

**4.19 Kilkeran Lake County Cork O.S. W 338 344**  
**O.S. Discovery Sheet 89**



**Conservation Designation:** Kilkeran Lake and Castlefreke Dunes  
 SAC 001061, pNHA 001061

**General description:**

Kilkeran Lake is a small (16ha), shallow (<3m) natural lagoon, lying behind sand hills on the south coast of Co. Cork, about 5 km east of the town of Rosscarbery and 2 km north of Galley Head. A channel leads from the lagoon 400 m to the shoreline where the water of the lake is impounded for most of the year by a short, coarse sand barrier, which the County Council periodically breach, but that also opens naturally, when water levels rise. The barrier closes again naturally, generally within a few weeks. Salinity is generally low, and measured 1-2psu when sampled in 1996. The lake has suffered from extreme eutrophication, and the once thriving trout fishery has now gone.

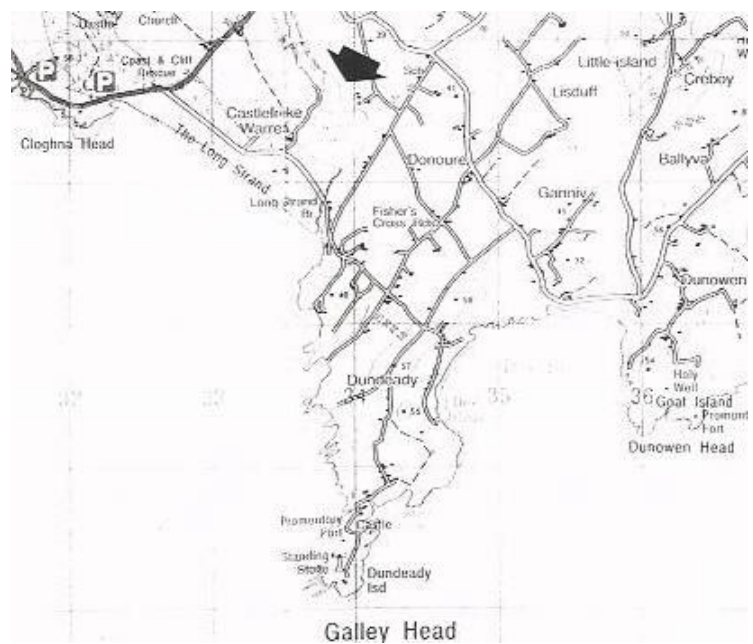


Fig 19.1 Location of map of Kilkeran Lake

Kilkeran 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

The vegetation of Kilkeran Lake was surveyed by P. Hatch in 1996 (Hatch 1996, Hatch and Healy 1998) and the following is based on his survey.

*Potamogeton pectinatus* is abundant, occurring in extensive, dense beds to 5-15 metres out from most of the eastern and western shores and covering the entire water surface of the eastern bay. *Ruppia maritima* occurs here but was found by grapnel survey near the mouth of the outlet channel only. Its abundance and distribution is unknown. A small amount of *Chara aspera* var. *aspera* was found at the same location. Its abundance and distribution are also unknown. *Polygonum amphibium* is occasional along the western shore. Marginal vegetation comprises a narrow fringing strip of *Scirpus maritimus*, *Schoenoplectus* and *Phragmites*, each locally dominant along the eastern and western shores, with a broader band of *Phragmites* along the southern shore and an extensive *Phragmites* bed associated with the freshwater inflows in the north.

A total of 9 floral taxa were recorded in 1996, of which one species (*R. maritima*) is regarded as a lagoonal specialist.

***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.

Hatch (1996) described the vegetation of Kilkeran as a species-poor example of mildly brackish conditions and regarded it as “potentially valuable” as a full survey of aquatics was not possible. No further information is available but the lagoon is regarded as of **low conservation value** based on aquatic flora.

### Fauna

The fauna of the lake was surveyed by P. Galvin in 1991 (Galvin 1992) and by Oliver and Healy in 1996 (Oliver 1996, Oliver and Healy 1998).

A total of 29 faunal taxa were recorded in 1996, of which 27 were identified to species (Table 19.2). Four species are lagoonal specialists and three appear to be rare species.

***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.

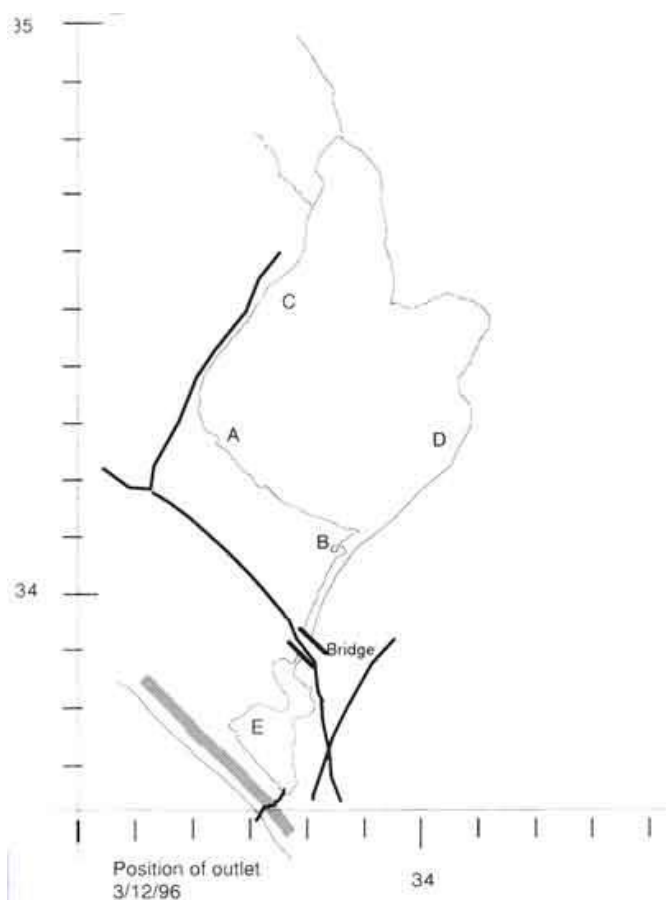


Figure 19.2 Sampling stations used at Kilkeran Lake.

Table 19.1 Positions, salinity, depth of water and type of substratum of sampling stations in Kilkeran Lake 25-27/7/96

	Sampling stations				
	Sta A	Sta B	Sta C	Sta D	Sta E
GPS position	W 3360 3426	W 3389 3404	W 3379 3454	W 3407 3425	W 3374 3356
Salinity(psu)	1.00	2.00	2.00	1-2.00	2.00
Depth of water(cm)	0-100	0-200	15-100	15-100	0-100
Substratum	Gravel, sand and mud, with occasional stones	Sand, soft organic mud	Stones with patches of sand and silty mud	Shaley stone, soft organic mud	Sand and gravel

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

***Notonecta viridis*** Hemipteran insect (back-swimmer) recorded on the east coast at Kilcoole, on the south coast at North Slob, Lady's Island L., Tacumshin L., Ballyteige, Clogheen/White's Marsh and Kilkeran L. and also on the west coast at Reenydonegan, Co. Cork and L. Donnell, Co. Clare. A rare brackish water species in Ireland. According to Southwood and Leston (1959), it was recorded only for Wexford and North Kerry. Recorded previously in Lady's Island L (Healy *et al.* 1982) in Lady's

Island L. and the North Slob by Galvin (1992) and from the Dingle Peninsula by McCarthy and Walton (1980). *N. viridis* is found at inland sites in the U.K. but appears to be largely restricted to lagoons in Ireland, and was proposed as a lagoonal specialist for Ireland by Oliver and Healy (1998).

Table 19.2 Aquatic Fauna Recorded at Kilkeran Lake, Co. Cork. June & July 1996.

( ) = records from July; L.T. = light-trap; + = present; o = occasional; c = common; a = abundant; \* = recorded by Galvin in 1991. Species in bold text are lagoonal specialists or rare species.

	Stations								
	A	L.T.A	B	L.T.B.	C	L.T.C	D	L.T.D	E
<b>Crustacea</b>									
Mysidacea <i>Neomysis integer</i>	c	c100	a	>100	a	c750	o	33	+
Amphipoda <i>Allomelita pellucida</i>			+						
<i>Gammarus duebeni</i>			+		+		+		
Decapoda <i>Palaemonetes varians</i>	c	5	a	59	o	4	c		+
<b>Insecta</b>									
Ephemeroptera <i>Cloeon dipterum</i>			+				+		
Odonata <i>Ischnura elegans</i>	(+)								
Diptera Chironomidae indet.	a	3	c		c		c	1	c
Hemiptera Corixidae	a	1500	a	1000	c	250	c	150	c
<i>Corixa panzeri</i>	+	1	+	+	+				
<i>Sigara concinna</i>	+	a	+	+	+	+	+	+	+
<i>S. dorsalis</i>		2			+		+		+
<i>S. stagnalis</i>			1						
<i>Notonecta glaucum</i>					+				
<i>N. viridis</i>					+				
<i>Hydrometra gracilenta</i>									
<i>H. stagnorum</i>					+				
Coleoptera (incl. larvae)	a	a			+		+		
<i>Anacaena lutescens</i>					+				
<i>Cercyon marinus</i>					+				
<i>Gyrinus caspius</i>					+				
<i>Helophorus brevipalpis</i>	+								
<i>Hydroporus angustatus</i>									
<i>H. palustris</i>	+								
<b>Mollusca</b>									
Prosobranchia <i>Potamopyrgus antipodarum</i>	+		+		c		+		?
Bryozoa <i>Plumatella repens</i>	+				+				
? <i>Fredericella sultana</i>			+						
<b>Teleostei</b>									
<i>Anguilla anguilla</i>	+		+		+		+		
<i>Gasterosteus aculeatus</i>	+	2	a	2	a	1	+		+
<i>Pomatoschistus microps</i>			+	2					
<i>Platichthys flesus</i>	+		+				+		

*Hydrometra gracilenta* was identified from specimens collected by Galvin (1992) and verified by M. Speight. This is a first record for Ireland and was not found at any other site, however the specimen was mislaid and despite subsequent searches, no others were found.

Both *Neomysis integer* and corixids were more abundant in this lake than at any other site sampled during the survey. This is the only site at which the beetles *Anacaena lutescens* and *Cercyon marinus* were recorded but details of their distribution in Ireland are not known at present. Galvin (1992) recorded 44 species of aquatic fauna in 1991,

including the rare lagoonal bryozoan *Victorella pavida* which may have been misidentified. In 1996 another bryozoan species, *Fredericella sultana*, was recorded but not verified.

The lake is regarded as of high conservation value. Surveys to date indicate that the fauna comprises some rare species which also deserve protection.

### Ecotonal Coleoptera

Eight species of Carabidae and seventeen species of Staphylinidae were recorded in 1996 (Good & Butler 1996, 1998). Three species were regarded as indicator species (*Blethysia multipunctata*, *Gabius keysianus*, *Philonthus fumarius*) and the site was rated as of **average conservation interest**.

### Summary

Kilkeran Lake is a **natural sedimentary lagoon** lying within an area of relatively unspoilt sand dunes and, although small (c.16 ha.) is probably the best example in the southwest of Ireland of a lagoon with a sand/gravel barrier. The lagoon suffers from eutrophication, but for such a relatively small lake, the aquatic fauna appears to be diverse and includes several rare or interesting species. In conclusion, based on Geomorphology and Aquatic invertebrates, the lagoon is of **high conservation value**.

### Overall Conservation Value = High

### Conservation Status Assessment (from Oliver 2007)

Impacts	Extreme eutrophication at times due to agricultural activities resulting in algal blooms and fishkills. Relieved by almost annual breaching. Modification of hydrology. Leisure fishing, Accumulation of organic material.
Conservation Status	<b>Unfavourable-BAD</b>

### Further Information

A water quality and phytoplankton survey was carried out on behalf of the NPWS in 1993-94. Aquatic fauna was surveyed by Galvin (1992). 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). Included in a biological classification of Irish coastal lagoons (Oliver 2005) and in the Conservation Status Assessment (Oliver 2007).

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