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Farranamanagh Lake, County Cork O.S. V 830 378

O.S. Discovery Sheet 88



Conservation Designation: Farranamanagh Lough SAC 002189

General description:

Farranamanagh Lake is situated in Dunmanus Bay on the south side of the Sheep's Head peninsula, 3 km east of Kilcrohane. The lake is a small (6ha), completely natural **sedimentary lagoon** lying behind a cobble barrier through which runs a permanent outlet. Small freshwater streams enter the lagoon in the north. On spring tides, seawater enters through the inlet and overtops the barrier during storms. Salinity ranged from 1-6psu at the time of sampling (17-18/8/96).

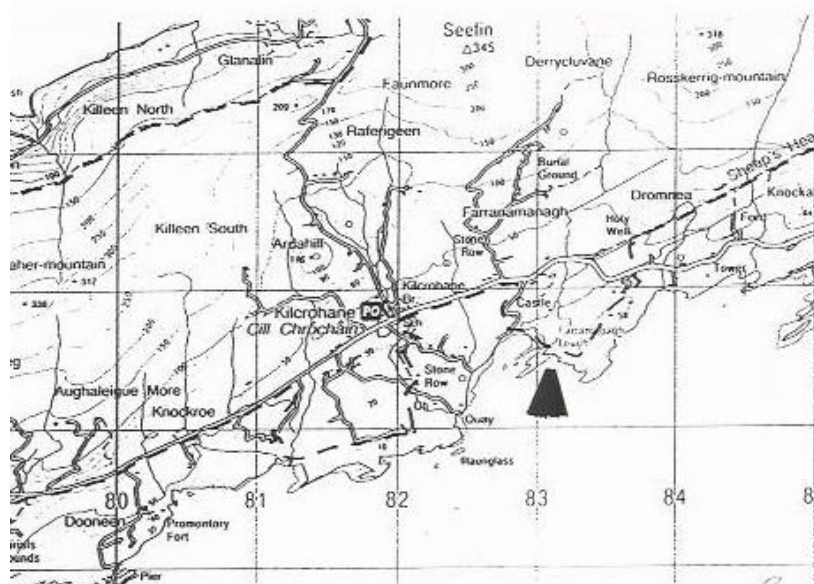


Figure 23.1 Location of map of Farranamanagh Lake.

Farranamanagh Lake was surveyed in 1996 for vegetation (Hatch 1996, Hatch & Healy 1998), aquatic fauna (Healy & Oliver 1996, Oliver & Healy 1998) and ecotonal coleoptera (Good 1996, Good & Butler 1998). Results of these surveys are summarised by Healy *et al.* (1997a,b,c), Healy & Oliver (1998) and Healy (1999, 2003).

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

Flora

Flora of the lagoon was surveyed by P. Hatch in 1996 (Hatch 1996, Hatch & Healy 1998).

Ruppia was the only aquatic higher plant found in the lake during this survey. It is well distributed around the site, occurring within two metres of the shore at sparse to patchy cover in most areas. It was not possible to identify samples to species.

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. *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 22 lagoons, but species was not determined at 12 sites. *Ruppia maritima* var *brevirostris* was only positively identified at two sites (Ballyteige, Co. Wexford and Inch L., Co. Donegal).

A *Fucus* species is locally abundant in the mouth of the outlet channel. Marginal vegetation shows no notable diversity. *Schoenoplectus lacustris* ssp *tabernaemontani* single species swamps fringe the eastern and north eastern shores and also occur at the freshwater inflow and in places along the southern shore. *Scirpus maritimus* swamp occurs along parts of the southern shore. The eastern shore consists of exposed bedrock alternating with stretches of low earth cliff. Small *Scirpus*, *Schoenoplectus* and *Eleocharis palustris* swamps occur at one point here approximately half way along the shore.

This seems to be a very species-poor site, although it is possible that additional aquatic species are present in deeper parts of the lagoon more than ten metres out from the shore. Based on vegetation, the lagoon appears to be of **low conservation value**.

Fauna

Four stations were selected for faunal sampling in 1996 (Figure 23.1, Table 23.1). Only 16 faunal taxa were recorded in 1996 (Table 23.2), of which 15 are identified to species. Only one of the species is listed as a lagoonal specialist (*Palaemonetes varians*) but two other species are proposed specialists for Ireland and one of these (*A. pellucida*) appears to be a rare species.

Jaera nordmanni. Isopod crustacean recorded at 24 of the 87 lagoons surveyed (27.6%) and may occur at others where it was not recorded due to the fact that only adult males are easily identified. This species may occur in freshwater, as in L. Errol, Cape Clear, Co. Cork. Described in England (Barnes 1994, Hayward and Ryland 1995) as occurring in streams flowing down the shoreline, on south and west coasts only. All

records in Ireland are from West Cork to Donegal. Proposed as a lagoonal specialist for Ireland by Oliver and Healy (1998).

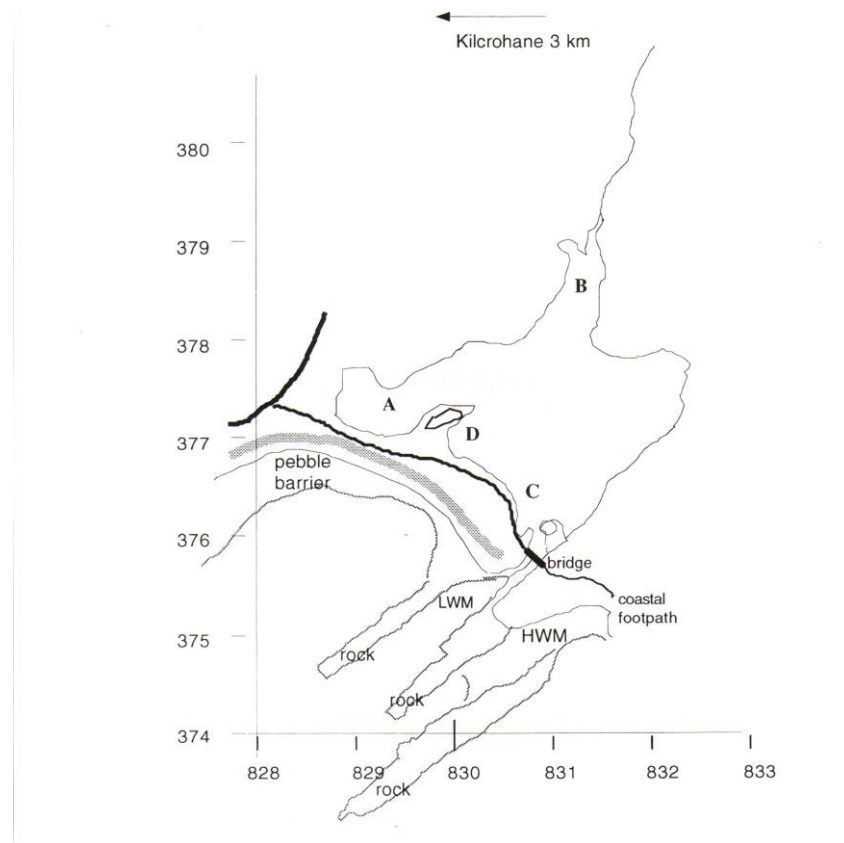


Figure 23.2 Sampling stations used at Farranamanagh Lake.

Table 23.1 Positions of sampling stations in Farranamanagh Lake, 17-18/8/96, with salinity, depth of water and type of substratum.

	Sta A	Sta B	Sta C	Sta D
GPS position	V 8297 3774	V 8312 3784	V 8307 3765	V 8301 3770
Salinity(psu)	2-3	1	6	5
Depth(cm)	0-100	25-60	100-150	0-25
Substratum	Cobbles, gravel, peat and organic silt.	Large boulders, sand, silt	Cobbles, gravel and sand	Cobbles and gravel

Allomelita pellucida. Amphipod crustacean recorded at Kilcoole, Co. Wicklow, six sites in Cork (Cuskinny, L. Beg, Kilkeran, Lissagriffin, Farranamanagh, Reenydonegan), and recently in the River Lee (Cott *et al.* 2007), and in Furnace L., Co. Mayo. There are also 2 unconfirmed records for Ballyvodock (Co Cork) and Muckinish (Co. Clare). The only previous records are for L. Hyne and Glengarriff in Co. Cork and Furnace L. (Costello *et al.* 1989). Proposed as a lagoonal specialist for Ireland by Oliver and Healy (1998).

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.

Faunal diversity was poor in Farranamanagh Lake. Only *Neomysis integer*, *Palaemonetes varians* and *Gasterosteus aculeatus* were common and no species was present at high density.

The faunal assemblage typifies a brackish lagoon with a sea inlet, but where the freshwater inflow is sufficient to counteract the marine influence and the salinity remains generally low. The salinities recorded at the time of sampling (2-6‰) may be typical but there are probably wide and rapid fluctuations according to tides and weather. The poor representation of oligohaline species may be due to temporary high salt levels which prevent populations becoming established. This seems to be the only possible explanation for the absence of corixids and the scarcity of beetles in areas where there was good growth of *Ruppia*.

Table 23.2 Fauna Recorded at Farranamanagh Lake, Co. Cork. July and August, 1996. L.T. = light-trap, () = recorded in July; + = present; o = occasional; c = common; a = abundant; F = fyke net. Species in bold text are lagoonal specialist and notable species.

Fauna	Sampling Stations						
	A	L.T.A	B	L.T.B	C	L.T.C	D
Cnidaria <i>Aurelia aurita</i>					(+)		
Crustacea							
Mysidacea <i>Neomysis integer</i>	o	10	o		15		
Isopoda <i>Jaera nordmanni</i>							+
Amphipoda	+	+	a	25		+	+
<i>Allomelita pellucida</i>		+					
<i>Gammarus duebeni</i>							+
<i>G. zaddachi</i>		+	a	+		+	
Decapoda <i>Carcinus maenas</i>			F		F, c		
<i>Crangon crangon</i>				2			
<i>Palaemonetes varians</i>	a	60	c	16	a	31	
Insecta							
Coleoptera <i>Anacaena globulus</i>			+				
<i>Haliplus lineatocollis</i>					+		
Diptera Chironomidae indet.			+			+	
Mollusca							
Prosobranchia <i>Potamopyrgus antipodarum</i>	+		+		+	+	+
Teleostei <i>Anguilla anguilla</i>	+		F				
<i>Gasterosteus aculeatus</i>	+	2	a	45	+		+
<i>Pomatoschistus microps</i>	+	3	+	5	+		+

Ecotonal Coleoptera were surveyed in 1996 by Good and Butler (1996, 1998). Thirty five species of staphylinid and thirteen species of carabid beetles were recorded, none of which were regarded as indicator species, and based on ecotonal coleoptera the site was rated as of **no conservation value**.

Summary

Although the number of both the flora and fauna of the lagoon are relatively poor, four lagoonal specialists were recorded (1 floral, 3 faunal) and one crustacean species (*A. pellucida*) appears to be rare in Ireland. Geomorphologically, Farranamanagh Lake is an excellent example of a **natural sedimentary lagoon** with a cobble barrier and therefore rated highly for overall conservation value.

Overall Conservation Value = High

Conservation Status Assessment (from Oliver 2007)	
Impacts	Small natural lagoon. Potential impact from exotic plants. Removal of beach materials. Erosion.
Conservation Status	Favourable

Further Information
Surveyed in 1996 for vegetation (Hatch 1996, Hatch & Healy 1998), aquatic fauna (Healy & Oliver 1996, Oliver & Healy 1998) and ecotonal coleoptera (Good 1996, Good & Butler 1998). Results of these surveys are summarised by Healy <i>et al.</i> (1997a,b,c), Healy & Oliver (1998), and Healy (1999, 2003). Included in a biological classification of Irish coastal lagoons (Oliver 2005) and in the Conservation Status Assessment (Oliver 2007).

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