



Conservation Designation: Rutland Island and Sound SAC 002283, pNHA 001141

General description:

Sally's Lough is a small (10ha), relatively shallow (<4m) **rock/peat lagoon** with tidal narrow 3 km to the north of Burtonport, Co. Donegal. According to local information it was former freshwater lake which became tidal following excavation of a channel to the sea. Seawater enters the lake on most tides and salinity at the time of sampling (5-7/9/98) was close to that seawater (29.5 -34.3psu) throughout the lagoon, although 28 psu was recorded in June 1998.



Figure 81.1 Location of map of Sally's Lough, Co. Donegal.

Sally's Lough was surveyed in 1998 for vegetation (Roden 1999), aquatic fauna (Oliver 1999) and ecotonal coleoptera (Good 1998, Good & Butler 2000). Results of these surveys are summarised by Healy (1999a,b; 2003).

Stations used for faunal sampling are not necessarily the same as those used for vegetation or ecotonal coleoptera.

Flora

The vegetation of L. Athola was surveyed in 1998 by C. Roden (Roden 1999). The following is based on the report by Roden, following his survey on 6-7/9/98.

The eastern part of the lagoon is shallow (<2m) and floored with sand and soft mud. *Chaetomorpha linum* is common, *Ruppia* sp. and drifts of *Cladophora battersii* are occasional. The two former taxa are lagoonal specialists and the latter is a proposed specialist for Ireland. The *Ruppia* at this site was not identified specifically, as no flowering plants were found.

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.

Cladophora battersii, confirmed by Prof. Van den Hoek, is a rare species previously known only from pre 1914 records and found during the lagoon surveys only at two high salinity sites on the west coast (L. Athola, Co. Galway and Sally's L., Co. Donegal). Proposed as lagoonal specialist for Ireland by Roden (1999).

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.

In the western part of the lagoon, the bed is at 3-4m with large areas of bare mud with *C. linum* and *C. battersii* but no *Ruppia*. Extensive underwater cliffs in the southwestern quarter support a moderately diverse macroalgal flora with *Furcellaria lumbricalis*, *Phyllophora pseudoceranooides*, *P. crispus*, *Anfelta plicata*, *Chondrus crispus*, *Corallina officinalis*, *Coccotylus truncata*, *Plocamium cartilaginum*, *Dictyota dichotoma*, *Codium fragile tomentosum* and *Cladophora rupestris*. Occasional brown algae including *Ascophyllum nodosum*, *Fucus spiralis* and *F. vesiculosus* were recorded close to the surface. This algal vegetation corresponds to OB23/OB24 of Covey and Thorpe (1994) found in the Scottish "obs".

Sally's Lough is one of only two sites where *Cladophora battersii* was found during the lagoon surveys. Generally, the flora might be described as species-poor, but two other lagoonal specialists were recorded (*Chaetomorpha linum*, *Ruppia* sp.). Based mainly on the presence of *C. battersii* alone, the site is rated as of **moderate conservation value** for aquatic vegetation.

Fauna

Five stations were selected for faunal sampling in Sally's Lough on 5-7/9/98 (Oliver 1999, Figure 81.2, Table 81.1).

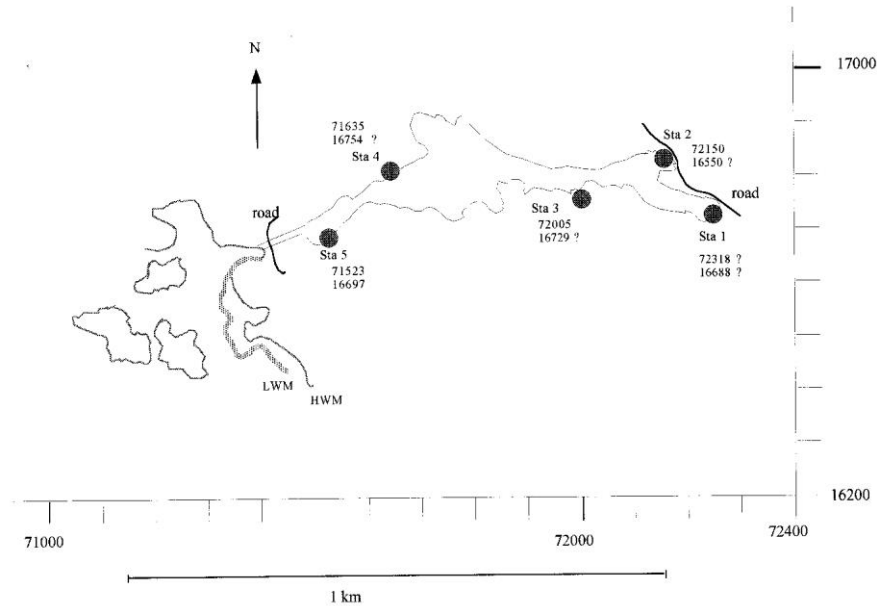


Figure 81.2 Positions of stations used for sampling aquatic fauna at Sally's L. 5-7/9/98 (there is some doubt about accuracy of GPS positions)

Table 81.1 Positions of faunal sampling stations in Sally's Lough, 7-8/9/98 with salinity, depth of water and type of substratum (there is some doubt about accuracy of GPS positions)

	Sta 1	Sta 2	Sta 3	Sta 4	Sta 5
GPS position	B 72318 16688	B 72150 16550	B 72005 16729	B 71635 16754	B 71523 16697
Salinity(psu)	33.7	34	33.4	29.5-31.5	33.5
Depth(cm)	0-100	0-100	0-150	0-50	20-100
Substratum	Gravel, sand and occasional stones overlain with peaty silt	Rock, stones, deep layer of organic silt	Rocks, stones, gravel, sand, silt	Sand, silt, peat	Sand, organic silt

A total of 49 faunal taxa were recorded at Sally's Lough (Table 81.2), of which four species are regarded as lagoonal specialists and two amphipod crustaceans appear 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.

Cerastoderma glaucum Bivalve mollusc. A common lagoonal specialist found at 30 of the 87 lagoons (34.5%) surveyed.

Onoba aculeus Gastropod mollusc recorded at Greenore Golf course, Co. Louth, Lettermullen Pool, L. an Aibhnín, and L. Athola, Co. Galway and Sally's Lake, Co. Donegal, and recently (unconfirmed) from L. Dearg in the Aran islands.

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 81.2 Aquatic fauna recorded at stations in Sally's Lough, Co. Donegal. 1998.
 L.T. = light trap; F = Fyke net; + = present, o = occasional, c = common, a = abundant.
 Species in bold text are lagoonal specialists or rare species.

Taxa		Sampling Stations										
		1	L.T. 1	2	L.T. 2	mid	3	L.T.3	4	L.T.4	5	
Cnidaria	<i>Anthopleura ballii</i>	c		a		a		a		a		a
Nematoda	indet.							c				c
Nemertea	indet.					+						
Annelida	<i>Arenicola marina</i>							c				
	<i>Lumbrinereis gracilis</i>					a						
	<i>Platynereis dumerili</i>					c						
	<i>Polyopthalmus pictus</i>					c						
	<i>Pomatoceros sp.</i>											+
	<i>Scoloplos armiger</i>					a						
	Spirorbidae indet.								+			+
Sipuncula	indet.							+				
Crustacea												
	Ostracoda											a
	Copepoda <i>Notodelphys sp.</i>			+						+		+
	Mysidacea <i>Praunus flexuosus</i>	a	15	a	78	c	c	35	c	37		c
	Isopoda <i>Idotea chelipes</i>	o						+				
	<i>Jaera sp.</i>	1	1									+
	Amphipoda	o	2	o	1	a	c	2	a	1		9
	<i>Ampithoe ramondi</i>					c	+		1			
	<i>Corophium volutator</i>	o	1	a		o	1	1	c			1
	<i>Dexamine spinosa</i>						1		1			
	<i>Gammarus duebeni</i>			o	1			1	1			
	<i>G. zaddachi</i>								1			
	<i>Microdeutopus anomalous</i>		1	o		a	8		32	1		9
	<i>Lembos longipes</i>								1			
	Decapoda <i>Cancer pagurus</i>								F=1			
	<i>Carcinus maenas</i>	F=65		+		+	+		F=35			+
	<i>Crangon crangon</i>											c
	<i>Palaemon elegans</i>	+		+		+		+	+			+
	<i>P. serratus</i>			+					+			
Acarina	indet.											+
Insecta	<i>Chironomidae sp.1</i>	+		+								
	<i>Chironomidae sp.2</i>	+										
Mollusca												
	Prosobranchia <i>Littorina saxatilis</i>	1		+				+				
	<i>Onoba aculeus</i>	o						+		+		
	<i>Rissoa parva</i>	+		+		1		+		+		+
	<i>Skeneopsis planorbis</i>											
	Bivalvia <i>Cerastoderma glaucum</i>	spat		shells		spat			shells			spat
	<i>Mya arenaria</i>	shells		shells				shells				shells
	<i>Mytilus edulis</i>								+			
	<i>Ostrea edulis</i>								+			
Echinodermata	<i>Asterias rubens</i>											1
	<i>Amphipholis squamata</i>	c		c		c		c		c		c
	<i>Leptosynapta inhaerens</i>			+		c			c			
Bryozoa	<i>Alcyonidium gelatinosum</i>							+				
	<i>Bowerbankia gracilis</i>			+								
	<i>Conopeum seurati</i>			a								
	<i>Cryptosula pallasiana</i>	+						+				+
Tunicata	<i>Ascidiella aspersa</i>	+		+				+		+		+
	<i>Clavelina lepadiformis</i>					+		+		+		+
Pisces	<i>Anguilla anguilla</i>	F=3		F=4				+		F=5		
	<i>Gasterosteus aculeatus</i>	+			3			o	2			
	<i>Gobius niger</i>	+								F=2		c
	<i>Pleuronectes flesus</i>			F=1								
	<i>Pomatoschistus microps</i>	+	10	+	5			+		+		c

Ampithoe ramondi Amphipod crustacean recorded at Kilmore L., Co. Cork, Drongawn L., Co. Kerry, L. an Aibhnín, and L. Athola, Co. Galway and Sally's L., Co. Donegal. According to Lincoln (1979) all records from Britain are in the southwest. The record from Sally's L., Donegal may be the most northerly record of the species for the British Isles.

Lembos longipes Amphipod crustacean recorded at 5 sites on the west coast (Kilmore L, Co. Cork, Drongawn L., Co. Kerry, L. an Aibhnín, Co. Galway, Furnace L., Co. Mayo and Sally's Lough, Co. Donegal). There are only three previous records for Ireland (Costello *et al.* 1989).

The aquatic fauna of Sally's Lough is moderately rich but this is largely due to the strong marine influence. However, four species are lagoonal specialists and two amphipod crustaceans appear to be rare. Based on aquatic fauna, the site is rated as of **moderate conservation value**.

Ecotonal coleoptera

A total of eight carabid and thirteen staphylinid beetles were recorded in Sally's Lough in 1998 (Good 1999, Good & Butler 2000), none of which are indicator species. Based on shoreline coleoptera, the site is rated as of **no conservation value**.

Summary

Sally's Lough is a small, relatively shallow **rock/peat lagoon**, a type of lagoon similar to the Scottish "obs", which are characteristic of parts of the west coast of Ireland, especially in Connemara, but relatively rare in European terms. Generally, the flora might be described as species-poor, but this is one of only two sites where *Cladophora battersii* was found during the lagoon surveys and two other lagoonal specialists were recorded (*Chaetomorpha linum*, *Ruppia* sp.). The aquatic fauna is moderately rich with four lagoonal specialists and two amphipod crustaceans which appear to be rare in Ireland (*A. ramondi*, *L. longipes*). Overall, the site is rated as of **moderate conservation value**.

Overall Conservation Value = Moderate

Conservation Status Assessment (from Oliver 2007)

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

Further Information

Listed as a lagoon by Healy *et al.* 1997. Surveyed in 1998 for vegetation (Roden 1999), aquatic fauna (Oliver 1999) and ecotonal coleoptera (Good 1998, Good & Butler 2000). Results of these surveys are summarised by Healy (1999a,b; 2003). Included in a biological classification of Irish coastal lagoons (Oliver 2005) and in the Conservation Status Assessment (Oliver 2007).

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