



Conservation Designation: Mweelrea/Sheefry/ Erriff complex SAC 001932

General description:

Corragaun Lough is a small (10ha), shallow (<1m) **natural sedimentary lagoon** situated on the west Mayo coast, 5 km north of Killary Harbour and 7 km from Killadoon, Co. Mayo. The lagoon lies at the head of a long, shallow tidal inlet impounded by the formation of a dune barrier. Seawater appears to enter on every tide but large volumes of freshwater flow through it at times of heavy rainfall. Salinity probably varies considerably, and measured 25-32psu at the time of sampling (17-19/9/96). Corragaun has changed shape between 1919 and 1976 (Bekkers *et al.* 1976) and according to local information has been reduced in size considerably over the last 20 years.

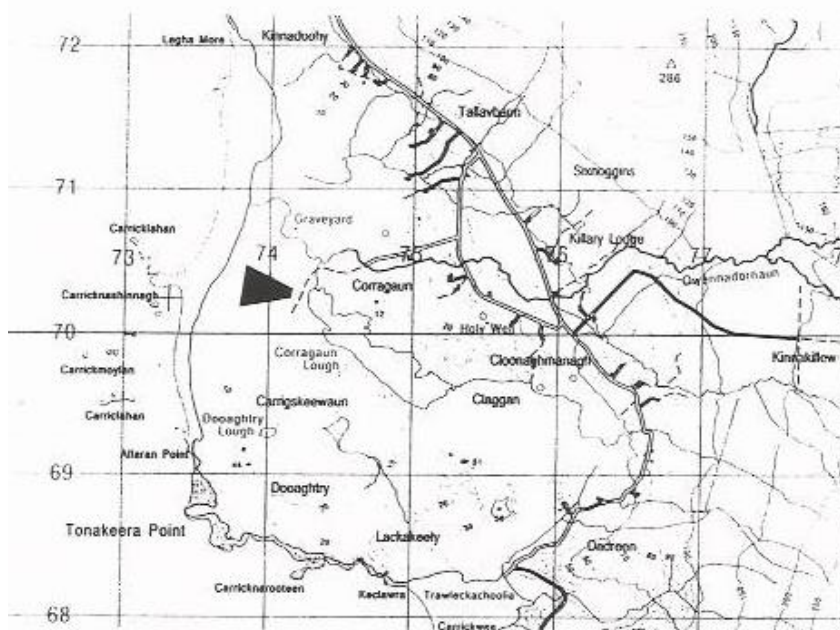


Figure 71.1 Location of map of Corragaun Lough.

Corragaun Lough 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).

Flora

Vegetation was surveyed by P. Hatch in 1996 (Hatch 1996, Hatch & Healy 1998), but no underwater observations were made, and areas surveyed for flora do not necessarily correspond with stations sampled for aquatic fauna.

Ruppia maritima was the only aquatic macrophyte recorded. It was low growing and had a wide but patchy distribution. This species is 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. *R. maritima* appears to be the more common of the species and was found at 41 of the lagoons surveyed (47%).

Filamentous algae and *Enteromorpha* were the only other aquatic plants found during this survey.

Diversity of marginal communities was notable. *Scirpus maritimus*, *Schoenoplectus lacustris* ssp *tabernaemontani* and *Phragmites* swamps occurred on the north shore and more extensively associated with the major freshwater inflow.

Juncus maritimus dominated salt tolerant community occurred above low peat cliffs along much of the northern shore and there was one open stony area of *Eleocharis palustris* dominated salt tolerant vegetation. *Puccinellia maritima* - *Glaux maritima* saltmarsh bordered the lagoon on its low, sandy western shore. This would seem to be a particularly species-poor lagoon but deeper areas of the eastern and central areas were not surveyed and could contain additional species. It is therefore rated as of **moderate but potentially high conservation value.**

Fauna

Six stations were selected for faunal sampling in Corragaun Lough, 17-19/9/96 (Figure 71.2, Table 71.1).

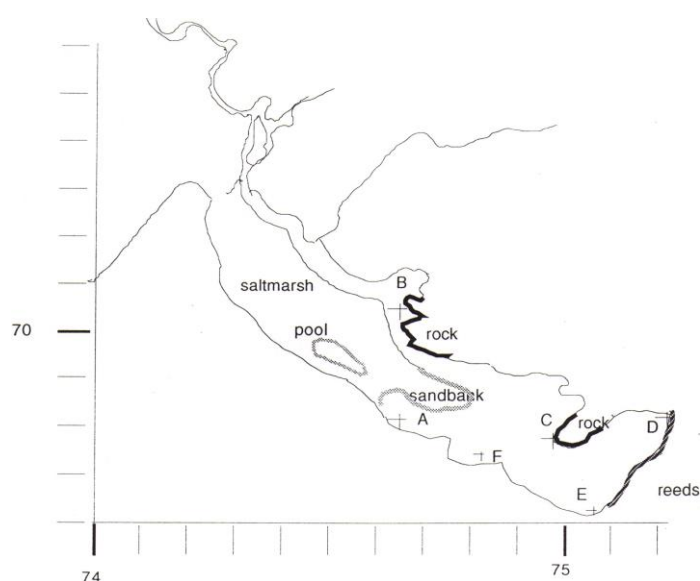


Figure 71.2 Sampling stations used at Corragaun Lough.

Table 71.1 Positions of faunal sampling stations in Corragaun Lough, 17-19/9/96, with salinity, depth of water and type of substratum.

	Sta A	Sta B	Sta C	Sta D	Sta E	Sta F
GPS position	L 7469 6982	L 7465 7049	L 7499 6973	L 7523 6982	L 7506 6963	L 7482 6965
Salinity(psu)	25	32	32	16-25	28	32
Depth(cm)	0-30	0-25	0-100	0-25	0-25	0-25
Substratum	Sand	Rock, solid peat, sand, silt, loose peat	Bedrock, sand	Fine sand and silt over peat	Soft anoxic mud and peat	Bedrock, stones, pockets of fine silt and sand

Table 71.2 Fauna Recorded in Corragaun Lough, Co. Mayo. June and September, 1996. () = records from June. (L.T. = light-trap) + = present; o = occasional; c = common; a = abundant; F = Fyke net. Species in bold text are lagoonal specialists or apparently rare.

Fauna	Sampling Stations									
	A	B	L.T.B	C	L.T.C	D	L.T.D	E	F	L.T.F
Annelida <i>Arenicola marina</i>	+									
Crustacea										
Mysidacea <i>Neomysis integer</i>	a	c	350	a	500	a	300	c	o	150
Isopoda <i>Eurydice pulchra</i>			1							
<i>Jaera nordmanni</i>				+					+	
Amphipoda <i>Corophium volutator</i>	c					o				
<i>Gammarus duebeni</i>		+							+	
<i>G. zaddachi</i>	+	+		+	+	+		+	+	+
Decapoda <i>Crangon crangon</i>	c	c	3	c	5				o	
<i>Carcinus maenas</i>	+	+		+		+		+	+	+
<i>Palaemon serratus</i>		o		o						
<i>Palaemonetes varians</i>				o						
Insecta										
Hemiptera Corixidae						c	10	+	+	+
<i>Sigara stagnalis</i>						+	+	+	+	+
Coleoptera				(+)						
Diptera Chironomidae				+		+		+	+	
Tipulidae	o									
Mollusca										
Prosobranchia <i>Potamopyrgus antipodarum</i>				+		+		+		
Bivalvia <i>Mya arenaria</i>	shells	shells								
<i>Scrobicularia plana</i>	shells	shells								
Teleostei <i>Anguilla anguilla</i>		+		F, 31		F, 1			+	1
<i>Gasterosteus aculeatus</i>	+	a	73	a	52	a	85	o	a	
Mugilidae				F, 4		F, 1				
<i>Platichthys flesus</i>	+	+		F, 1		+		+	+	

The fauna was poor in spite of open contact with the sea and a gradient in salinity. Species poverty may be due to wide, and possibly sudden salinity fluctuations. Only 20 taxa recorded and only three of these are lagoonal specialists, all of which are common in lagoonal habitats in Ireland.

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. Described in Britain (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).

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 fauna typifies a lagoon subject to strong tidal influence with no areas allowing low salinity species to survive. No interesting or rare species were recorded. Based on aquatic fauna, Corragaun is regarded as of **low conservation value**.

Ecotonal Coleoptera

Fourteen species of staphylinid and seven species of carabid beetles were recorded at Corragaun in 1996 (Good 1996, Good & Butler 1998), none of which are regarded as indicator species, and based on ecotonal coleoptera the site is regarded as of **no conservation value**.

Summary

Corragaun is a completely **natural sedimentary lagoon** with a tidal inlet in an area of coastline containing a number of lagoons, and “former lagoons”, which vary in their geomorphology and degree of marine influence. Some are entirely fresh, others saline, while barriers may be of sand or cobbles, or both. Corragaun Lough is the only one of this series with a permanent tidal inlet through which the sea enters at each high tide. The post-glacial history of parts of this coastline has been studied in detail and continues to be of great interest to geomorphologists.

Relatively few species of aquatic fauna were present and none was interesting or rare.

The aquatic vegetation was species poor and the shores are of no conservation value for ecotonal Coleoptera.

Corragaun undergoes wide fluctuations in salinity and has little conservation value for aquatic fauna and flora on its own but is of interest as the most marine of a series displaying a range of ecological conditions.

Overall Conservation Value = Moderate

Conservation Status Assessment (from Oliver 2007)

Impacts	Natural siltation and eutrophication in lagoon which is rapidly diminishing in size.
Conservation Status	Unfavourable-Inadequate

Further Information

Vegetation survey by Bekkers *et al.* 1976. Geology described by Delaney and Devoy (1995). 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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