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**Clooncneen Pool, County Clare O.S. Q 836 497**

O.S. Discovery Sheet 63

**Conservation Designation:** Lower River Shannon SAC 002165**General description:**

This pool lies on the Shannon estuary, just west of Kilcredaun Point, 2 km southwest of Carrigaholt. Small (7ha) natural **sedimentary lagoon** with a cobble barrier in an area of partially cut peat bog which has become flooded by seawater. Salinity was high at the time of sampling (9-10/8/96) and ranged from 32-34psu in the main pool but is probably less for much of the time. There is a drowned forest of pine, some 4,000 years old on the beach which Mitchell (1990) describes as the finest example of "submerged forest" that he knows. Further offshore is another barrier of rock, which possibly represents the position of a former complete barrier, enclosing a larger lagoon. The lagoon and cobble barrier, together with the drowned forest, is of great geomorphological interest.

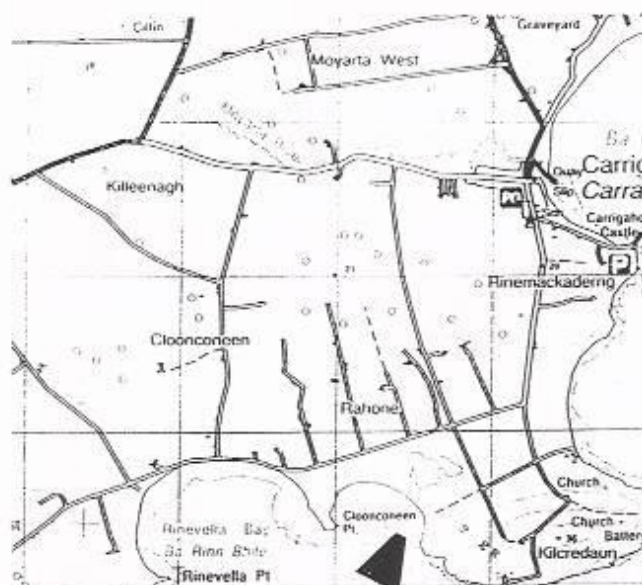


Figure 34.1 Location map of Clooncneen Pool.

Cloonconeen Pool 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).

Stations used for faunal sampling are not necessarily the same as those used for vegetation or ecotonal coleoptera.

## Flora

Vegetation was surveyed by P. Hatch in 1996 (Hatch 1996, Hatch & Healy 1998).

*Ruppia maritima* was the only aquatic higher plant species. It is more or less sparse but frequent around most shores and forms fairly dense beds in the south eastern bay. It has a wide distribution, but is absent from the vicinity of the inflow channel.

*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.

Marginal communities and species show some diversity. *Scirpus maritimus* and *Juncus maritimus* are the dominant species around most shores, typically associated with a sparse understorey of salt tolerant species and grading to *Juncus gerardii* - *Festuca rubra* saltmarsh. *Puccinellia maritima* saltmarsh occurs at the western end, including one stand on the barrier shore with an open *Phragmites* cover. *Spartina anglica* is locally dominant on the north western shore and there is one small area of open *Salicornia* cover on a muddy shore in the same area.

Extensive stands of *Phragmites* and *Spartina* lie to the west of the site, associated with the inflow channel which joins the lagoon at its western end.

## Fauna

Four stations were selected for faunal sampling in 1996 (Figure 34.2, Table 34.1).

Table 34.1 Positions of sampling stations in Cloonconeen Pool, 9-10/8/96, with salinity, depth of water and type of substratum

	Sta A	Sta B	Sta C	Sta D
GPS position	Q 8362 4966	Q 8351 4976	Q 8382 4974	Q 8373 4981
Salinity(psu)	34	30	32	32
Depth(cm)	0-100	0-40	0-50	0-50
Substratum	Cobbles, gravel, coarse sand	Sand, silt, unconsolidated peat	Fine silt, soft unconsolidated peat	soft unconsolidated peat

A total of only 14 taxa were recorded in Cloonconeen, of which 13 are identified to species (Table 34.2), but seven of these species are lagoonal specialists, (Lady's Island had only 8 lagoonal specialists and is 100 times larger!), and one beetle found in abundance (*E. bicolor*) is relatively rare nationally.

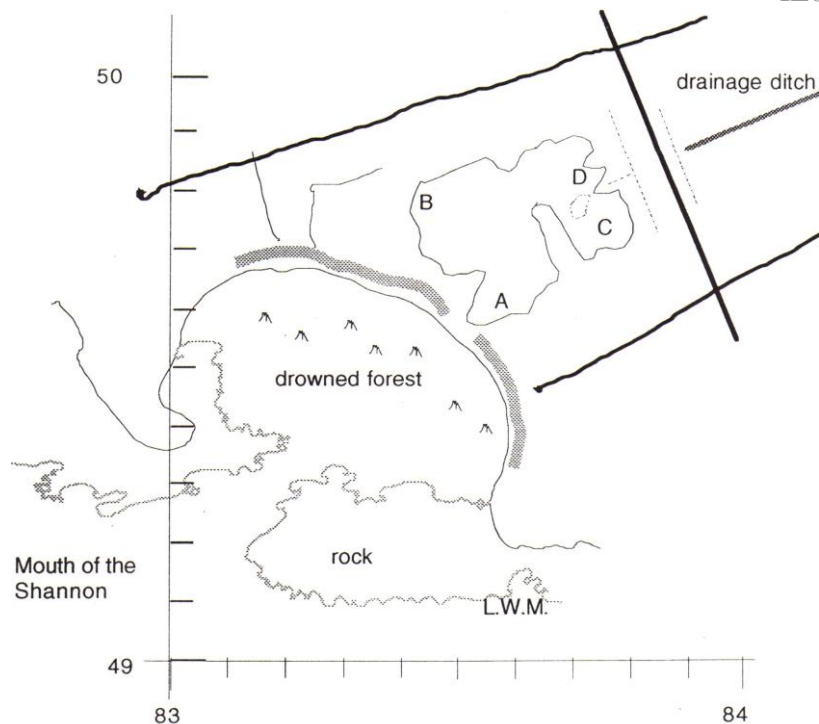


Figure 33.2 Sampling stations used at Cloonconeen Pool.

Table 34.2 Aquatic fauna recorded at stations in Cloonconeen Pool, 9-10/8/96

L.T. = Light Trap + = present; r = rare, c = common, o = occasional; a = abundant; F = fyke net. Species in bold text are lagoonal specialists.

Taxa	Sampling Stations							
	A	L.T.A	B	L.T.B	C	L.T.C	D	L.T.D
<b>Crustacea</b>								
Isopoda <i>Lekanesphaera hookeri</i>	a	50	a	50	a	150	a	120
<i>Jaera ?nordmanni</i>	+							
Amphipoda <i>Gammarus locusta</i>	+						+	
Decapoda <i>Carcinus maenas</i>	+		+					
<i>Palaemonetes varians</i>	a	55	a	200	a	110	a	56
<b>Insecta</b>								
Hemiptera Corixidae	a	150	o	2	a	50	a	40
<i>Sigara stagnalis</i>	a	a	+	+	a	+	a	+
Coleoptera <i>Enochrus bicolor</i>	+		+		+		+	
Diptera Chironomidae	+				+		+	
<b>Mollusca</b>								
Prosobranchia Hydrobiidae	a				c		+	
<i>Hydrobia ulvae</i>	10							
<i>Hydrobia ventrosa</i>	1				+			
Bivalvia <i>Cerastoderma glaucum</i>	a		shells		c		a	
<b>Teleostei</b>								
<i>Anguilla anguilla</i>	F,						F,	
<i>Gasterosteus aculeatus</i>	a	24	a	43	a	56	c	16

*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.

***Enochrus bicolor*** Water-beetle recorded at 12 lagoons of the 87 surveyed, from the southern half of the country from Co. Wicklow to Connemara including the Aran Islands. There are only two recent records from N. Ireland (Nelson *et al.* 1998).

***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.

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

The *Jaera* were not identified specifically as only females were found, but were thought to be ***Jaera nordmanni***, which was proposed as a lagoonal specialist for Ireland by Oliver and Healy (1998). This is an 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. This species may occur in freshwater, as in L. Errol, Cape Clear, Co. Cork. Described in England (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.

The fauna of Cloonconeen is poor, with only 14 taxa recorded, reflecting the small size of the pool, the absence of emergent vegetation and hard surfaces, and a soft sediment that may be unsuitable to most species. However, a high proportion of these (50%) are lagoonal specialists and one is a relatively rare species. Therefore, based on aquatic invertebrates, Cloonconeen is regarded as of **high conservation value**.

### Ecotonal coleoptera

A total of five carabid and five staphylinid beetles were recorded at Cloonconeen (Good & Butler 1998), of which two species are indicator species (*Bembidion aeneum*, *Brundinia meridionalis*). The presence of two indicator species indicates well-developed habitat and the site is described as of **significant conservation value**.

### Summary

Cloonconeen Pool is a small natural sedimentary lagoon with a cobble barrier superimposed on peat. The biota of the pool is poor with relatively few species but a large proportion of lagoonal specialists (7 faunal, 1 floral) and a relatively rare beetle found in abundance. The pool and shoreline are worthy of conservation for their unusual geomorphology, the presence of the drowned forest, the pool with its typical lagoonal fauna and the presence of a rare species of beetle, found in abundance. Overall it 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. Erosion.
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Conservation Status	Unfavourable-Inadequate
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### Further Information

Cloonconeen Pool 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). Included in a biological classification of Irish coastal lagoons (Oliver 2005) and in the Conservation Status Assessment (Oliver 2007).

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