

4.10

**Ballyvodock lagoon, County Cork O.S. W 868 708**  
 (Ahanesk Lake)

O.S. Discovery Sheet 81


**Conservation Designation:** Great Island Channel SAC 001058, pNHA 001058

**General description:**

Situated 2km southwest of Midleton on the northern shore of Cork harbour. Ballyvodock lagoon is a small (2ha), shallow (1m) **artificial lagoon** formed behind a coastal embankment, ranging in salinity at the time of sampling (7-8/9/06) from 15-25psu.

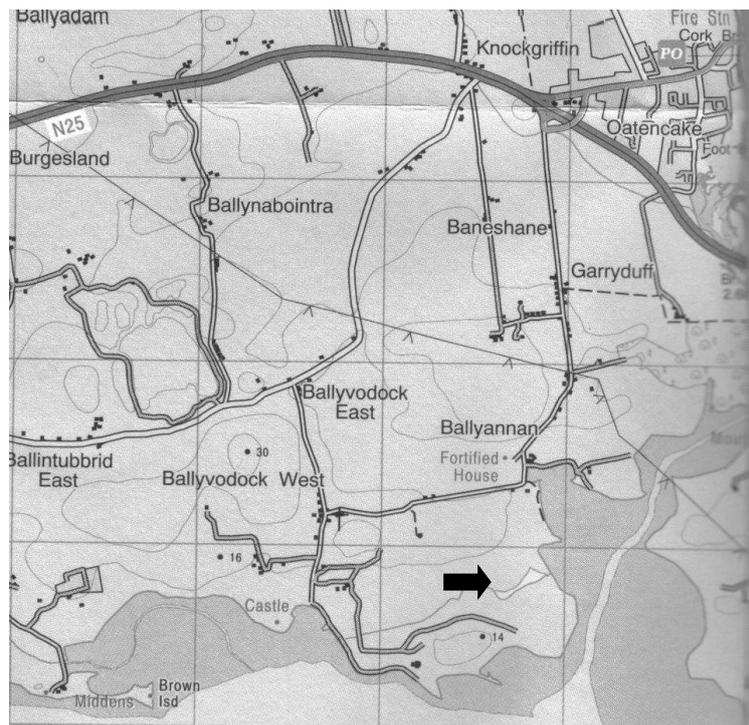


Figure 10.1 Location map of Ballyvodock lagoon.

Three stations were selected for sampling aquatic fauna and flora Ballyvodock lagoon in 2006 (Figure 10.2, Table 10.1)

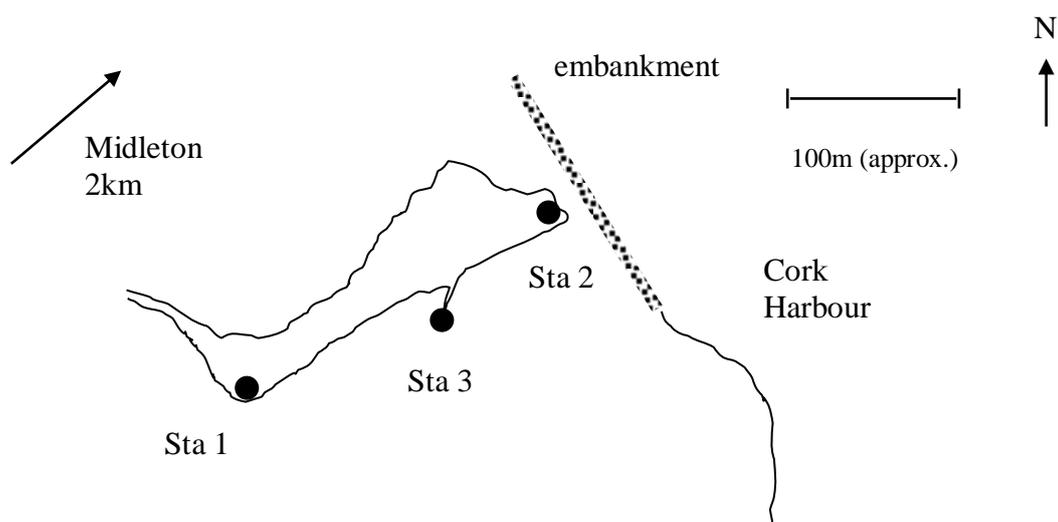


Figure 10.2 Sketch map showing sampling stations used at Ballyvodock 7-8/9/06.

### Flora

Ballyvodock is an “estuarine lagoon”, the bed of which is mostly bare, soft mud. Only 7 floral taxa were recorded at this site (Table 10.1), none of which are rare, but one (*R. maritima*) is a lagoonal specialist.

Table 10.1 Positions of sampling stations in Ballyvodock, 7-8/9/06, with salinity, temperature and depth of water, type of substratum and percent cover of vegetation, bare ground and rotting vegetation. Text in bold indicates lagoonal specialist species.

	Sampling stations		
	Sta 1	Sta 2	Sta 3 (channel)
GPS position	W 86863 70821	W 86648 70709	W 86791 70774
Sampling date	7-8/9/06	7-8/9/06	7-8/9/06
Salinity (psu)	25.3	15.6	20.4
Temperature	20.9	18.7	22.2
Depth (cm)	0-50	0-30	0-30
Substratum	mud + stones	mud + stones	soft mud
<b>Percentage cover:</b>			
<b>Algae</b>			
Chlorophyceae	<i>Enteromorpha</i> sp.	2	-
	<i>Cladophora</i> sp.	1	5
	<i>Ulva</i> sp.	10	10
Phaeophyceae	<i>Fucus vesiculosus</i>	1	-
Rhodophyceae	<i>Gracilaria verrucosa</i>	1	-
<b>Angiosperms</b>			
	<i>Ruppia maritima</i>	-	90
	<i>Scirpus maritimus</i>	10	-
Bare mud	70	70	-
Stones	10	10	-

**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.

The bed of the lagoon is mostly soft mud. Only 7 floral taxa were recorded, but there are extensive areas of *Ruppia* in places. Based on aquatic vegetation, the site is regarded as of **low conservation value**.

## Fauna

A total of 34 faunal taxa were recorded at Ballyvodock lagoon, of which 26 were identified to species (Table 10.2). Five of these species are regarded as lagoonal specialists in Britain, plus one other as yet unconfirmed (*G. chevreuxi*). One other unconfirmed species (*A. pellucida*) appears to be rare in Ireland and is a proposed specialist.

***Cyathura carinata*** Isopod crustacean which occurs from the southern British coast to the Mediterranean (Hayward and Ryland 1995). Recorded at the North Slob (Co. Wexford) in 1991 (Galvin 1992) and still present in 1996, but was not recorded in 2003, following drainage for maintenance work. Recorded from Bantry Bay (Griffith 1970) and more recently at Ballyvodock and Commoge Marsh (Co. Cork) and Lauragh (Co. Kerry), but otherwise appears to be rare in Ireland. Regarded by some authors as a lagoonal specialist in Portugal.

***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).

***Gammarus chevreuxi*** Amphipod crustacean confirmed only recently as an Irish species by the record of a small population in the Douglas Estuary (De Grave and Myers 1997). The record from Durnesh L., Co Donegal (Oliver and Healy 1998) is erroneous. Previously recorded from "N. Ireland, rarely" by Spooner in the Plymouth Marine Fauna (1957) and subsequently from Ireland by Pinkster (1978), but confirmation of these records was described as desirable by Costello *et al.* (1989). Recorded at Rostellan L. and Commoge Marsh, Co. Cork and recently (unconfirmed) from Ballyvodock and Raffeen (Cork) and Rincarna (Galway). Known only from six sites in England and Wales (Bamber *et al.* 2001) where it is regarded as a rare lagoonal specialist. These records from Co. Cork and possibly Galway are of high conservation interest.

***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.

Table 10.2 Aquatic fauna recorded at Ballyvodock on 7-8/9/06.

(SW = mean of 3x 30 second sweeps, Seds = mean of 3 x 0.005m<sup>2</sup> diameter sediment cores, L.T. = Light trap, **Ab** = overall abundance of all sampling methods, including visual searches). r = rare, o = occasional, c = common, a = abundant. Species in bold text are lagoonal specialist or notable species.

		Sta 1				Sta 2			Sta 3 (channel)		
		SW	Seds	LT	Ab	SW	Seds	Ab	SW	Seds	Ab
Cnidaria	<i>Obelia geniculata</i>	+			o	+		o			
Annelida											
	Polychaeta <i>Eteone longa</i>	R			r						
	<i>Manayunkia estuarina</i>						r	r			
	<i>Nereis diversicolor</i>		5		c		a	a		o	o
	<i>Streblospio shrubsolii</i>		10		c		o	o			
	Oligochaeta Tubificidae indet.		200		c	o	c	c			
	Naididae indet.			3	o						
Crustacea											
	Ostracoda Ostracoda indet.					o	o	o			
	Cirripedia <i>Elminius modestus</i>				o			c			
	Mysidacea <i>Neomysis integer</i>	C			c	c		c	o		o
	Isopoda <i>Idotea</i> sp.							r			
	<i>Jaera</i> sp.	1	1	1	r						
	<b><i>Lekanesphaera hookeri</i></b>	o			o	a		a	a		a
	Amphipoda <b>?<i>Allomelita pellucida</i></b>			2	r						
	<i>Corophium volutator</i>	o	150		c	a		a	r		o
	<b><i>Cyathura carinata</i></b>						a	a			
	<b><i>Gammarus ?chevreuxi</i></b>	c			c	o		c	a		a
	<i>G. zaddachi</i>							c			c
	<i>Microdeutopus gryllotalpa</i>	c			c	o		o			
	Decapoda <i>Carcinus maenas</i>	2			o			c			
	<i>Crangon crangon</i>	o			o			c			
	<i>Palaemon serratus</i>	o			o			o			
	<b><i>Palaemonetes varians</i></b>				o			c	o		o
Insecta											
	Trichoptera <i>Limnephilus</i> sp.				o						
	Heteroptera <b><i>Sigara stagnalis</i></b>				r						
	Coleoptera <i>Halipus</i> sp.										r
	Diptera Chironomidae indet.				o						
	<i>Ephydra riparia</i>				r						
Mollusca											
	Gastropoda <i>Hydrobia ulvae</i>	O				o		o			
	<i>Potamopyrgus antipodarum</i>								o		o
	Bivalvia <b><i>Cerastoderma glaucum</i></b>					r		r			
	Bryozoa <i>Bowerbankia gracilis</i>	c		+	c	+		o			
	<b><i>Conopeum seurati</i></b>	+			o			o			o
	Pisces <i>Gasterosteus aculeatus</i>								r		o

*Cerastoderma glaucum* Bivalve mollusc. A common lagoonal specialist found at 30 of the 87 lagoons (34.5%) surveyed.

*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.

The aquatic fauna of Ballyvodock lagoon is surprisingly rich for a relatively small site, with at least five lagoonal specialist species, plus possibly two others which are rare amphipod species (*A. pellucida*, *G. chevreuxi* unconfirmed). Based on this fauna, the site is regarded as of **moderate conservation value**. If the two amphipods are confirmed, the site would be rated as of **high conservation value**.

### Summary

Ballyvodock lagoon is a small "**estuarine**", **artificial lagoon**. Morphologically it is of no great interest, but it contains a relatively high number of lagoonal specialists (1 floral, 5 faunal) and possibly two other rare amphipod species which are also lagoonal specialists. At present, the site is regarded as of moderate conservation value, but it is potentially higher, depending on the confirmation of these two species (*G. chevreuxi*, *A. pellucida*).

**Overall Conservation Value = Moderate**

### Conservation Status Assessment (from Oliver 2007)

Impacts	Moderate eutrophication from surrounding farmland but significant tidal flushing. Poaching by cattle. Landfill.
Conservation Status	<b>Unfavourable-Inadequate</b>

### Further Information

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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