



Conservation Designation: Barley Cove to Ballyrissode Point SAC 001040, pNHA 001040

General description:

Lissagriffin Lake is situated at the western end of the Mizen peninsula, 5 km west of Crookhaven. The lake lies at the landward end of a long sinuous tidal inlet and is **partly artificial** in that it now lies behind a causeway, but at the mouth of the inlet is a dune barrier through which the combined action of river and sea has cut a channel. The lake is very shallow (<2m) and seawater enters on all tides but a relatively large amount of fresh water also flows through the lake. Salinity at the time of sampling (29-31/7/96) ranged from 6-28psu.

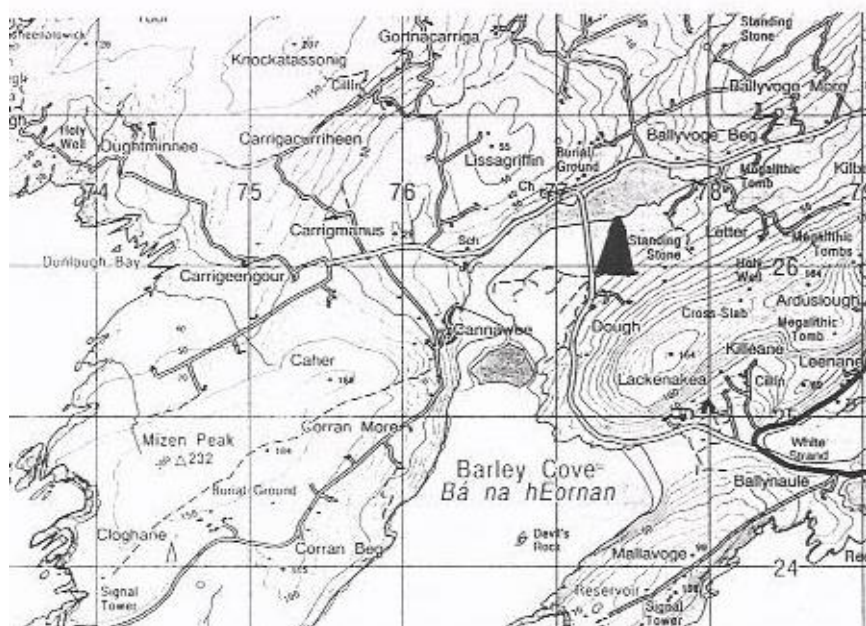


Figure 22.1 Location of map of Lissagriffin Lake.

Lissagriffin 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 flora of Lissagriffin was surveyed by P. Hatch in 1996 (Hatch 1996, Hatch & Healy 1998). *Ruppia* was the only aquatic higher plant recorded. It is confined to the southern half of the eastern section and occurs at a sparse to patchy cover. It is low-growing here. It was not possible to identify this *Ruppia* 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).

Ulva lactuca and a *Fucus* species are occasional in the western section of the site, where no higher plant species occur. Marginal communities are fairly diverse. *Phragmites australis* is extensive around the freshwater inflows at the eastern end and fringes the north eastern shore. *Scirpus maritimus* and *Schoenoplectus lacustris* ssp. *tabernaemontani* occur in single species swamps along south eastern shores and with saltmarsh species along southern shores. *Puccinellia maritima* dominated saltmarsh occurs at the western end on either side of the mouth of the outlet channel. Lissagriffin Lake is a very species-poor site with no species or communities of notable interest and is regarded as of **low conservation value**.

Fauna

Eight sampling stations were selected in Lissagriffin (Figure 22.2, Table 22.1). A total of 24 faunal taxa were recorded in 1996, of which 22 were identified to species (Table 22.2). Four of these species are regarded as lagoonal specialists, one of which appears to be a rare species (*A. pellucida*), but may easily be overlooked.

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).

Allometita 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).

Table 22.1 Positions of sampling stations in Lissagriffin Lake, 29-31/7/96, with salinity, depth of water and type of substratum.

	Sta A	Sta B	Sta C	Sta D	Sta E	Sta F	Sta G	Sta H
GPS position	V 772 264	V 773 263	V 775 263	V 776 264	V 774 266	V 777 266	V 778 266	V 772 263
Salinity(psu)	6-28	8	6	8	4	6	8	25
Depth(cm)	0-200	0-25	0-10	0-10	0-40	20-80	20-80	0-25
Substratum	Sand	Fine sand, organic mud	Fine sand, mud, scattered stones	Shaly rocks and stones, soft mud	Rock, stones, gravel, soft mud	Peat on sand	Gravel, sand, peat, soft mud	Sand, silt, mud

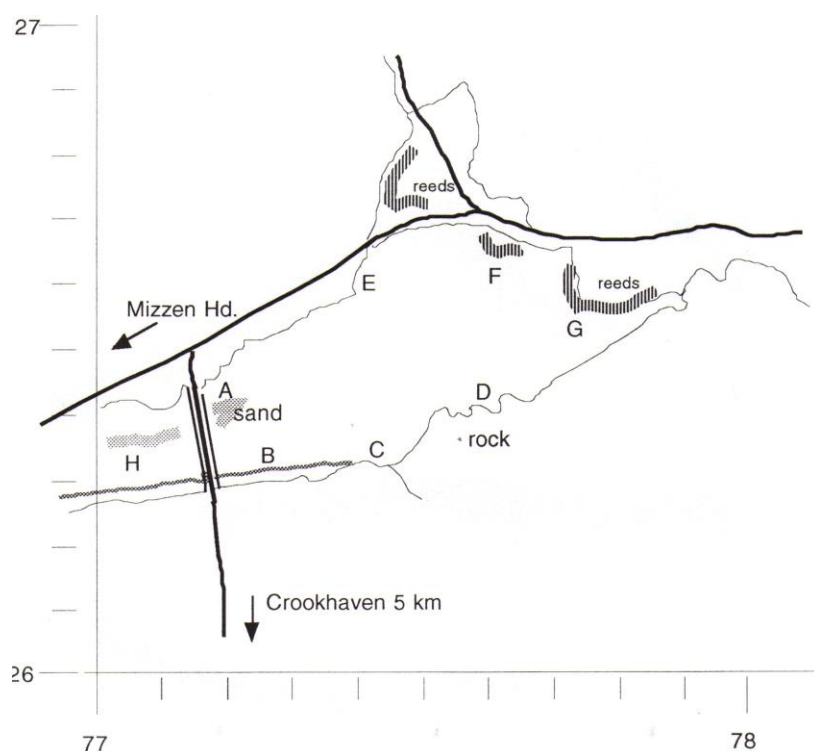


Figure 22.2 Sampling stations used at Lissagriffin Lake.

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.

The recorded fauna typifies a brackish water of medium to high salinity with open access to the sea. The poor representation of oligohaline species, even at the stations furthest from the sea, may be due to poor growth of submerged macrophytes caused by overheating in shallow water and possibly tidal scouring. However, the frequency of ragworms throughout the lake suggests that the lake bed is not exposed or overheated for long periods. When the presence of a sea inlet is taken into account, the lake may be described as poor in species, although one of the recorded species may be rare in Ireland. Generally, the aquatic fauna is relatively poor and of little interest. In conclusion, based on the aquatic fauna, Lissagriffin is of **low conservation value**.

Table 22.2 Aquatic Fauna Recorded at Lissagriffin Lake, Co Cork. July and August 1996. L.T. = light-trap, + = present; r = rare, o = occasional, c = common, a = abundant; F = Fyke net . Species in bold text are lagoonal specialists or rare species.

		Sampling Stations													
		A	L.T.A	B	C	L.T.C	D	L.T.D	E	L.T.E	F	L.T.F	G	H	
Annelida	<i>Hediste diversicolor</i>	a		a			a		+		+			a	
Crustacea															
	Mysidacea <i>Neomysis integer</i>	c	>100	c	o	75	o		o	5	c	75	c	c	
	Isopoda <i>Jaera nordmanni</i>								+						
	Amphipoda <i>Allomelita pellucida</i>			+											
	<i>Gammarus duebeni</i>	+												c	
	<i>Melita palmata</i>								+					+	
	Decapoda <i>Carcinus maenas</i>	c		c			c		+				c	c	
	<i>Crangon crangon</i>													a	
	<i>Palaemonetes varians</i>	c	2	c						1				a	
	<i>Palaemon elegans</i>		2											c	
	<i>P. serratus</i>													a	
Insecta															
	Hemiptera <i>Sigara stagnalis</i>												+		
	Diptera Chironomidae indet.										+		+		
Mollusca															
	Prosobranchia Hydrobiidae	shells		shells			shells		+		o			o	
	<i>Hydrobia ulvae</i>	shells												+	
	<i>Potamopyrgus antipodarum</i>			shells			shells		+		+				
	Bivalvia <i>Ceastoderma edule</i>	shells												shells	
	<i>Macoma baltica</i>	shells												shells	
	<i>Scrobicularia plana</i>	shells												shells	
Bryozoa	<i>Plumatella repens</i>								+						
Teleostei	<i>Anguilla anguilla</i>	F, 1		+									+		
	<i>Gasterosteus aculeatus</i>	+		o	+		+		o	4	+		+	c	
	Mugilidae			F, 1					+					+	
	<i>Pomatoschistus microps</i>													+	
	<i>Platichthys flesus</i>	+		+									c	c	

Ecotonal coleoptera

Ecotonal Coleoptera were surveyed in 1996 (Good & Butler, 1998). Five species of Carabidae and 15 species of Staphylinidae were recorded, including one indicator species (*Carabus clatratus*), but the site, based on coleoptera was rated as of **low conservation value**.

Summary

The lake and tidal inlet are of great scenic and ornithological interest. However, based on geomorphology, aquatic fauna and flora and ecotonal coleoptera, Lissagriffin is rated as of **low conservation value** as a coastal lagoon.

Overall Conservation Value = Low

Conservation Status Assessment (from Oliver 2007)

Impacts	Moderate eutrophication in small, shallow lagoon but significant tidal flushing. Increasingly shallow due to siltation. Poaching by cattle.
Conservation Status	Unfavourable-Inadequate

Further Information

Lissagriffin 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). Included in a biological classification of Irish coastal lagoons (Oliver 2005) and in the Conservation Status Assessment (Oliver 2007).

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