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Rincarna Pools (2), County Galway O.S. M 370 166
O.S. Discovery Sheet 52



Conservation Designation: Galway Bay complex SAC 000268,
SPA 004031, pNHA 000268

General description:

Rincarna Pools comprise two small (0.5ha) natural **karst lagoons** with a sedimentary **cobble/shingle barrier**, situated 2.5km northwest of Ballinderreen, Co. Galway on a peninsula on the southeast shore of Galway Bay. Both pools were highly saline, measuring 34.6 (pool 1) and 39.7psu (pool 2) at the time of sampling (22/7/06) and appear to suffer from eutrophication, possibly due to natural accumulations of marine algae.

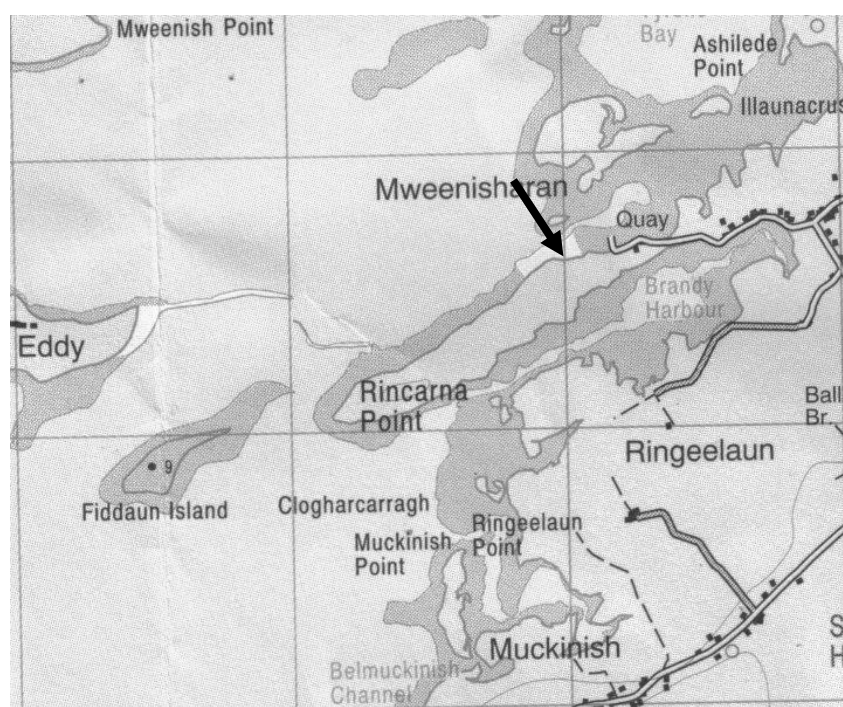


Figure 46.1 Location map of Rincarna Pools.

Rincarna Pools were surveyed on 22/7/06 for aquatic fauna and flora. The pools are small and each one was treated as a single sampling station (Figure 46.2. Table 46.1)

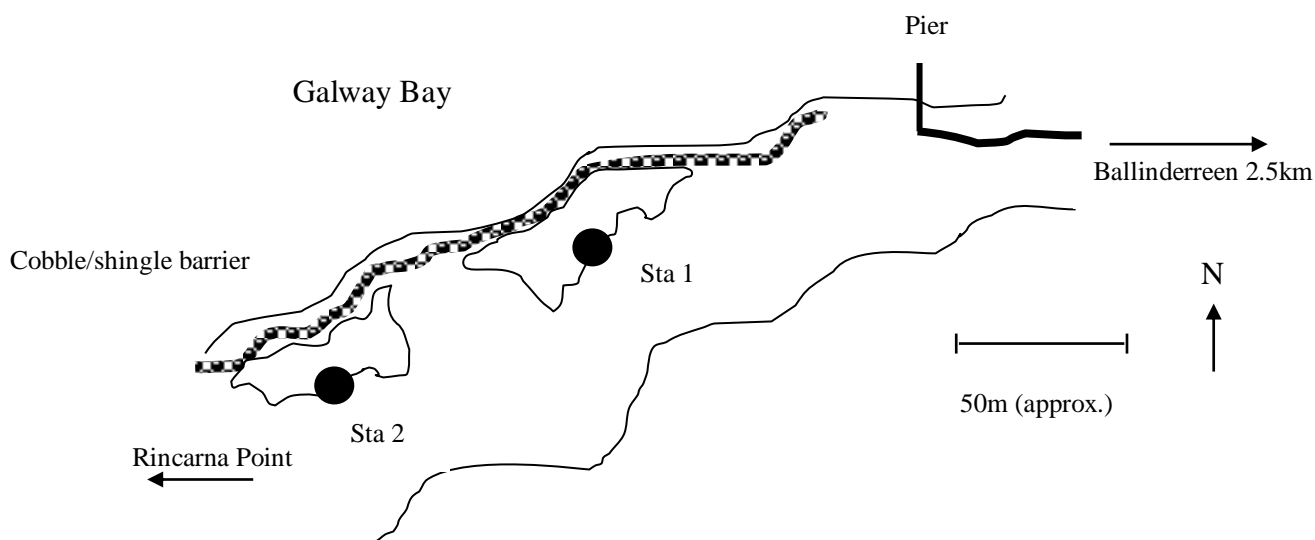


Figure 46.2 Sampling stations at Rincarna Pools, 22/7/06

Flora

Only five floral taxa were recorded in Rincarna Pools at the time of sampling (Table 46.1). The eastern pool (Sta 1) appeared to be highly eutrophic and largely anoxic, with a 30% cover of a pink bacterial mat (*Beggiatoa*) and 60% cover of filamentous algae, one of which (*Chaetomorpha linum*) is a lagoonal specialist.

Table 46.1 Positions of sampling stations in Rincarna Pools, Co. Galway 22/07/2006, with hydrological variables (salinity, temperature and depth of water), type of substratum and percent cover of vegetation and bare ground. Species in bold text are lagoonal specialists.

	Sta 1	Sta 2
GPS position	M 36970 16540	M 36879 16466
Salinity (psu)	34.6	39.7
Temperature at surface	20.2	19.6
Depth (cm)	0-120	0-100
Substratum	cobbles, soft mud	cobbles, soft mud
Percentage cover		
Bacterial mat (<i>Beggiatoa</i>)	30	5
Algae		
Chlorophyceae		
<i>Chaetomorpha linum</i>	20	80
<i>Cladophora ?rupestris</i>	10	1
<i>Enteromorpha</i> sp.	30	5
Phaeophyceae		
<i>Cystseira</i> sp.	drift	
<i>Fucus vesiculosus</i>	drift	drift
Bare ground	10	10
Cobbles	20	

There is some doubt about the taxonomic status of the unattached lagoonal form of *C. linum*, 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.

The western pool (Sta 2) was almost completely dominated by this alga. It appeared that other species may have been “choked” and out-competed by these filamentous algae, which may occur periodically, and the vegetation of these pools may be more interesting at another time.

Although highly eutrophic and dominated largely by just one species (*C. linum*), this is a characteristic lagoonal specialist and based on aquatic vegetation, as a coastal lagoon the site is regarded as of **moderate conservation value**.

Fauna

For such small pools, the fauna is quite rich with a total of 30 faunal taxa recorded (Table 46.2), of which five are regarded as lagoonal specialists. However, two of these remain to be confirmed (*G. chevreuxi*, *H. ventrosa*). There is some doubt about the species of *Idotea*, but is likely to be another lagoonal specialist, *I. chelipes*. Most of the other taxa recorded are common marine animals.

Idotea chelipes is a common, lagoonal, isopod crustacean, often found in association with the lagoonal form of *Chaetomorpha linum*. Found at 23 of the 87 (26.4%) lagoons surveyed, mostly at relatively high salinity.

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). 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.

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.

Hydrobia ventrosa. Gastropod mollusc commonly found in brackish lagoons and ditches and generally not on the open coast. Recorded at 18 of the 87 (20.7%) lagoons surveyed up to 2006.

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 pools are small and at the time of sampling appeared highly eutrophic, however the aquatic fauna is relatively rich with a complement of lagoonal specialists, two of which may be rare species. Based on this fauna the site is regarded as of **high conservation value**.

Table 46.2 Aquatic fauna recorded at sampling stations in Rincarna pools, Co. Galway 22/7/06. (a = abundant; c = common; o = occasional; r = rare) Species in bold text are lagoonal specialists or rare species.

Taxa		Sampling Stations		
		Sta 1	Sta 2	
Cnidaria	<i>Actinia equina</i>	o	o	
	<i>Dynamena pumila</i>		o	
Nemertea	<i>Lineus viridis</i>		o	
Nematoda	indet.	r		
Annelida	Polychaeta			
	<i>Capitella capitata</i>		o	
	Spirorbidae indet.	c	a	
	? <i>Neodexiospira</i> sp.	c	a	
Crustacea	Ostracoda	indet.	o	
	Mysidacea	<i>Praunus flexuosus</i>	r	
	Isopoda	<i>Idotea</i> sp.	c	o
		<i>Lekanesphaera hookeri</i>	r	
	Amphipoda	<i>Gammarus ?chevreuxi</i>	a	o
		<i>Melita palmata</i>	o	
		<i>Microdeutopus gryllotalpa</i>	c	
		? <i>Microprotopus</i>	c	
	Decapoda	<i>Carcinus maenas</i>	o	
		<i>Palaemonetes varians</i>	r	o
	Acarina	indet.	r	r
	Insecta	Diptera		
		<i>Ephydra riparia</i>	o	o
	Chironomidae indet.		o	
Mollusca	Gastropoda	<i>Bittium reticulatum</i>	r	
		<i>Hydrobia ulvae</i>	o	o
		<i>Hydrobia ?ventrosa</i>		o
		<i>Littorina littorea</i>	o	o
		<i>Rissoa membranacea</i>	o	
	Bivalvia	<i>Modiolus barbatus</i>		o
	Bryozoa	<i>Conopeum seurati</i>	o	
	<i>Cryptosula pallasiana</i>		a	
Teleostei	<i>Atherina presbyter</i>	r		
	<i>Gasterosteus aculeatus</i>		r	

Summary

The two lagoons referred to as Rincarna Pools are natural **karst lagoons** with **sedimentary cobble barriers** and as such are examples of a relatively rare lagoon type in Europe. They are small and appear to be heavily impacted by accumulations of organic material (possibly natural) and the barrier appears weak and could easily be damaged by storms. One pool in particular was largely anoxic at the time of sampling. However, the other pool is more typically lagoonal and is dominated by the lagoonal specialist alga, *Chaetomorpha linum*. The fauna is interesting with a relatively high number of lagoonal specialists, one of which (*G. chevreuxi* unconfirmed) may be rare. A repeat visit which may reveal less eutrophic conditions is recommended. As an unusual lagoon type with a relatively rich lagoonal community, overall, the site is rated as of high conservation value.

Overall Conservation Value = High

Conservation Status Assessment (from Oliver 2007)	
Impacts	Natural damage to cobble barrier may destroy lagoon habitat. One pool highly eutrophic.
Conservation Status	Unfavourable-Inadequate
Further Information	
Listed as a lagoon by Healy <i>et al.</i> 1997, Healy 2003 and Oliver 2005 and included in the Conservation Status Assessment (Oliver 2007).	

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