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Claggan lagoon, County Mayo O.S. L 941 888

O.S. Discovery Sheet 31

Photo Shay Fennelly/Aquaphoto.ie

**Conservation Designation:** Clew Bay complex SAC 001482**General description:**

A small (2ha), shallow (<1m) **“saltmarsh” lagoon**, of an unusual type with a long narrow sluiced tidal inlet leading through a pipe under the road and a very soft bed of almost liquid marl. The lagoon is situated 9km northwest of Westport, Co. Mayo, bordering Clew Bay. Salinity probably varies considerably and ranged from 13.4psu in the main body of the lagoon to 30.4psu at the tidal inlet at the time of sampling (15/8/06).

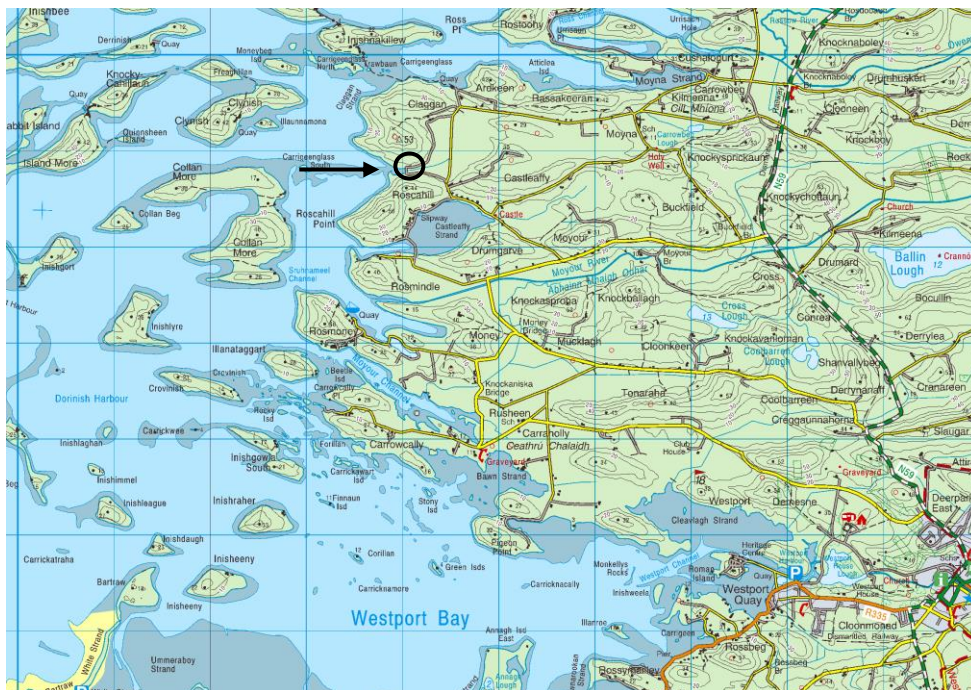


Figure 74.1 Location map of Claggan lagoon.

Claggan lagoon was surveyed on 15/8/06 for aquatic fauna and flora. Three stations were selected for sampling at this time (Figure 74.2, Table 74.1)

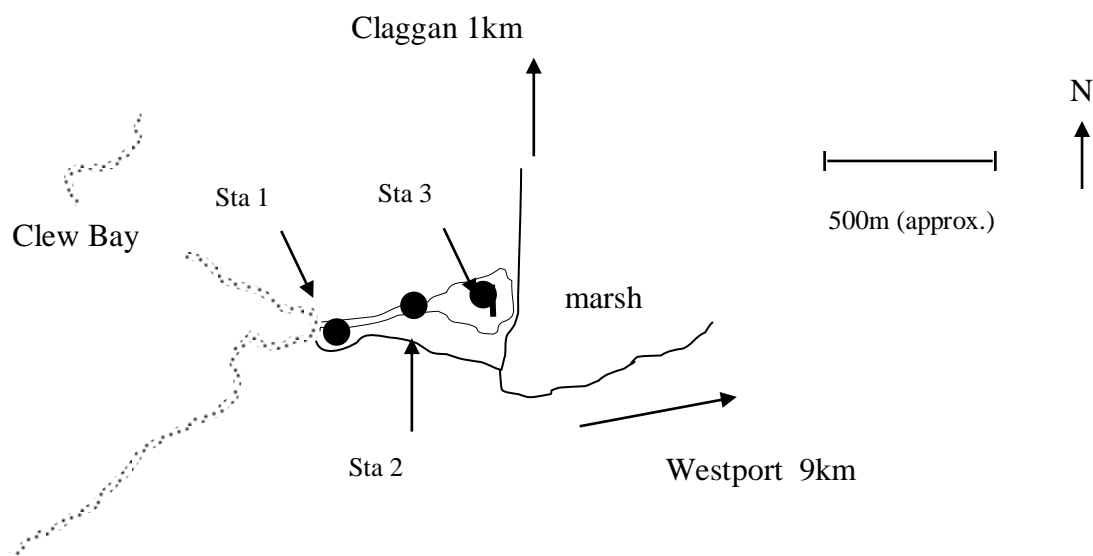


Figure 74.2 Sketch map of sampling stations used at Claggan lagoon 15/8/06.

Flora

This lagoon was visited briefly on 15/8/06, when the bed of the main body of the lagoon was a very soft, almost liquid marl. Remnants of charophytes were found in the lagoon, but all were decomposed and unidentifiable. The lagoon should be visited again to determine the identity of these potentially interesting charophytes.

Otherwise, the bed of the lagoon at the time of sampling (15/8/06) was largely bare (Table 74.1) and bordered by dense beds of *Scirpus maritimus*. In the narrow inlet, *Fucus spiralis* and *Chondrus crispus* were increasingly common towards the seawater inlet.

Table 74.1 Positions of sampling stations in Claggan lagoon 15/8/06, with salinity, depth of water and type of substratum.

		Sta 1	Sta 2	Sta 3
GPS position		L 94058	L 94249	?
		88804	88837	
Salinity(psu)		30.4	17.1	13.5
Depth(cm)		0-40	0-30	<30
Substratum		Soft mud, gravel, rocks	Soft mud, gravel	Very soft marl
Percentage cover:				
Chlorophyta	<i>Enteromorpha</i> sp.	2	+	+
Phaeophyta	<i>Fucus spiralis</i>	20	5	
Rhodophyta	<i>Chondrus crispus</i>	+		
Charophyta	indet.			+
Angiosperms	<i>Scirpus maritimus</i>		30	20
Bare ground	Bare mud	60	40	80
	Stones/gravel	20	30	

Based on aquatic vegetation the lagoon appears to be of **low conservation value** but should be revisited to determine the identity of the charophytes.

Fauna

A total of 21 faunal taxa were recorded at Claggan lagoon on the 15/8/06, most of which were confined to the inlet and the channel leading to the main body of the lagoon. Within the lagoon itself, on this occasion, only chironomid larvae and the mollusc *Potamopyrgus antipodarum* were recorded, neither of which were abundant. The main body of the lagoon appeared largely lifeless, and it is possible that very low water levels and high temperatures may have caused anoxia, and at least temporary extinctions. This lagoon should be revisited when conditions may be more suitable for both fauna and flora.

Of the species recorded, three are regarded as lagoonal specialists, but all are common species in lagoonal habitats in Ireland:

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.

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.

Table 74.2 Faunal taxa recorded at stations in Claggan lagoon, 15/8/06
r = rare, o = occasional, c = common. Species in bold text are lagoonal specialists.

		Sta 1	Sta 2	Sta 3
Crustacea				
	Ostracoda	o		shells
	Mysidacea			
	<i>Neomysis integer</i>	o		
	<i>Praunus flexuosus</i>	c		
	Isopoda			
	<i>Jaera albifrons</i>	c		
	<i>Lekanesphaera hookeri</i>	o	o	
	Amphipoda			
	<i>Gammarus</i> sp.	c	o	
	<i>Melita palmata</i>	c		
	Decapoda			
	<i>Carcinus maenas</i>	c		
	<i>Crangon crangon</i>	c		
	<i>Palaemon elegans</i>	c		
	<i>Palaemonetes varians</i>		o	
Insecta				
	Odonata			
	<i>Ischnura elegans</i>	r	r	
	Diptera			
	Chironomidae indet.	o	o	o
Mollusca				
	Gastropoda			
	<i>Hydrobia ulvae</i>	o	o	
	<i>Littorina littorea</i>	o		
	<i>Potamopyrgus antipodarum</i>			o
Bryozoa				
	<i>Conopeum seurati</i>	o		
Pisces				
	<i>Gasterosteus aculeatus</i>	c		
	Mugilidae indet.	c		
	<i>Pleuronectes flesus</i>	c		
	<i>Pomatoschistus microps</i>	c		

The *Gammarus* species was not identified specifically, but based on the aquatic fauna recorded, Claggan lagoon appears to be of **low conservation interest** as a coastal lagoon.

Summary

Claggan lagoon is a small, unusual type of "**saltmarsh**" lagoon with a very soft, almost liquid bed of marl at the time of sampling (15/8/06). Neither fauna nor flora appear to be of any conservation interest, but the lagoon may have suffered recent anoxia, due to low water levels, high temperatures and eutrophication, and **should be revisited** to determine the identity of the largely decomposed fragments of charophytes that were found. Based on this brief visit, the site is regarded as of low conservation value, but is potentially more interesting.

Overall Conservation Value = Low/Potentially higher.

Conservation Status Assessment (from Oliver 2007)

Impacts	Natural eutrophication in very shallow lagoon. Accumulation of organic material.
Conservation Status	Unfavourable-Inadequate

Further Information

This lagoon was only recently surveyed (2006) and added to the Lagoon Inventory, following information from a local resident (S. Fennelly). Included in the Conservation Status Assessment (Oliver 2007). Otherwise, no further information available.

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.
- Oliver, G.A. 2007. Conservation status report: Coastal Lagoons (1150). Unpublished report to the National Parks and Wildlife Service, Dublin.
- Wyse Jackson, P.N. 1991. Distribution of Irish marine Bryozoa, together with biographical notes relating to the chief researchers in the group. *Bulletin of the Irish Biogeographical Society*. **14**: 129-18.