

4.86

Blanket Nook Lough, County Donegal O.S. C 307 194
O.S. Discovery Sheet 6



Conservation Designation: Lough Swilly, including Big Isle, Blanket Nook & Inch Lake
SAC 002287, SPA 004075, pNHA 000166

General description:

Blanket Nook is a large (40ha), shallow, **artificial lagoon** formed behind a coastal embankment carrying a dismantled railway line, situated on the eastern shore of Lough Swilly, 2.5km northwest of Newtown Cunningham, Co. Donegal. Seawater enters through the malfunctioning sluice and probably by percolation through the embankment and ranged from 10.4-20.6psu at the time of sampling (21-23/7/03).

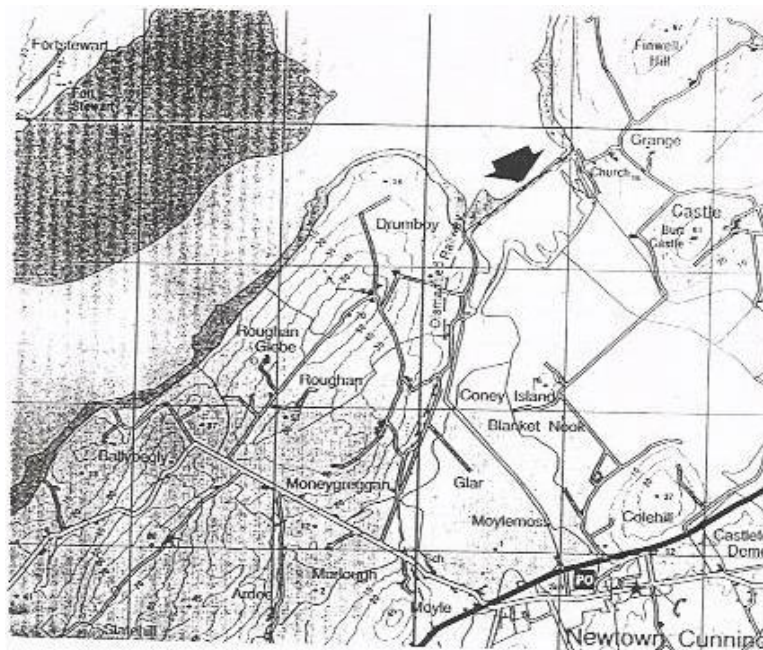


Figure 86.1 Location map of Blanket Nook Lough, Co. Donegal.

Blanket Nook Lough was surveyed in 2003 as part of a PhD study and used in a biological classification of Irish coastal lagoons (Oliver 2005). Four stations were selected for the sampling of aquatic fauna and flora (Figure 86.2, Table 86.1)

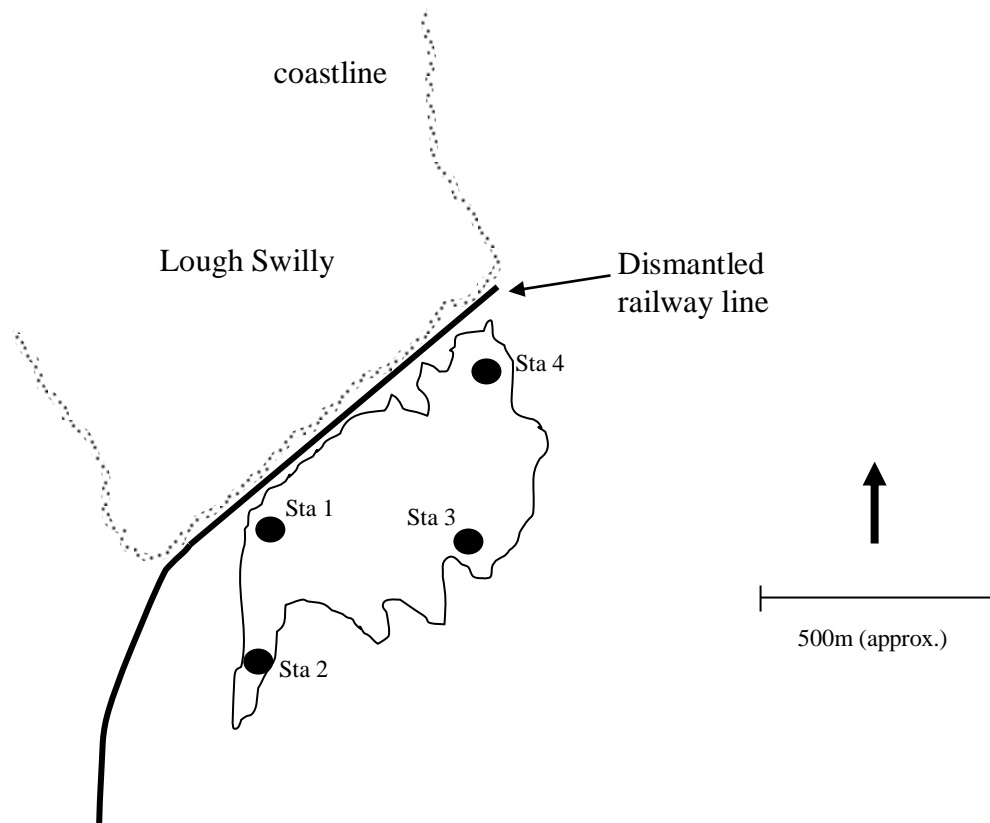


Figure 86.2 Sampling stations used at Blanket Nook from 21-23/7/03.

Flora

The flora of Blanket Nook is remarkably poor, with only eight taxa recorded in 2003 (Table 86.1). Two species are lagoonal specialists (*Chaetomorpha linum*, *Ruppia* sp.) but both are relatively common species in lagoonal habitats in Ireland. All of the other species are common algal or marginal plants.

***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. The *Ruppia* in Blanket Nook was not identified specifically as no fruiting plants were found, but is assumed to be *Ruppia maritima* which appears to be the more common of the species and was found at 41 of the lagoons surveyed (47%).

Based on aquatic flora, the site is rated as of **low conservation value**.

Table 86.1 Percentage cover of vegetation and bare ground at sampling stations in Blanket Nook Lough, 21-23/7/03, with salinity, temperature and depth of water, and type of substratum. Species in bold text are lagoonal specialists.

Taxa	Sampling Stations			
	Sta 1	Sta 2	Sta 3	Sta4
Salinity (psu)	10.4	10.5-20.6	10.9	12.9
Temperature	18.2	19.6-19.4	19.8	20.1
Depth (cm)	0-100	0-100	0-80	0-50
Substratum	Shelly mud, occ. stones	Shelly mud	Shell and gravel	Soft mud, overlying shells
Percentage cover:				
Chlorophyceae <i>Chaetomorpha linum</i>	5	20	30	
<i>Cladophora</i> sp.	5	30	20	+
<i>Enteromorpha</i> sp.	15	20	10	+
Xanthophyta <i>Vaucheria</i> sp.				+
<i>Potamogeton pectinatus</i>	10		2	+
<i>Ruppia</i> sp.	1	5	2	
<i>Schoenoplectus lacustris</i>				20
<i>Scirpus maritimus</i>				10
Mineral sediment	70	50	30	80
rotting vegetation	10	10	20	

Fauna

The aquatic fauna of Blanket Nook is more interesting than the flora with a total of 27 taxa recorded (Table 86.2), five of which are regarded as lagoonal specialists and one other species (*Jaera ischiosetosa*) appears to be rare in Ireland.

Cordylophora caspia. Hydroid recorded at four lagoons in Donegal (Kincas L., Inch L., Durnesh L., Blanket Nook), on the North Slob, Co. Wexford, Rostellan, Co. Cork, Muckinish, Co. Clare and an unsurveyed site (Rinmore) in Co. Galway and previously at Lady's Island L. (Healy *et al.* 1982). According to Arndt (1984), the species "appears to be an excellent bio-indicator for eutrophic brackish water in the horohaline zone". Proposed as a lagoonal specialist for Ireland by Oliver and Healy (1998).

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

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.

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.

Jaera ischiosetosa Isopod crustacean recorded at 12 sites from West Cork to Donegal. The only previous record appears to be for L. Hyne. Co. Cork (Goss Custard *et al.* 1979).

Table 86.2 Faunal taxa recorded at stations in Blanket Nook, 21-23/7/03

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 specialist 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>Cordylophora caspia</i>				o									
Annelida																	
				Polychaeta <i>Nereis diversicolor</i>	0.7	1.3	12.0	c					2.0	0.4	1.3	o	
				sp. 2												1.3	
Crustacea																	
				Mysidacea <i>Neomysis integer</i>	31.7		21.0	c					5.0	1.1	1.0	o	
				<i>Praunus flexuosus</i>									4.0	0.9		o	
				Isopoda <i>Jaera ischiosetosa</i>	1.3			o									
				<i>Lekanesphaera hookeri</i>	8.7		33.0	c	2.0	1.0	o	35.0	7.8	41.0	c	4.3	
				Amphipoda indet					0.7		o	49.0	1.9	3.0	a		
				<i>Gammarus zaddachi</i>	8.0		8.0	c	0.7		o	49.0	1.9	3.0	a	0.7	
				Decapoda <i>Carcinus maenas</i>												a	
				<i>Crangon crangon</i>	0.3		2.0	o					2.0	0.4		o	
				<i>Palaemonetes varians</i>												o	
																13.7	
																79.0	
																c	
Insecta																	
				Odonata <i>Ischnura elegans</i>													r
				Heteroptera Corixidae												0.3	11.0
				<i>Corixa</i> sp.													o
				<i>Gerris</i> sp.													r
				<i>S. dorsalis</i>													4.0
				<i>Sigara stagnalis</i>													5.0
				Coleoptera												4.3	2.0
				<i>Helophorus brevipalpis</i>												4.3	
				<i>Nebrioporus depressus</i>													2.0
				Diptera Chironomidae	12.3	18.3	15.0	c	2.0	1.0	c	2.0	4.4		c	16.0	25.3
				<i>Ephydra riparia</i>												0.3	c
Mollusca																	
				Gastropoda <i>Potamopyrgus antipodarum</i>	11.0			c	1.0		o	62.0	13.8	13.0	c	0.3	13.0
Bryozoa				<i>Conopeum seurati</i>				o			o						
Pisces				<i>Anguilla anguilla</i>													c
				<i>Gasterosteus aculeatus</i>	3.7		3.0	o			o	1.0	0.2	21.0	c		1.0
				<i>Pleuronectes flesus</i>													c
				<i>Pomatoschistus microps</i>			4.0	o	0.3	1.0	a	7.0	1.6	12.0	a		3.0

The aquatic fauna of Blanket Nook is more interesting than the flora, with a total of twenty-seven taxa recorded, most of which are common species, but five are lagoonal specialists and one is apparently rare in Ireland. Based on aquatic fauna, the site is rated as of **moderate conservation value**.

Summary

Blanket Nook is a large **artificial lagoon** with a relatively poor flora (8 taxa) but two species are lagoonal specialists (*C. linum*, *Ruppia sp.*). The fauna is slightly more interesting with a total of 27 taxa recorded, of which five are lagoonal specialists, including *C. caspia* and one species (*J. ischiosetosa*) appears to be rare in Ireland. Overall conservation value is rated as moderate.

Overall Conservation Value = Moderate

Conservation Status Assessment (from Oliver 2007)

Impacts	Eutrophication from surrounding farmland but significant tidal flushing. 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 and used in a biological classification of Irish coastal lagoons (Oliver 2005) and in the Conservation Status Assessment (Oliver 2007).

References:

- Arndt, E.A. 1984. The ecological niche of *Cordylophora caspia* (Pallas, 1771). *Limnologica*. (Berlin) **15**: 469-477.
- Bamber, R.N. 1997. Assessment of saline lagoons within Special Areas of Conservation. *English Nature Research Reports* No. 235.
- Barnes, R.S.K. 1989. Coastal lagoons of Britain: an overview and conservation appraisal. *Biological Conservation* **49**: 295-313.
- Goss Custard, S., J. Jones, J.A. Kitching & Norton, T. A. 1979. Tidepools of Carrigathorna and Barloge Creek. *Philosophical Transactions of the Royal Society of London*. Series B, **287**: 1-44.
- Hatch, P. & Healy, B. 1998. Aquatic vegetation of Irish coastal lagoons. *Bulletin of the Irish Biogeographical Society*. **21**: 2-21.
- Healy, B. 2003. Coastal Lagoons. In: *Wetlands of Ireland*. R. Otte (ed). Chapter 4. University College Dublin Press. Dublin. 44-78.
- Healy, B., Bates, R. & McGrath, D. 1982. Marine Fauna of Co. Wexford - 5. Lady's Island Lake. *Irish Naturalists' Journal* **20**: 509-560.
- Healy, B., Oliver, G.A., Hatch, P. & Good, J.A. 1997. *Coastal lagoons in the Republic of Ireland. Vol. 3. Inventory of lagoons and saline lakes*. Report to the National Parks and Wildlife Service, Dublin.
- Oliver, G.A. 2005. *Seasonal changes and Biological Classification of Irish Coastal Lagoons*. PhD Thesis. U.C.D., Dublin. Available on www.irishlagoons.com
- Oliver, G.A. 2007. *Conservation status report: Coastal Lagoons (1150)*. Unpublished report to the National Parks and Wildlife Service, Dublin.
- Oliver, G.A. and Healy, B. 1998 Records of aquatic fauna from coastal lagoons in Ireland. *Bulletin of the Irish Biogeographical Society*. **21**: 66-115.
- Wyse Jackson, P.N. 1991. Distribution of Irish marine Bryozoa, together with biographical notes relating to the chief researchers in the group. *Bulletin of the Irish Biogeographical Society*. **14**: 129-18.