

4.16

**Commoge Marsh, Kinsale, County Cork O.S. W 630 498
O.S. Discovery Sheet 87**



Conservation Designation:

NONE

General description:

Situated 1km southwest of Kinsale on the eastern shore of the River Bandon estuary. A moderate size (12ha), shallow, **artificial lagoon** created on saltmarsh behind a coastal embankment carrying a road, ranging in salinity at the time of sampling in August and September 2003 from 30.4-33.5psu.

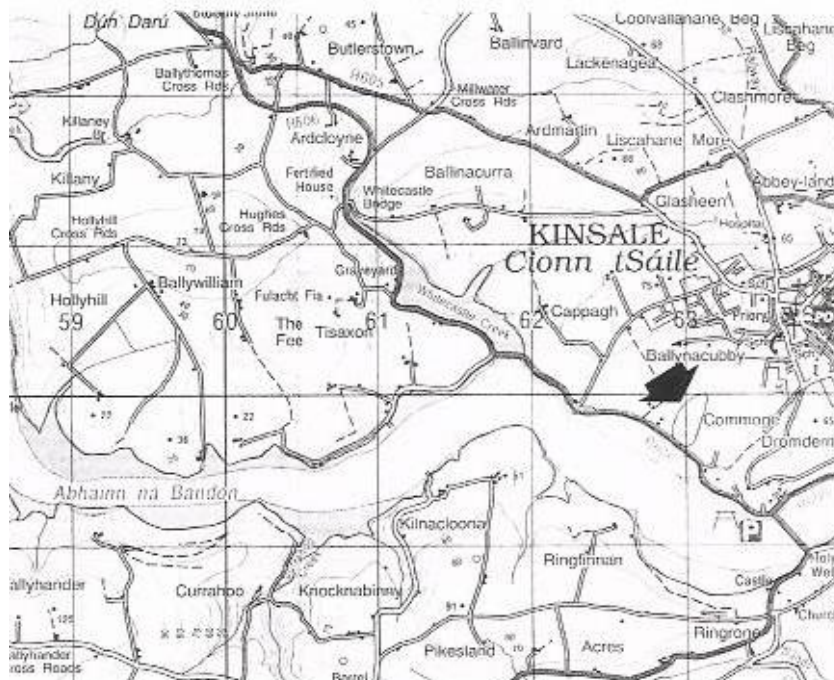


Figure 16.1 Location map of Commoge Marsh, Kinsale.

Commoge Marsh was surveyed in 2003 as part of a PhD study (Oliver 2005) and used in a biological classification of Irish coastal lagoons. Four stations were selected for the sampling of aquatic fauna and flora (Figure 16.2, Table 16.1).

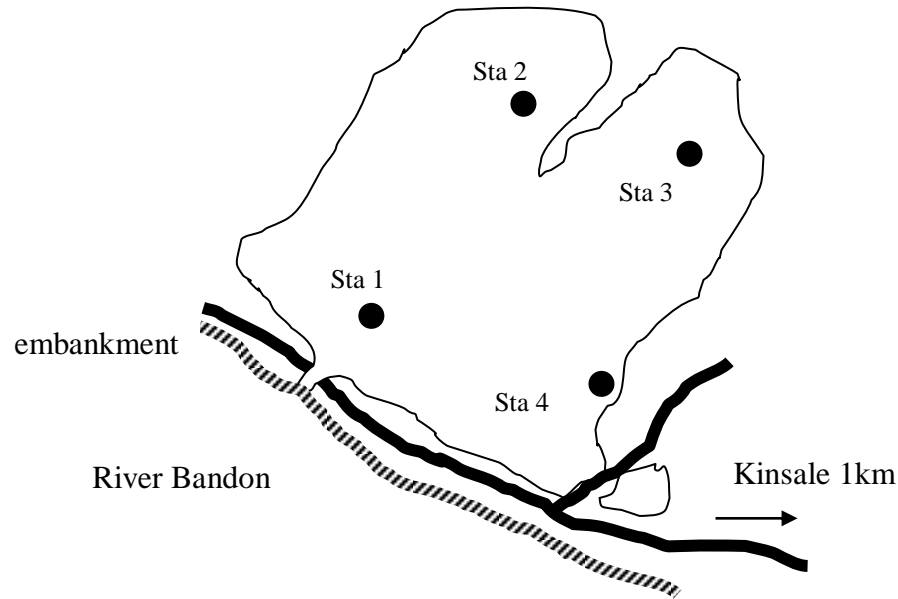


Figure 16.2 Sampling stations used at Commoge Marsh on 8/8 and 5/9/2003.

Flora

Commoge Marsh is an “estuarine” lagoon and much of the bed of the lagoon consists of bare mud. A total of 11 floral taxa were recorded during the sampling period of which 7 were identified to species (Table 16.1). One of these taxa is regarded as a lagoonal specialist (*C. linum*). Small pieces of plant material which had the appearance of *Ruppia* were found, but were too decayed for positive identification.

***Chaetomorpha linum*.** There is some doubt about the taxonomic status of the unattached lagoonal form of this species, and it was recorded by Hatch and Healy (1998) as *C. mediterranea*. It is a common, characteristic alga of semi-isolated Irish lagoons, recorded at 49 of the 87 (56.3%) lagoons surveyed.

***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.

None of the other plants recorded are of any special interest. Based on aquatic vegetation, as a lagoon Commoge Marsh is regarded as of **low conservation value**.

Table 16.1 Positions of sampling stations in Commoge Marsh, with sampling date, hydrological variables (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 or rare species.

	Sampling stations			
	Station 1	Station 2	Station 3	Station 4
GPS position	W 62902 50402		W 63042 50617	W 63031 50366
	8/8 and 5/9	8/8 and 5/9	8/8 and 5/9	8/8 and 5/9
Sampling dates	2003	2003	2003	2003
Salinity(psu)	33.5	32.2	33.3	30.4
Temperature	17.3	17.1	17.6	25.7
Depth(cm)	200	<80	<100	0 - 80
Substratum	Soft mud, shell plus <i>Mytilus</i> reef	muddy sand and gravel	sandy mud, shell, gravel, occasional stones	stony mud
Percentage cover:				
ALGAE				
Chlorophyta				
<i>Chaetomorpha linum</i>	5	5	25	0
<i>Cladophora</i> sp.	5	5	25	15
<i>Enteromorpha</i> sp.	5	5	+	10
<i>Ulva</i> sp.	10	10	5	5
Phaeophyta				
<i>Ascophyllum nodosum</i>	2	0	0	0
<i>Fucus serratus</i>	2	0	0	0
<i>F. vesiculosus</i>	2	0	0	0
Rhodophyta				
<i>Ceramium stricta</i> agg.	2	0	0	0
<i>Polysiphonia</i> sp.	+	0	0	0
ANGIOSPERMS				
?? <i>Ruppia</i> sp.	0	??	0	0
<i>Schoenoplectus lacustris</i>	0	+	0	0
<i>Scirpus maritimus</i>	0	10	5	0
BARE - mineral	70	30	30	50
BARE - rotting vegetation	5	50	10	20

Fauna

A total of 39 faunal taxa were recorded at Commoge Marsh, of which 34 were identified to species (Table 16.2). Most of these taxa are common estuarine animals, but four species are regarded as lagoonal specialists, one of which is rare (*G. chevreuxi*) and one other species (*C. carinata*) appears to be rare in Ireland.

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

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.* 2001b) where it is regarded as a rare lagoonal specialist. These records from Co. Cork and possibly Galway are of high conservation interest.

Table 16.2 Faunal taxa recorded at stations in Commoge Marsh in August-September 2003.

Sw = mean of 3x 30 second sweeps, Sed = mean of 3 x 0.005m² 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 specialists or rare species.

		Sta 1				Sta 2				Sta 3				Sta 4				
		SW	Sed	L.T.	Ab	SW	Sed	L.T.	Ab	SW	Sed	L.T.	Ab	SW	Sed	L.T.	Ab	
Cnidaria	<i>Actinia equina</i>																	r
	<i>Obelia longissima</i>				o								o					a
Annelida	Polychaeta <i>Hediste diversicolor</i>		0.7		o		2.7		o		0.3		r					
	<i>Pomatoceros ?lamarcki</i>				o													
Crustacea	Cirripedia <i>Balanus improvisus</i>				o													
	<i>Elminius modestus</i>				o				r				o					
	Mysidacea <i>Praunus flexuosus</i>	4.7		2	o	2.3		1	o	6.7		5	o	15.7				c
	Isopoda <i>Cyathura carinata</i>				o		0.7		o		0.3		r		1.7			o
	<i>Jaera sp.</i>																	
	<i>Lekanesphaera hookeri</i>				o	16.7			c	16.7		14	c	90.7		22		c
Amphipoda	Indet																	
	<i>Corophium volutator</i>											3	r	0.3				r
	<i>Gammarus chevreuxi</i>								c									
	<i>G. locusta</i>								r	0.3		3	r	2.3				o
	<i>G. salinus</i>				o													
	<i>Melita palmata</i>				r								r					
	<i>Microdeutopus gryllotalpa</i>				o		3.3		c	1.0		6	o	33.7		15		a
Decapoda	<i>Carcinus maenas</i>	0.3			a								a					c
	<i>Crangon crangon</i>			2	o				r									
	<i>Palaemon elegans</i>												o					
	<i>P. serratus</i>	2.0			o			1	r			1	c	0.3				r
	<i>Palaemonetes varians</i>					10.0		2	o	6.0		5	c					
Insecta	Heteroptera <i>Sigara sp.</i>						0.3		o									
	Diptera Chironomidae	0.3			r	16.3	0.7		c	9.7			c					o
	Ephydriidae					0.7			o									
Mollusca	<i>Anomia ephippium</i>				r													
	Prosobranchia <i>Hydrobia ulvae</i>								o	4.0			o	30.7				c
	<i>Littorina littorea</i>				r									0.3				r
	<i>Skeneopsis planorbis</i>				r													
	Bivalvia <i>Mytilus edulis</i>				o													
Bryozoa	<i>Alcyonidium gelatinosum</i>				o													
	<i>Bowerbankia gracilis</i>				o													
	<i>Conopeum seurati</i>												o					o
	<i>Membranipora membranacea</i>				c													
Pisces	<i>Anguilla anguilla</i>				a								c					
	<i>Gasterosteus aculeatus</i>									0.3			r					
	<i>Mugilidae</i>				c				4				c					
	<i>Pleuronectes flesus</i>				o								o					
	<i>Pollachius virens</i>				o													
	<i>Pomatoschistus microps</i>				o	0.7		1	3	0.7			c					c

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.

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). A single specimen was recorded at Aughinish lagoon, Co. Galway (Oliver

& Healy 1998). The record from Durnesh L., Co Donegal 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.* 2001b) where it is regarded as a rare lagoonal specialist. These records from Co. Cork and possibly Galway are of high conservation interest.

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.

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 2002, following drainage for maintenance work. Recorded from Bantry Bay (Griffith 1970) and more recently at this site and Lauragh (Co. Kerry), but otherwise appears to be rare in Ireland. Regarded by some authors as a lagoonal specialist in Portugal.

Summary

Commoge Marsh is a moderate size "**estuarine**", **artificial lagoon** with a generally typical estuarine faunal and floral community (11 floral, 39 faunal taxa) but with a small suite of lagoonal species, with 1 floral and 5 faunal lagoonal specialist species, one of which is rare in Ireland (*G. chevreuxi*) and one other species (*C. carinata*) which also appears to be rare in Ireland. The lagoon is under pressure from surrounding housing developments and attempts are being made to conserve it as a nature reserve. However, conservation objectives are at times in conflict.

Overall Conservation Value = Moderate

Conservation Status Assessment (from Oliver 2007)

Impacts	Moderate eutrophication from surrounding farmland and sewage from housing estate but significant tidal flushing. Occasional low water levels. Drainage. Urbanisation. Landfill. Modification of hydrology. Dumping. Silting up.
Conservation Status	Unfavourable-Inadequate

Further Information

Listed as a lagoon by Healy *et al.* 1997, and Healy 2003. Surveyed in 2002/2003 as part of a PhD study (Oliver 2005) and used in a biological classification of Irish coastal lagoons and in the Conservation Status Assessment (Oliver 2007). Recently being monitored by the County Nature Trust.

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