

Coole-Garryland Complex

SITE NAME : COOLE-GARRYLAND COMPLEX

SITE CODE : 000252

The Coole-Garryland Complex is situated in a low-lying karstic limestone area west of Gort, County Galway. It contains a series of seasonal lakes (turloughs), which are fed by springs and a partly submerged river, surrounded by woodland, pasture and limestone heath. The more well-known turloughs present in the site include Lydacan, Crannagh North, Raheen, Crannagh South, Coole, Garryland, Newtown and Hawkhill.

Turloughs are listed as priority habitat on Annex I of the EU Habitats Directive, and the turloughs at Coole-Garryland are particularly good examples of this habitat type. Vegetation of the turloughs includes Shoreweed (*Littorella uniflora*), Spike-rush (*Eleocharis palustris*), Water-purslane (*Lythrum portula*) and Fen Violet (*Viola persicifolia*). A species of Water-starwort, *Callitriche palustris*, has recently been recorded from the site, its only known station in Ireland. The Coole river itself is of particular interest for the occurrence of a rare riverine habitat characterised by Trifid Bur-marigold (*Bidens tripartita*), Red Goosefoot (*Chenopodium rubrum*) and species of Knotgrass (*Polygonum spp.*).

The turloughs are fringed by a range of habitats on limestone pavement, including scrub communities containing Buckthorn (*Rhamnus catharticus*) and Hawthorn (*Crataegus monogyna*). In places, heath communities have developed over the limestone pavement, consisting of Ling Heather (*Calluna vulgaris*), Juniper (*Juniperus communis*), Blue Moor-grass (*Sesleria albicans*) and occasional Yew (*Taxus baccata*). In addition, the site contains good examples of smooth pavement and associated species-rich grasslands. Small areas of orchid-rich grassland occur at Coole-Garryland. The colourful array of orchids which can be found here include Pyramidal Orchid (*Anacamptis pyramidalis*), Spotted Orchids (*Dactylorhiza spp.*), Fragrant Orchid (*Gymnadenia conopsea*), Fly Orchid (*Ophrys insectifera*) and Greater Butterfly Orchid (*Platanthera chlorantha*).

A remarkable feature of the turloughs at Coole-Garryland is that they are closely associated with areas of woodland. Although substantial parts of the original deciduous forest have been converted to coniferous woodland composed of non-native species, stands of semi-natural deciduous woodland survive. Pedunculate Oak (*Quercus robur*) and Ash (*Fraxinus excelsior*) are the dominant species on deeper, more fertile soils, where there is also some Hazel (*Corylus avellana*), occasional Yew (*Taxus baccata*) and Elm (*Ulmus spp.*). There are also some unusual areas of dwarf Pedunculate Oak woodland growing on limestone pavement. This species of oak does not typically colonise this type of substrate.

Some of the deciduous woodlands have a mixture of native and non-native species. These mixed woodlands have a diverse shrub layer comprised of Spindle (*Euonymus europaeus*), Privet (*Ligustrum vulgare*), Burnet Rose (*Rosa pimpinellifolia*), Guelder Rose (*Viburnum opulus*), Blackthorn (*Prunus spinosa*), Pear (*Pyrus pyraster*) and Honeysuckle (*Lonicera periclymenum*). The ground flora is rich and includes Wood Anemone (*Anemone nemorosa*), Dog Violet (*Viola riviniana*), Shining Crane's-bill (*Geranium lucidum*), Maidenhair Spleenwort (*Asplenium trichomanes*), Northern Bedstraw (*Galium boreale*), Biting Stonecrop (*Sedum acre*), Harebell (*Campanula rotundifolia*) and Bitter Vetch (*Lathyrus montanus*). The woodlands are notable for the presence of rare species of Myxomycete fungi, namely, *Licea*

idris, *Licea marginata* and *Macbrideola decapillata*, the first-named in one of only three known sites for the species.

The nationally rare Mudwort (*Limosella aquatica*) and Dropwort (*Filipendula vulgaris*) also occur at this site. These two plant species are listed in the Irish Red Data Book.

The complex of habitats at Coole-Garryland provides habitat for a variety of mammal species, including Otter and Pine Marten. The otter is listed on Annex II of the EU Habitats Directive, while Pine Marten is considered to be threatened in Europe. The Coole-Garryland complex is also home to one of the most important and unique assemblages of insects in the country, including several notable species of beetles and flies.

The area is of importance for wintering waterfowl, especially Whooper Swan (mean peak of 324 in 1995/96 - 98/99), Bewick Swan (79 in winter 96/97), Wigeon (mean peak of 1044 in 1995/96 - 98/99), Mallard (mean peak of 330 in 1995/96 - 98/99), Pochard (mean peak of 176 in winter 1995/96 - 98/99), along with smaller numbers of Teal, Tufted Duck, Lapwing, Curlew and Dunlin. In 1996 seven pairs of Lapwing bred at Newtown Turlough and two pairs of Common Sandpiper bred at Coole Lough.

A substantial portion of this site is in the ownership of the National Parks and Wildlife Service. It is a popular amenity area, and uncontrolled visitor access would pose a threat to sensitive animals. Other threats to the site may result from the intensification of agriculture (e.g. fertiliser application or pollution of water courses) outside the Nature Reserve.

The turlough system at Coole-Garryland is considered to be the most diverse in the country, for both its physiography and vegetation. It is unique in that it is so closely associated with woodland. The juxtaposition of these two distinct habitats, in addition to the presence of a variety of turloughs, has led to the development of uncommon communities, and rare species of insect and plant occur which are associated with both the turlough and the turlough/woodland transition. Overall, the range of good quality habitats at Coole-Garryland supports a high diversity of plant and animal species, rendering this site of prime importance for conservation.

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