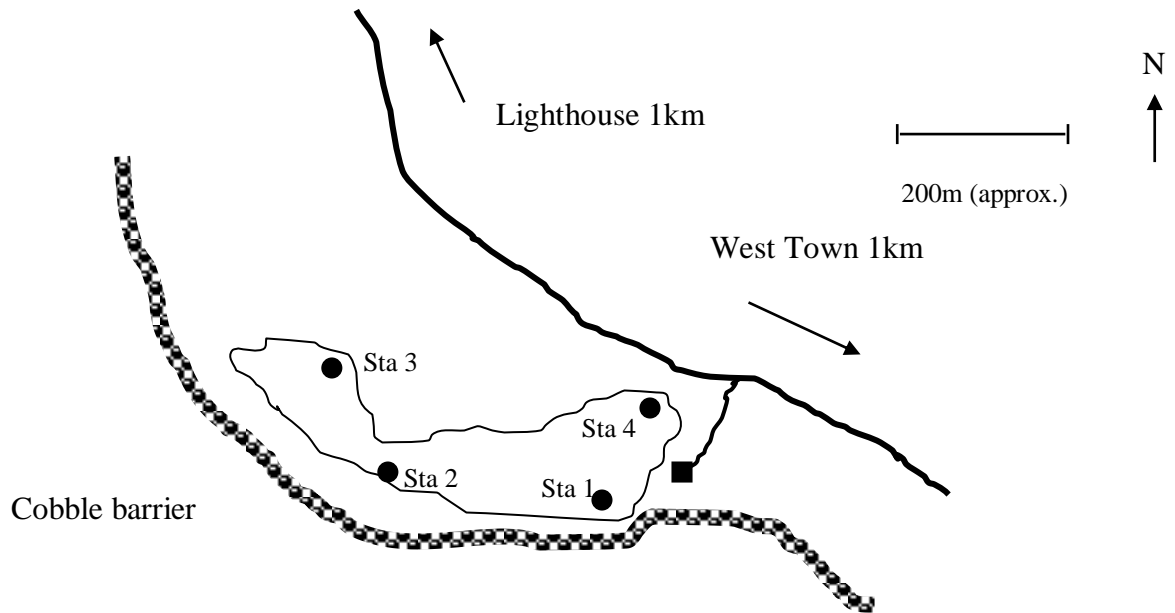


Figure 84.2 Sampling stations used at Loch Ó Dheas, Tory Island 26-27/10/05

Flora

The aquatic vegetation of Loch Ó Dheas at the time of sampling in 2005 (26-27/10/05) was remarkably poor (Table 84.1). In August 2006, the vegetation was slightly more abundant with percentage cover of *Ruppia cirrhosa* up to 25% and a few plants of *Ranunculus baudotii* were recorded, but the lagoon consists largely of bare granite rocks and sand, smothered at times with the filamentous alga, *Cladophora* sp.

Table 84.1 Positions of sampling stations in Loch Ó Dheas, 26-27/10/05, with salinity, temperature and depth of water, type of substratum and percentage cover of vegetation and bare ground. Species in bold text are lagoonal specialists.

	Station 1	Station 2	Station 3	Station 4
GPS Position	B 84587	B 84377	B 84348	B 84640
Salinity(psu)	46403	46442	46561	46513
Temperature	0.6	0.6	0.6	0.5
Depth(cm)	12.1	13.2	14.1	14.1
Substratum	0-100	0-100	0-70	0-50
	Granite boulders, sand	Granite boulders, sand	Granite boulders, sand	Granite boulders, sand
Percentage cover:				
Algae				
Chlorophyta	<i>Cladophora</i> sp.	10	10	20
Angiosperms				
	<i>Littorella</i> sp.	+	+	10
	<i>Myriophyllum spicatum</i>	5	5	
	<i>Ruppia cirrhosa</i>	5	5	
Bare ground				
Rock/pebbles				
	70	70	40	40
Sand				
	20	20	50	50

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. *Ruppia cirrhosa* was only identified at 23 lagoons (26%), but species was not determined at 12 sites.

Based on aquatic flora the site is rated as of **low conservation value**.

Fauna

The aquatic fauna recorded in Loch Ó Dheas on 26-27/10/05 is poor, with a total of only 17 faunal taxa, most of which are freshwater insects. None of the species are lagoonal specialists and only the mollusc, *Potamopyrgus antipodarum*, the corixid *Sigara dorsalis* and unidentified Mayfly (Ephemeroptera) were abundant at some stations. When visited in August 2006, the fauna was very similar, except that two additional species (*Lymnaea peregra*, *Ischnura elegans*) were recorded in low numbers.

The aquatic fauna is poor, with a low number of generally freshwater taxa recorded. None of the species recorded are lagoonal specialists and none are of particular interest. Based on aquatic fauna, the site is rated as of **low conservation value**.

Table 84.2 Aquatic fauna recorded at sampling stations in Loch Ó Dheas, 26-27/10/05
a = abundant, c = common, o = occasional, r = rare.

			Sta 1	Sta 2	Sta 3	Sta 4
Nematoda		Nematoda indet.			r	
Annelida	Hirudinea	Hirudinea indet.			c	r
		Naididae indet.			o	o
Crustacea	Amphipoda	<i>Gammarus duebeni</i>	o	o	c	r
Acarina		Hydracarina indet.	o		o	
Insecta	Ephemeroptera	Ephemeroptera indet.	c	c	c	a
	Trichoptera	Trichoptera indet.			o	c
	Heteroptera	<i>Corixa</i> sp.				o
		<i>Sigara dorsalis</i>	c	c	o	c
		<i>Sigara scotti</i>	o	o		o
	Coleoptera	<i>Haliplus</i> sp.	o	c		
		<i>Hygrotus</i> sp.	o	o		o
		sp. 3		o		
	Diptera	Chironomidae indet.	o	o	r	o
Mollusca	Gastropoda	<i>Potamopyrgus antipodarum</i>	a	c	a	a
Bryozoa		<i>Plumatella repens</i>	c	o	o	o
Pisces		<i>Gasterosteus aculeatus</i>	c	c	o	o

Summary

Loch Ó Dheas is a small, shallow **natural sedimentary lagoon** with a **cobble** barrier. Geomorphologically it is a good example of its type, but salinity is very low and the Loch could easily be regarded as a freshwater lake, rather than lagoon. In August 2006, the vegetation was slightly more abundant than in October 2005, with percentage cover of *Ruppia cirrhosa* up to 25% and a few plants of *Ranunculus baudotii*, but the lagoon consists largely of bare granite rocks and sand, smothered at times with the filamentous alga, *Cladophora* sp. The aquatic fauna is similarly poor, with a low number of generally freshwater taxa recorded. None of the species recorded are lagoonal specialists and none are of particular interest. Although geomorphologically it is an interesting sedimentary lagoon with an impressive cobble barrier, overall conservation value is rated as low.

Overall Conservation Value = Low

Conservation Status Assessment (from Oliver 2007)

Impacts	Poaching by cattle. Eutrophication from surrounding farmland, roosting waterfowl and dwelling houses in very shallow lagoon. Dumping.
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).

References:

- 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
- Oliver, G.A. 2007. *Conservation status report: Coastal Lagoons (1150)*. Unpublished report to the National Parks and Wildlife Service, Dublin.