

“Turloughnacloghdoo Commons”

By the 5th and 6th class of 2008-2009

Gordon D’Arcy Artist and Naturalist spent a day in St. Thomas’ N.S. in March 2009 during which he ignited an inquisitive spark in the students. He took us, the Senior Classes on a environmental walk to the local turlough and whetted our appetites to know more.

This local turlough is called ***Turloch na Clocha Dubha***, which means the ‘turlough of the black stones’. Turloughs have a very distinctive appearance in summer due to the presence of the black moss *Cinclidotus* on rocks and other hard surfaces. This moss is aquatic, associated with periodic flooding and does not occur above the level of the flood zone. Turloughs are unique to Ireland and are an important part of our heritage. They are among the most distinctive of Ireland's semi-natural landscapes. They are of interest because of their formation, means of flooding and their flora and fauna. Turloughs occur in limestone areas. Rain flows through the cracks and normally rises at springs. However with heavy rainfall the underground water level (or water table) rises, the underground flow routes to the springs cannot cope with the volume and the water appears back up at the surface through a hole in the form of a turlough.

Location

Turloughs are mostly found on the central lowlands west of the Shannon in Galway, Clare, Mayo and Roscommon, although a few are also found elsewhere e.g. Limerick, Sligo and Longford. Our turlough is to be found in the area of Blackrock, which is North West of Peterswell village.

Flooding

Most turloughs are lakes only in wet weather but some hold water permanently in their deepest parts. Flooding periods may be for days, weeks or months This was clearly visible in 1995, resulted in the road being impassable during the winter months. The result of this was that students from the flooded areas had to be transported to school in army lorries. The rate of flooding can be very rapid according to rainfall. Drainage rate varies from a few centimetres per day to 100 metres per hour. It depends on the surrounding soil structure. Flooding occurs to a depth of two metres but some like Turloughnacloghdoo are much deeper in winter.

Turlough flora and fauna

Vegetation

Turlough vegetation can be divided into different zones, according to the varying water level. In addition to flooding and heavy grazing, plants also have to survive drought during dry periods when the shallow soil may dry out completely.

Trees grow as a type of scrub near the upper edge. Below the tree zone there are sedges. The shrubby Cinquefoil with its attractive yellow flowers often shows the high water mark. Just below, dog violets are abundant and in our turlough there is a dense covering of the rare *sky-blue turlough violet* further down. Other characteristic plants of turlough sides include orchids and speedwell. About half way down the sides and across the bottom of shallow turloughs, silverweed may blanket almost all other plants.

If the turlough has a marshy zone near the shallow hole, aquatic plants may occur, but most swallow holes when dry comprise a jumble of rocks, covered in the blackish mosses.

Turlough vegetation
(zoned in descending order)

Ash, Whitethorn, Blackthorn, Buckthorn, Purging Buckthorn, Creeping
☐ Willow, Stone Bramble
☐ Carnation Sedge, Autumnal Hawkbit
☐ Shrubby Cinquefoil, Meadow Rue
☐ Common Dog Violet
☐ Dewberry + (Orchids)
☐ Birdsfoot Trefoil + (Speedwell)
☐ Ribwort Plantain
☐ Creeping Cinquefoil
☐ Turlough Violet (rare)
☐ Silverweed

If wet area

Mint, Water-cress, Aquatic Buttercups, Knotgrass, Floating Sweet Grass,
☐ Floating Fox Tail, Shoreweed

Amphibious Bistort

Gordon also noted ridges in the turlough field, which he said may date back to famine times when in desperation farmers sought new ground in which to sow their potato crop.

Fauna

Turloughs, which dry out entirely each year, have a less varied fauna than those in which ponds or small lakes persist during dry periods. Where the swallow hole water source is augmented by spillover from rivers or streams a third type of fauna occurs.

The alteration between dryness and flooding creates major problems for animals since, except for short periods, conditions suit neither aquatic nor dry land species. The speed at which turloughs can flood without prior warning gives little chance to escape the rising water. Neither aquatic nor dry land animals can complete their life cycle in turloughs unless these take only a few months.

Fairy Shrimp

The fairy shrimp *Tanymastix* only occurs in turloughs. . It can be found at our turlough in Peterswell. When full grown at nearly 2.5 centimetres in length, it is one of the largest aquatic turlough animals. It survives the dry periods as drought-resistant eggs, which remain in the soil. As soon as the ground floods the tiny fairy shrimps hatch and swim up into the water, where they grow within two months to their full size. They then produce large numbers of eggs, which sink to the bottom of the turlough and will not hatch until they have gone through a period of desiccation. The shrimps themselves die when the turlough waters recede.

Other Aquatic Fauna

Water fleas and other small creatures depend on livestock dung pats and plant remains. Winged adult water bugs and water beetles fly to the turloughs feeding on microscopic plant life and small crustacea.

Frogs and newts may spawn in turloughs, sticklebacks and waterlice may survive in larger turloughs, retreating into underground cracks in the rock when waters are low. Flatworms and snails are also often abundant, passing the dry periods in spring mouths or marshy areas.

Dry Land Animals

These are nearly all small, active carnivores. While the turlough is flooded in winter, they hibernate above the water level nearby and then as the waters recede, become active along the water's edge, feeding on dead and dying aquatic creatures stranded there. Most of these predators are ground beetles but also include wolf spiders and centipedes. The ground beetles include two of Ireland's rarest species *Agonum Livens* and *Badister Meridionatis*.

In summertime there is grass for grazing livestock. This land is commonage – locals have the rights to graze sheep, cattle and horses. The traditional grazing regime is necessary to preserve the characteristic sward. Without grazing, scrub and tress would dominate. Fencing off stock and stopping grazing is detrimental.

Fieldfares and Red Wings feed on berries on the edge of the Turlough. The

Blackthorn bushes in the area also support the brown-haired streak butterfly.

Waterfowl

The turlough is an important wintering grounds for waterfowl such as the golden plover, the wigeon and the teal.

Many birds from Eastern Europe, Iceland and Scandinavia come to our turlough to spend the winter there. There are two kinds of birds in our turlough, **Wading Birds** – golden plover, lapwing, snipe and **Water Birds** – Duck, wigeon, teal and mallard.

Wild swans come from Iceland. These are called Whooper Swans. Whitefronted Geese also arrive from Greenland.