

4.66

## Loch an Chaoráin, County Galway (Lough Keeraun)

O.S. L 784 315

O.S. Discovery Sheet 44

**Conservation Designation:**

NONE

**General description:**

Lough Keeraun is a small (2ha), “**rock/peat**” lagoon, with a stream running through it, from an “upper” freshwater lake. It is situated in the northern part of Mweenish Bay, 0.5 km south of Carna. Seawater enters from the south, only occasionally and salinity is probably low most of the time, and measured 6.5-7.4psu at the time of sampling (7/10/06), but water flowing from the lagoon measured 8.6psu, suggesting more saline water may remain at depth in central areas which were not surveyed.

**Underwater observations should be made in this lagoon.**

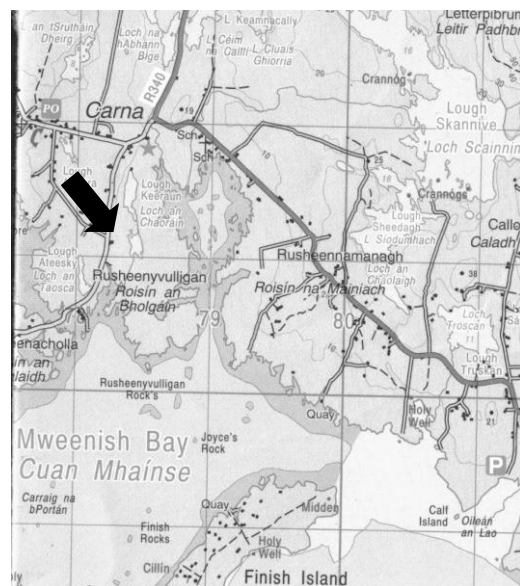


Figure 66.1 Location map of Lough Keeraun.

Lough Keeraun was surveyed on 7/10/06 for aquatic fauna and flora. The lagoon is small and only two stations were selected for sampling at this time (Figure 66.2, Table 66.1).

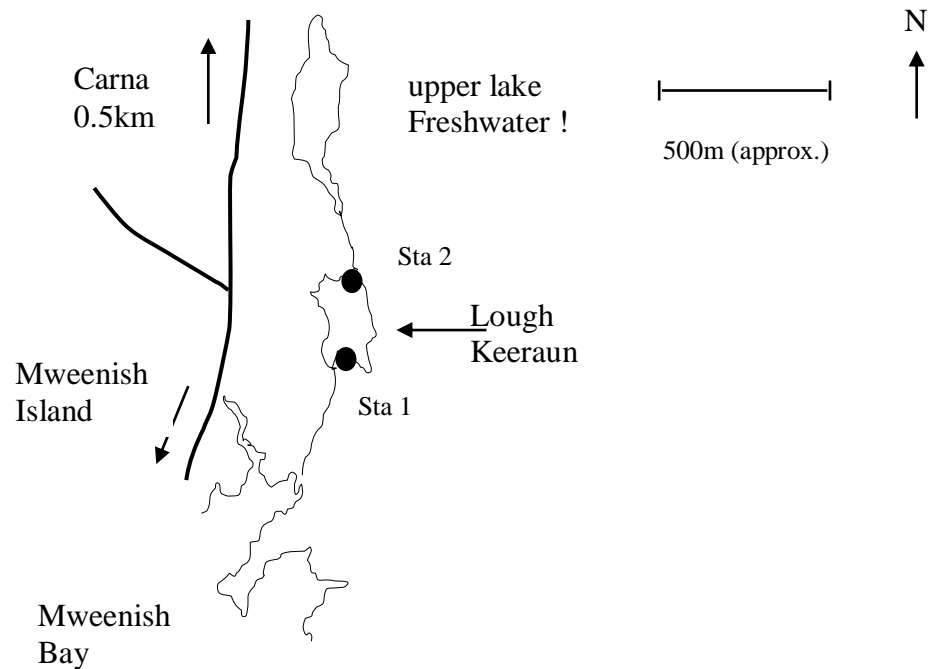


Figure 66.2 Sketch map of sampling stations in Lough Keeraun 7/10/06.

### Flora

Only 5 floral taxa were recorded in Lough Keeraun on 7/10/06. The southern part of the lagoon is dominated by emergent *Scirpus maritimus* and the northern part is dominated by filamentous *Cladophora* sp.

Table 66.1 Positions of sampling stations in Lough Keeraun, 7/10/06, with percentage cover of vegetation and bare ground, salinity, temperature, depth of water and type of substratum. + = present

	Sta 1	Sta 2
GPS position	L 78438 31036	L 78460 31170
Salinity(psu) at surface	7.3	6.5
Salinity(psu) at 1m depth	7.4	7.3
Temperature at surface	12.4	13.2
Temperature at 1m depth	12.2	12.8
Substratum	Granite bedrock, stones, peaty mud	Granite bedrock, stones, peaty mud
<b>Percentage cover:</b>		
<b>Algae</b>		
<i>Cladophora</i> sp.	10	50
<i>Enteromorpha</i> sp.	+	+
<b>Angiosperms</b>		
<i>Juncus</i> sp.	5	
<i>Scirpus maritimus</i>	70	
<i>Potamogeton pectinatus</i>	+	+
<b>Bare ground - mud</b>	10	20
<b>rock/stones</b>	15	20

Patches of emergent *Phragmites australis* and *Cladium mariscus* were seen at the northern end of the lagoon, but outside the sample areas. Only very small amounts of any other species were found. Perhaps more extensive beds of *Potamogeton pectinatus* occur at depth in the central parts of the lagoon which were not surveyed, due to the difficulty of accessing the lagoon with a boat. It is possible that *Ruppia* and even charophytes may occur at depth. **Underwater observations should be made in this lagoon.**

In the absence of an underwater survey, based on aquatic flora, this lagoon is rated as of **no conservation value**.

### Fauna

A total of 19 faunal taxa were recorded in Lough Keeraun, most of which are freshwater insects (Table 66.2), especially beetles and corixids, but three species are lagoonal specialists and one (*Plea leachi*) appears to be more frequently recorded in brackish water in Ireland.

Table 66.2 Faunal taxa recorded at stations in Lough Keeraun, 7/10/06.

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

			Sta 1	Sta 2
<b>Crustacea</b>	Mysidacea	<i>Neomysis integer</i>	o	
	Amphipoda	<i>Gammarus duebeni</i>	o	c
	Decapoda	<b><i>Palaemonetes varians</i></b>	r	
<b>Insecta</b>	Odonata	<i>Ischnura elegans</i>	c	c
	Trichoptera	indet.	o	
	Heteroptera	<i>Corixa panzeri</i>	o	
		<i>Gerris</i>	r	
		<b><i>Plea leachi</i></b>	o	c
		<i>Sigara dorsalis</i>	c	
	Coleoptera	<b><i>Sigara stagnalis</i></b>		o
		<i>Haliphus confinis</i>	o	c
		<i>Hygrotus inaequalis</i>		o
		<i>Laccophilus minutus</i>		o
<i>Noterus clavicornis</i>		o		
Diptera		Chironomidae indet.	o	o
<b>Mollusca</b>	Pulmonata	<i>Potamopyrgus antipodarum</i>	a	a
<b>Bryozoa</b>		<b><i>Conopeum seurati</i></b>	c	
<b>Pisces</b>		<i>Gasterosteus aculeatus</i>	r	
		<i>Pleuronectes flesus</i>		o

***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.

***Plea leachi*** has been recorded from Ballyteige, Tacumshin and The North Slob (Co. Wexford) and from Kilcoole (Co. Wicklow) and curiously from two sites in Galway (Dorus Lakes, Lough Keeraun). Recorded previously from Tacumshin and Ballyteige (Galvin 1992). Otherwise appears to be rare, but is small and could be overlooked. Halbert (1935) recorded it from L. Gill (Co. Kerry) and described it as

widespread, but local, usually “in stagnant water near the coast”. Proposed as a lagoonal specialist for Ireland, but there is now some doubt about this decision.

*Sigara stagnalis* Hemipteran insect (water-boatman). A common lagoonal specialist found at 36 of the 87 (41.4%) lagoons 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.

Relatively few faunal taxa were recorded in Lough Keeraun, and most of these are common freshwater species, but a small suite of lagoonal specialists were also found, most of which are relatively common in lagoonal habitats in Ireland, but they nevertheless confirm the lagoonal status of the site. Based on aquatic fauna, Lough Keeraun is rated as of **moderate conservation value**.

### Summary

Lough Keeraun is a good example of a small “**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. They are permanent, shallow and brackish, with restricted tidal influence due to the presence of a “barrier” of peat or rock. Aquatic flora appears to be poor, but an underwater survey may find it to be more interesting. Aquatic fauna is also relatively poor, and largely dominated by freshwater species, but also including a small suite of lagoonal specialists which confirm the site’s status as a coastal lagoon. Overall, it is a good example of a small “rock/peat” lagoon and is rated as of moderate conservation value.

**Overall Conservation Value = Moderate**

### Conservation Status Assessment (from Oliver 2007)

Impacts	Poaching by cattle in some areas.
Conservation Status	<b>Favourable</b>

### 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:

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- Barnes, R.S.K. 1989. Coastal lagoons of Britain: an overview and conservation appraisal. *Biological Conservation* **49**: 295–313.
- Galvin, P. 1992. *The ecology of the brackish-water lagoons of Wexford and east Cork*. MSc thesis, University College, Dublin.
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