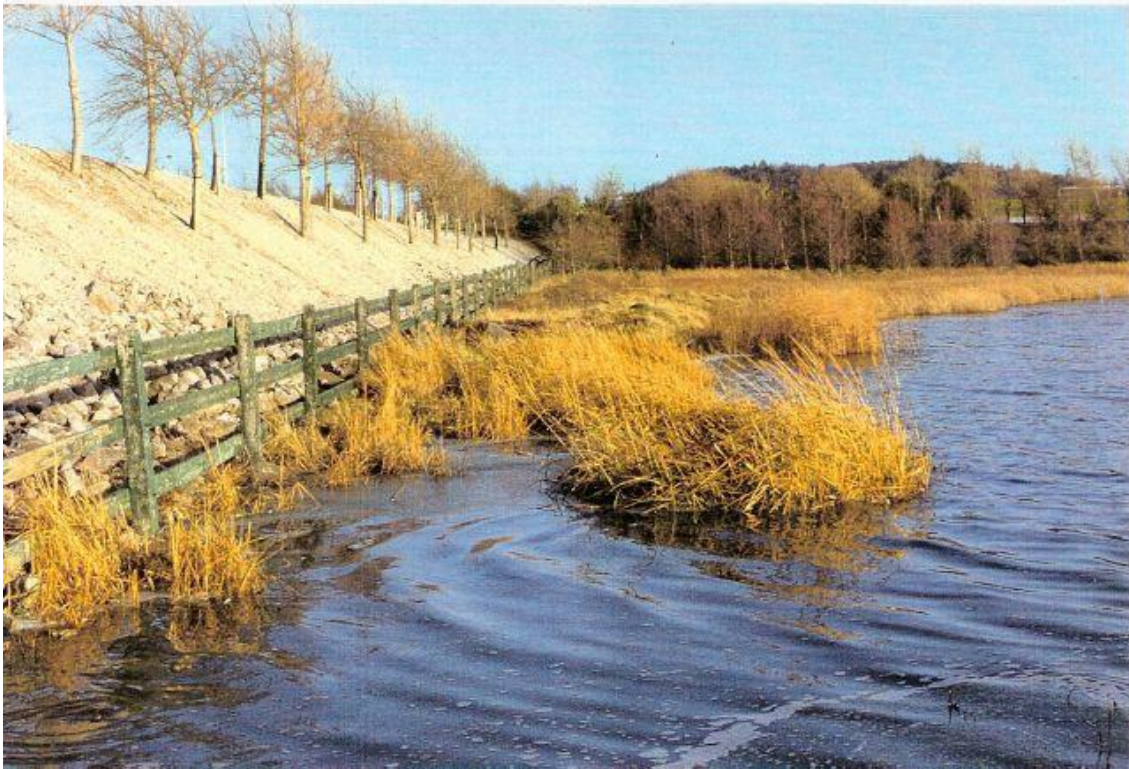


4.13

**Lough Beg, Curraghbinny, County Cork O.S. W 778 627**  
O.S. Discovery Sheet 87



**Conservation Designation:** Lough Beg (Cork) pNHA 001066

**General description:**

Situated 5km east of Carrigaline and 1.5km south of Ringaskiddy in Cork Harbour. A small (2ha) **artificial “estuarine” lagoon** formed behind a causeway constructed for access to a petrochemical plant (Glaxo-Smith-Kline). Salinity is generally low, ranging at the time of sampling (Autumn 2005 to Spring 2006) from 2-18psu.

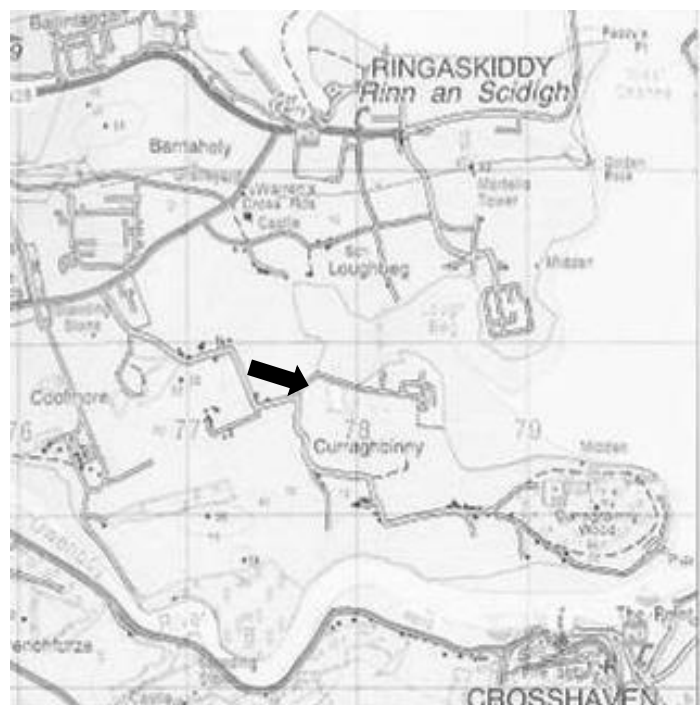


Figure 13.1 Location map of Lough Beg.

Lough Beg was sampled in the Autumn of 2005 and Spring of 2006 on behalf of Glaxo Smith-Kline (Oliver 2006). Five sampling stations were chosen (Figure 13.2) in order to make comparisons with previous surveys by Galvin and Healy (1991) and Galvin (1992).

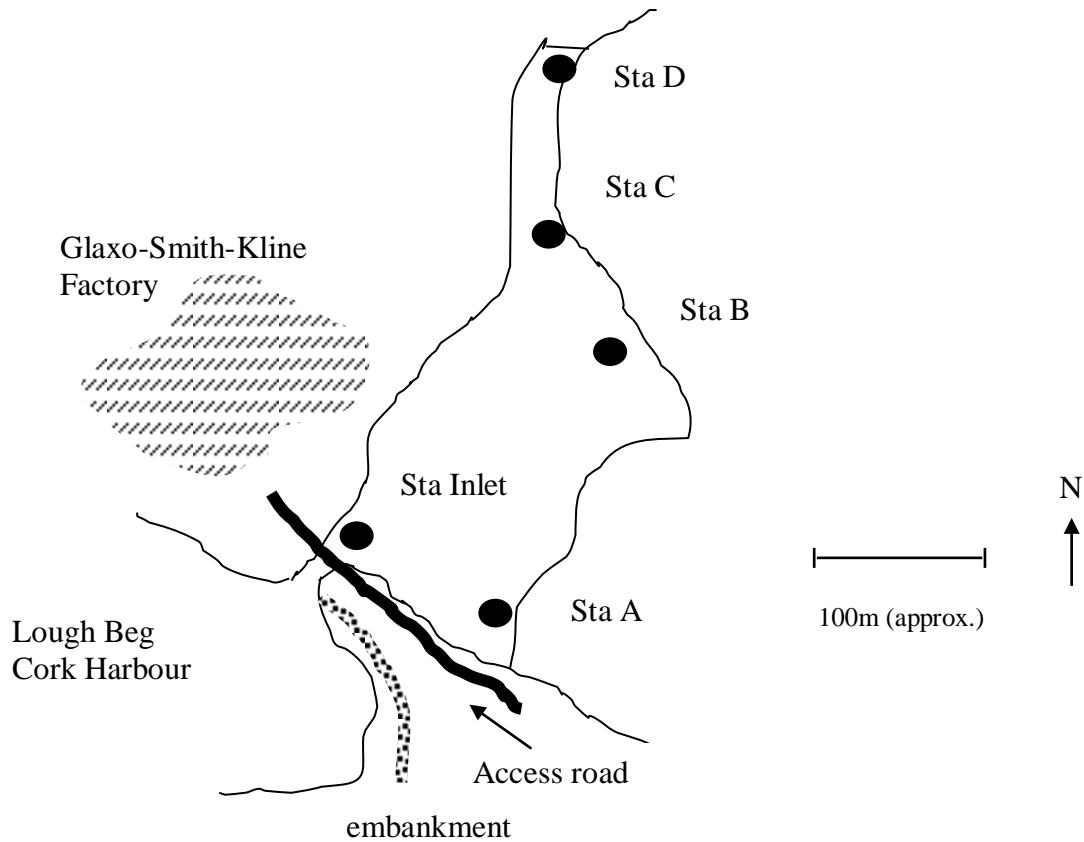


Figure 13.2 Sketch map showing sampling stations used at Lough Beg in Autumn 2005 and Spring 2006.

Over this sampling period depth varied from an average of 62cm in Spring 2006 to 78cm in Autumn 2005 (Table 13.1). Salinity ranged from an average of 1.86 to 18.54psu.

Table 13.1 Salinity, temperature and depth of water of all stations combined for each period sampled in Autumn 2005 and Spring 2006 in Lough Beg, County Cork

	Autumn 2005	Spring 2006	Difference between two periods
Depth (cm)	78	62	16
Surface salinity (psu)	17.88	1.86	16.02
Bottom salinity (psu)	18.54	7.20	11.34
Surface temperature (C)	20.08	11.50	8.58
Bottom temperature (C)	19.60	12.20	7.4

## Flora

Lough Beg is an “estuarine” lagoon and much of the bed of the lagoon is bare mud and sand (Table 13.2). Only four floral taxa were recorded during the sampling period. The lagoon is surrounded largely by dense stands of *Scirpus maritimus*, which appears to be encroaching on the shallow lagoon. Apart from the *Scirpus*, the only plants were dense growths of *Cladophora* sp. and occasional pieces of drift *Enteromorpha* and *Ulva*

Table 13.2 Average percentage cover of vegetation, bare mud, stones, *Ficopomatus* “reef” and rotting vegetation at all stations combined for each period, sampled in Autumn 2005 and Spring 2006 in Lough Beg, County Cork.

Station	Autumn 2005	Spring 2006	%Difference
<i>Bolboschoenus maritimus</i>	48	28	- 41.66
<i>Cladophora</i> sp.	38	32	-15.8
<i>Enteromorpha</i> sp.	2	0.2	- 90
<i>Ulva</i> sp.	0.2	0.2	none
Bare mud	34	48	+ 41.2
Stones	10	9	- 10
Rotten vegetation	10	22	+ 120
<i>Ficopomatus</i> “reef”		0.4	?

## Fauna

When results of previous surveys are included (Table 13.3), a total of 53 faunal taxa have been recorded in Lough Beg, of which 36 were identified to species. This relatively high species list is explained partly by the facts that several survey periods are combined and that greater attention was paid to specialist groups such as oligochaetes and dipteran larvae. Seven of the species are lagoonal specialists, two of which are rare species and one (*Ficopomatus enigmaticus*) appears to be a recent colonist:

*Ficopomatus enigmaticus* is a potentially invasive species which can cause problems by blocking pipes and fouling ships. It has been found recently at several sites in Cork Harbour (L. Beg, Raffeen, Fota), and is believed to have arrived from Wales on the Cork-Swansea ferry.

*Lekanesphaera hookeri* is a common lagoonal isopod crustacean, found at 37 of the 87 lagoons surveyed (42.5%).

*Allomelita pellucida*. Amphipod crustacean recorded at Kilcoole, Co. Wicklow, six sites in Cork (Cuskinny, L. Beg, Kilkeran, Lissagriffin, Farranamanagh, Reenydonegan) 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.

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

***Enochrus halophilus*** Water-beetle recorded only at Tacumshin (1996), and previously from samples collected from L. Beg, Co. Cork in 1992. One specimen was found in L. Murree by Pybus and Pybus (1980). There appear to be no other recent records.

***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 13.3 Aquatic fauna recorded in Lough Beg, Co. Cork during surveys carried out in 2005 and 2006 compared with earlier surveys by Galvin (1992) and Galvin and Healy (1991). r = rare, o = occasional, c = common, a = abundant, nr = not recorded. Species in bold text are lagoonal specialists or rare species.

Taxa		Galvin & Healy 1991 (Dec 1990–Feb 1991)	Galvin 1992 (March 1991) (Stations A & C)	Galvin 1992 (Summer 1991) (Stations A & C)	Sept 2005	April 2006	
<b>Protozoa</b>	Foraminifera	nr	nr	nr	o	o - r	
<b>Nematoda</b>	Nematoda indet.	r	nr	nr	o	o - c	
<b>Annelida</b>	Oligochaeta	c	c	c	nr	o - c	
	Naididae	c (3 sta)	o	o - c	nr	o - c	
	<i>Paranais littoralis</i>	c (3 sta)	o	o	nr	o - c	
	<i>Nais elinguis</i>	nr	nr	c	nr	c	
	Tubificidae	<i>Tubifex costatus</i>	c	o	c	nr	r
	Enchytraeidae	r (6 spp)	nr	nr	nr	r	
		<i>Lumbricillus lineatus</i>	c	o	c	nr	nr
	Polychaeta	<b><i>Ficopomatus enigmaticus</i></b>	nr	nr	nr	c	c
		<i>Nereis diversicolor</i>	nr	nr	nr	nr	nr
<b>Crustacea</b>	Ostracoda indet.	nr	nr	o - r	r - o	r - o	
	<b><i>Lekanesphaera hookeri</i></b>	r	r	r	nr	r	
	Copepoda indet.	nr	nr	nr	r	o - c	
		<i>Gammarus duebeni</i>	r	o	nr	r - o	r
		<i>Gammarus zaddachi</i>	c (3 sta)	o	c	r - o	r - c
		<b><i>Allomelita pellucida</i></b>	c	r	nr	r	r - o
		<i>Corophium volutator</i>	nr	nr	r	nr	r - o
		<i>Crangon crangon</i>	r	r	r	nr	nr
		<b><i>Palaemonetes varians</i></b>	c (3 sta)	c	c	c	o - c
		<i>Neomysis integer</i>	c	o	c	r - o	r
		<i>Carcinus maenas</i>	r	r	r	o	r
<b>Hydracarina</b>		r	-	-	r	r	
<b>Insecta</b>							
	Diptera						
		Chironomidae indet.	c (3 spp.)	c (4 spp.)	c (3 spp.)	c	c - a
		Ceratopogonidae sp.1	c (3 sta)	c	r	nr	c
		<i>Psychoda</i> sp.	c	nr	r	nr	o
		Tabanidae sp.	nr	nr	r (3 spp)	nr	nr
		Culicidae indet.	nr	nr	r	nr	r
		<i>Ephydra riparia</i> (cases)	nr	nr	nr	o	r
	Ephemeroptera	<i>Cloeon dipterum</i>	nr	nr	r	nr	nr
	Hemiptera	<i>Gerris thoracicus</i>	nr	nr	r	r	nr
		<i>Callicorixa praeusta</i>	nr	nr	nr	nr	r
		<b><i>Sigara stagnalis</i></b>	c	o	r	o - c	o

Continued.....

Table 13.3 cont.. Aquatic fauna recorded in Lough Beg, Co. Cork during surveys carried out in 2005 and 2006 compared with earlier surveys by Galvin (1992) and Galvin and Healy (1991). r = rare, o = occasional, c = common, a = abundant, nr = not recorded. Species in bold text are lagoonal specialists or rare species.

		Galvin & Healy 1991 (Dec 1990–Feb 1991)	Galvin 1992 (March 1991) (Stations A & C)	Galvin 1992 (Summer 1991) (Stations A & C)	Sept 2005	April 2006
Coleoptera	Coleoptera indet.	o	o	o	r (2 spp.)	r
	<i>Coelambus</i> sp.	nr	nr	r (2 spp)	nr	nr
	Dytiscidae indet	r (3 spp.)	nr	nr	nr	nr
	<b><i>Enochrus halophilus</i></b>	nr	nr	r	nr	nr
	<i>Gyrinus caspius</i>	nr	nr	r	nr	nr
	<i>Haliplus immaculatus</i>	nr	nr	r	nr	nr
	<i>Helophorus brevipalpis</i>	nr	nr	r	nr	nr
	Hydrophilidae indet.	r (2 spp.)	r	r	nr	nr
	<i>Laccophilus</i> sp.	nr	r	r	nr	nr
	Trichoptera	<i>Limnephilus affinis</i>	c	o - r	nr	nr
	<i>Limnephilus</i> sp.2	r	nr	nr	nr	r
Odonata	<i>Ischnura elegans</i>	nr	nr	nr	nr	r
	<i>Platycnemis pennipes</i>	r	nr	nr	nr	nr
	<i>Potamopyrgus</i>					
<b>Mollusca</b>	<i>antipodarum</i>	c (3 sta)	o	r	o - r	o - r
	<i>Hydrobia ulvae</i>	nr	nr	nr	nr	o
<b>Bryozoa</b>	<b><i>Conopeum seurati</i></b>	nr	nr	nr	o - c	o - c
<b>Teleostei</b>	<i>Atherina presbyter</i>	r	r	r	nr	nr
	<i>Anguilla anguilla</i>	nr	nr	nr	c	r
	<i>Gasterosteus aculeatus</i>	r	r	r	o - r	r
	Mugilidae	nr	nr	nr	r	nr
	<i>Pleuronectes flesus</i>	nr	nr	nr	o	r
	<i>Pomatoschistus microps</i>	nr	o	r	r	r
	<i>Pomatoschistus minutus</i>	c	nr	nr	nr	nr

Geomorphologically and botanically the site is of no great interest as a lagoon. However, the aquatic fauna is relatively rich with quite a high number of lagoonal specialists, two of which (*E.halophilus*, *A. pellucida*) are rare species. Based on this fauna, the site is regarded as of **high conservation value**.

### Summary

Lough Beg is a small "estuarine", **artificial lagoon** with a relatively large number of faunal taxa (53), most of which are typically estuarine species, but with an important suite of typically lagoonal species, with 7 faunal lagoonal specialist species, two of which are rare species and one is an interesting recent colonist in Ireland. Overall conservation value is therefore rated as moderate.

**Overall Conservation Value = Moderate**

Conservation Status Assessment (from Oliver 2007)	
Impacts	Minimal eutrophication from surrounding farmland, rotting <i>Scirpus</i> and high tide roost for waterfowl and waders but significant tidal flushing. Modification of hydrographic functioning.
Conservation Status	Unfavourable-Inadequate

### Further Information

Surveyed by Galvin and Healy (1991), Galvin (1992). Surveyed by Oliver in 2005-2006 on behalf of Glaxo-Smith-Kline (Oliver 2006). Listed as a lagoon by Healy *et al.* 1997, Healy 2003 and Oliver 2005 and included in the Conservation Status Assessment (Oliver 2007).

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