The Blooming Burren
Flowers of the Burren National Park

By Frank McGourty, Sec. Institute of Biology of Ireland, 6th May 2015

The Institute of Biology of Ireland (www.ibioli.net) members were again warmly welcomed by Richard Morris on behalf of BurrenBeo (**www.burrenbeo.com**) , the organisers of today's walk as part of the Burren in Bloom series of walks and talks. Almost 50 people from USA, UK, and many parts of Ireland, turned out for this walk under the iconic Mullaghmore mountain.

Figure 1: Iconic Mullaghmore mountain

Figure 2: Our guides, Anne, Eamonn, and Emma

Figure 3: Some of Emma's group in the Cowslip meadow

The afternoon was filled with glorious sunshine despite experiencing rather inclement weather in the morning. Decked out in appropriate clothing and walking shoes, we all met at Gortlecka Cross at 2.15pm. Three guides were assigned to the group, Ann, Eamon and Emma. At their suggestion, we divided into 3 almost even groups. After an introductory talk from Richard, BurrenBeo co-ordinator, Emma led off and guided 18 others and myself to explore the flowers in bloom. Anne and Eamonn moved off in different directions with their respective groups to meet up again after 2 hours of working our ways through the hazel scrub (Figure 9), over the limestone pavements and across the cowslip-clad grassland (Figure 11).

We encountered a great variety of plants, each of which were spoken about by Emma with such an enthusiastic interest that it became infectious. She explained the relationships between the natural environment of the Burren, and the work, not only by BurrenBeo's management of the National Park, but also, in particular, the engagement of the local community and farmers. She explained the concept of the Winterage programme. No silage is used to feed the cattle during winter. The cattle are moved to the uplands and fed specially compounded concentrate. Grazing the available herbage provides the roughage element of the diet. The rocks act as major 'storage heaters' slowly releasing the summer sun's energy, shelter is provided by the hazel scrub and, by way of return, the grazing density and regime favours the early growth of the flowers which we were now enjoying. Livestock are returned to the lowlands for late Spring and Summer.

We identified Wild Strawberry, Wood Anemone, Dog Violet, Mountain Avens (an Alpine plant with oak-like leaves), and Hazel and Ash shrubs and trees (clad with so many lichen varieties). On the limestone pavements we identified Wall Lettuce, Rusty-backed Fern, Harts Tongue Fern and Wall Rue ferns. In the grikes (the E-W cracks on the limestone pavement), some pink-flowered Herb Robert battled for survival space with Burnet Rose and the occasional Carlisle Thistle. The occurrence of Wild Thyme cladding a few small ant hills stimulated debate about this association. The Wood Sage that flourished in the open space seemed to be out of place as it is a woodland, shade

plant; however Emma explained that clearing of hazel scrub (an environmental management strategy) had recently been undertaken in that area.

Figure 5: Wood anemone

Figure 4: False Oxslip

As we stood on the limestone pavement we were given a brief overview of the geology of the Burren; the age of the limestone rock is 350 million years and was formed in warm seas near the Equator. Over that period of time, due to tectonic plate movements edging us on average 3cm per year, we are where we are now. I kept thinking what would it like to be righ now in the Bahamas!! Under foot we found fossils of coral that flourished then in those same seas (Figure 10). In a shallow water-filled depression in the limestone, some Nostoc was identified. *Nostoc* is a genus of cyanobacteria found in a variety of environmental niches that forms colonies composed of filaments of moniliform cells in a gelatinous sheath. These bacteria contain photosynthetic pigments in their cytoplasm to perform photosynthesis. Weak acids produced by the Nostoc colonies help to erode the limestone to form the depression in which they can thrive.

Figure 6: Spring Gentian

Figure 7: Fr. Ted's house

The meadow area was covered with Cowslip plants. Many Primrose plants were also discovered towards the edes of the field and in depressions. The 'pin-eye' and 'thrum-eye' characteristics of the Primrose that ensures cross-pollination were identified. Occasionally, cross fertilisation between the Primrose and the Cowslip results in the False Oxslip – also found there (Figure 5). Other plants found included Bugle, Cat Paw, Milkwort, Oxeye Daisy, Blue Moor Grass, Silverweed, Tormentil and Common Spotted Orchid.

But a visit to the Burren would not be complete without an encounter with the Alpine plant, Spring Gentian. And if as planned, there it was just under foot offering us that that majestic blue, unforgetable colour (Figure 6).

The day was not yet over. We retired to ‘Fr Ted’s’ house (Figure 7), just 2 Km further up the road where “Mrs Doyle” served home made scones, chocolate cookies, cinnamon-flavoured apple pie, and tea (Figure 8).

Figure 8: Enjoying "Mrs Doyle's" home cooking

Figure 9: Hazel scrub in Burren National Park

Figure 10: Fossil of coral, formed 350 million years ago

Figure 11: Meadow clad with Cowslips