

**Site Name: Mweelrea/Sheeffry/Erriff Complex SAC**

**Site Code: 001932**

The Mweelrea/Sheeffry/Erriff Complex SAC covers a large area of the scenic hills of south Co. Mayo. The western limit of the site is at Dooaghtry, south of Kinnadoohy. The southern margin is bounded by Killary Harbour and the Erriff River, including the corrie of Lough Glenawough. The Aille River forms the eastern limit, and to the north the boundary includes the main massifs of the Sheeffry Hills and the Mweelrea Mountains. Several river catchments are encompassed within the site, including the Bundorragha and Glenummera Rivers, as well as Fin Lough, Doo Lough and Glencullin Lough, the upper catchment of the Bunowen River and parts of the Derrycraff and Owenmore Rivers.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (\* = priority; numbers in brackets are Natura 2000 codes):

- [1150] Coastal Lagoons\*
- [1210] Annual Vegetation of Drift Lines
- [1330] Atlantic Salt Meadows
- [1410] Mediterranean Salt Meadows
- [2110] Embryonic Shifting Dunes
- [2120] Marram Dunes (White Dunes)
- [2150] Decalcified Dune Heath\*
- [2170] Dunes with Creeping Willow
- [21A0] Machairs\*
- [3110] Oligotrophic Waters containing very few minerals
- [3130] Oligotrophic to Mesotrophic Standing Waters
- [3160] Dystrophic Lakes
- [3260] Floating River Vegetation
- [4010] Wet Heath
- [4030] Dry Heath
- [4060] Alpine and Subalpine Heaths
- [5130] Juniper Scrub
- [6430] Hydrophilous Tall Herb Communities
- [7130] Blanket Bogs (Active)\*
- [7140] Transition Mires
- [7150] Rhynchosporion Vegetation
- [7220] Petrifying Springs\*

- [7230] Alkaline Fens
- [8110] Siliceous Scree
- [8210] Calcareous Rocky Slopes
- [8220] Siliceous Rocky Slopes
  
- [1013] Geyer's Whorl Snail (*Vertigo geyeri*)
- [1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)
- [1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*)
- [1106] Atlantic Salmon (*Salmo salar*)
- [1355] Otter (*Lutra lutra*)
- [1395] Petalwort (*Petalophyllum ralfsii*)
- [1833] Slender Naiad (*Najas flexilis*)

A number of lowland blanket bog sites are located within the complex, including bogs at Knockeen, Srahroosky, Kinnakillew, Bunowen, Glenkeen, Muingatogher, Owennaglogh and Laghta Eighter in the Mweelrea/Sheeffry Hills region, and Derryaun, Srahlea, Derrinkee, Derrintin and Glenawough in the Erriff Valley. Lowland blanket bog was formerly more extensive in the area but is now fragmented by coniferous forestry plantations, particularly in the Erriff Valley. Typically, areas of lowland blanket bog within this site are dominated by Purple Moor-grass (*Molinia caerulea*), Black Bog-rush (*Schoenus nigricans*), Cross-leaved Heath (*Erica tetralix*) and various bog moss (*Sphagnum* spp.) species. A number of rare or uncommon bog moss species are found in the site, such as *S. subsecundum*, *S. strictum*, *S. imbricatum* and *S. pulchrum*. Upland areas of blanket bog are much less common at the site, and some areas are known to be degraded, with Deergrass (*Scirpus cespitosus*), Heath Rush (*Juncus squarrosus*) and Mat-grass (*Nardus stricta*) being the most common species.

Rhynchosporion vegetation is best developed in the lowland blanket bog areas, where pools, wet hollows and quaking areas occur. White Beak-sedge (*Rhynchospora alba*) occurs in association with such species as Common Cottongrass (*Eriophorum angustifolium*), Bogbean, Oblong-leaved Sundew (*Drosera intermedia*), and a range of bog mosses, including *Sphagnum auriculatum* and *S. cuspidatum*. In some places, Rhynchosporion vegetation occurs on areas of wet cutover bog.

Areas of quaking bog are often associated with soakways which flow through lowland blanket bog areas. These are found at the site in a number of places, and vegetation consists of Purple Moor-grass, Black Bog-rush, Bog Pondweed (*Potamogeton polygonifolius*), Bogbean (*Menyanthes trifoliata*), White Beak-sedge, Bog-sedge (*Carex limosa*), Slender Sedge (*Carex lasiocarpa*), Bog Asphodel (*Narthecium ossifragum*) and Bog-myrtle (*Myrica gale*). Tall reedswamp species such as Common Reed (*Phragmites australis*) and Great Fen-sedge (*Cladium mariscus*) are also found in these areas. These habitats correspond with the E.U. Annex I listed habitat 'Transition mires and quaking bogs'.

Dystrophic lakes occur at this site in association with the extensive tracts of lowland blanket bogs, particularly in the northern and eastern parts of the site. They range in size from tens of square metres to two hectares. There is typically a peat base, and the water is usually brown-tinged. Species such as Lesser Bladderwort (*Utricularia minor*), Intermediate Bladderwort (*U. intermedia*), Many-stalked Spike-rush (*Eleocharis multicaulis*), the bog mosses *Sphagnum cuspidatum*, *S. auriculatum* and *S. tenellum*, Oblong-leaved Sundew, White Beak-sedge and Bogbean are common.

Wet heath occurs at this site in upland regions, where peat depth is restricted. Vegetation can be similar to lowland blanket bog, and is typically dominated by Deergrass, Cross-leaved Heath, Purple Moor-grass, Bog-myrtle and bog mosses (*Sphagnum* spp., but most notably *S. palustre*). Dry heaths also occur, and are best developed at low to moderate altitudes, in areas of shallow, sloping, well-drained peat. Typical dominant plant species are Heather, Tormentil (*Potentilla erecta*), Bell Heather (*Erica cinerea*), Deergrass and the mosses *Hypnum cupressiforme*, *Rytidiadelphus loreus* and *Hylocomium splendens*. The habitat supports a number of unusual plant species, including a large stand of Irish Heath (*Erica erigena*) on the Killary side of Mweelrea Mountain, and a range of rare mosses and liverworts.

Species typical of alpine and subalpine heaths have been recorded from Mweelrea and the Sheeffry range. These include Heather (*Calluna vulgaris*), Bilberry (*Vaccinium myrtillus*), Crowberry (*Empetrum nigrum*), the moss *Racomitrium lanuginosum*, Dwarf Willow (*Salix herbacea*), Stiff Sedge (*Carex bigelowii*) and Alpine Clubmoss (*Diphasiastrum alpinum*). Juniper (*Juniperus communis*) has also been recorded as a component of subalpine heath at the site. This species, however, also occurs in other areas, where it is considered to form areas of 'Juniper scrub'. These include the middle of Knockeen bog, where it is found on small islands in pools as well as in flat areas of blanket bog between the pools. It is also found in the Creganawoody townland in the north-west of the site on shallow blanket bog where there is much outcropping rock. Associated species here are Heather, Tormentil, Purple Moor-grass and Rowan (*Sorbus aucuparia*). Juniper has also been recorded from the summit above the main corrie on the east face of Mweelrea.

At high elevations within the site there are cliffs, scree slopes, corrie walls and other exposures of Mweelrea grits and Ordovician and Silurian shales and slates. These support communities of montane plants such as Roseroot (*Rhodiola rosea*), Beech Fern (*Phegopteris connectilis*), Mountain Sorrel (*Oxyria digyna*), Alpine Meadow-rue (*Thalictrum alpinum*), Lesser Meadow-rue (*Thalictrum minus*), Green Spleenwort (*Asplenium viride*), and also the threatened species Purple Saxifrage (*Saxifraga oppositifolia*) and Alpine Saw-wort (*Saussurea alpina*), both of which are listed in the Irish Red Data Book. An upland ledge aspect of the Annex I habitat Hydrophilous tall herb communities has been recorded from the site.

The mountain corries, particularly the northern corrie of Mweelrea, are also important for montane bryophytes (mosses and liverworts), including the north Atlantic hepatic mat community. There is a long list of Red Listed bryophytes known from the mountains, including *Amphidium lapponicum*, *Bazzania pearsonii*, *Bryum*

*riparium*, *Dicranodontium uncinatum*, *Ditrichum zonatum*, *Fissidens serrulatus*, *Hygrohypnum duriusculum*, *Lejeunea flava* subsp. *moorei*, *Lophozia opacifolia*, *Oedipodium griffithianum*, *Philonotis cernua*, *P. rigida*, *P. tomentella*, *Plagiochila carringtonii*, *Pogonatum nanum*, *Ptilium crista-castrensis*, *Racomitrium macounii* subsp. *alpinum* and *Scapania ornithopodioides*. Several of these species are protected under the Flora (Protection) Order, 2015.

The site contains a scattering of large, base-poor lakes, the largest concentration of which is in the Doo Lough valley. Typical species which have been recorded from lakeshores include Shoreweed (*Littorella uniflora*), Common Sedge (*Carex nigra*), Lesser Spearwort (*Ranunculus flammula*), Water Lobelia (*Lobelia dortmanna*), Water Horsetail (*Equisetum fluviatile*), Bulbous Rush (*Juncus bulbosus*) and Common Yellow-sedge (*Carex demissa*).

The site also contains a number of fine examples of upland corrie lakes which are situated in the northern and eastern sides of the Mweelrea, Sheeffry and Maumtrasna mountain ranges. These fall into the category of 'oligotrophic to mesotrophic standing waters'. Some of these lakes are relatively large, while others are no more than a couple of hectares, and all of these lakes lie above 200 m. As an example, at one of these lakes, Lough Glenawough, a sparse base-poor vegetation is supported with species such as Bulbous Rush, Water Lobelia, Quillwort (*Isoetes lacustris*) and Shoreweed being found.

As mentioned already, this site contains a number of extensive and important river systems. The species Bulbous Rush (*Juncus bulbosus* var. *fluitans*), Alternate Water-milfoil (*Myriophyllum alterniflorum*), Broad-leaved Pondweed (*Potamogeton natans*), Lesser Spearwort and the moss *Fontinalis squamosa* have been recorded from the Erriff River, and Broad-leaved Pondweed, water-starworts (*Callitriche* spp.), Branched Bur-reed (*Sparganium erectum*), Spiked Water-milfoil (*M. spicatum*) and Bulbous Rush from the Carrownisky River in the north-west of the site.

The aquatic plant Slender Naiad (*Najas flexilis*) has been recorded from the river north of Fin Lough, and probably also occurs in Doo Lough. This species is protected in Ireland under the Flora (Protection) Order, 2015, and is listed in Annex II of the E.U. Habitats Directive.

Petrifying springs are found in wet depressions with flowing water in areas of sand dune to the north of Dooaghtry. These are bryophyte-rich, with *Cratoneuron commutatum* being the most dominant species in some springs. There are a number of petrifying springs in the Sheeffry mountain range also.

The best examples of alkaline fen at this site are to be found both to the north and south of the lake at Dooaghtry. These areas are species-rich and occur on a gradual slope down to the lake where there are transitions to freshwater marsh. The most prominent vascular plants are Few-flowered Spike-rush (*Eleocharis quinqueflora*), Carnation Sedge (*Carex panicea*), Water Mint (*Mentha aquatica*), Jointed Rush (*Juncus articulatus*) and Grass-of-parnassus (*Parnassia palustris*). The uncommon orchid

Marsh Helleborine (*Epipactis palustris*) is a prominent component of this vegetation. Moss cover is high, and the most common species are *Campylium stellatum*, *Calliergonella cuspidata*, *Scorpidium revolvens*, *Aneura pinguis* and *Philonotis fontana*.

The coastal plain at Dooaghtry represents perhaps the finest example of machair habitat in Ireland. This area includes dunes, machair, oak (*Quercus* sp.)/birch (*Betula* sp.) woodland, freshwater lakes, lagoon, marsh and saltmarsh, and supports a rich flora, including the orchids Marsh Helleborine, Narrow-leaved Helleborine (*Cephalanthera longifolia*) and Irish Lady's-tresses (*Spiranthes romanzoffiana*), all listed in the Irish Red Data Book, and the latter two protected under the Flora (Protection) Order, 2015. The rare liverwort, Petalwort (*Petalophyllum ralfsii*), a species listed under Annex II of the E.U. Habitats Directive and also protected under the Flora (Protection) Order, 2015, has been recorded from this area also. There is an unconfirmed record of the rare species Starry Stonewort (*Nitellopsis obtusa*) from a machair lake at Dooaghtry - this species is listed in the Red Data Book.

The pioneering community of embryonic shifting dunes is typically found at the seaward edge of fixed or eroded Marram (*Ammophila arenaria*) dunes at Dooaghtry. Here, the inhospitable conditions created by blowing sand favours the development of a species-poor vegetation which is dominated by Sand Couch (*Elymus farctus*). In places the Sand Couch is accompanied by Sea Sandwort (*Honkenya peploides*), Sea-holly (*Eryngium maritimum*), and occasionally, Common Bird's-foot-trefoil (*Lotus corniculatus*).

Marram dunes are also confined to the Dooaghtry area, and are composed of either open partly-eroded dunes where Marram is the dominant species, or dunes dominated by Marram but with a high cover of other vascular plant species such as Red Fescue (*Festuca rubra*), Lady's Bedstraw (*Galium verum*), Common Bird's-foot-trefoil, Ribwort Plantain (*Plantago lanceolata*) and Daisy (*Bellis perennis*).

Decalcified dune heath is found along the interface between the sand dunes and rocky heath/grassland at Dooaghtry, and an unusual mixture of sandy and heathland species co-occur. Typical species include Heather, Bell Heather, Tormentil, Red Fescue, Lady's Bedstraw, Ribwort Plantain and Daisy.

Scattered throughout the Dooaghtry complex are damp hollows with vegetation dominated by Creeping Willow (*Salix repens*). Also often present are wetland species such as Grass-of-parnassus, Common Butterwort (*Pinguicula vulgaris*), Fairy Flax (*Linum catharticum*) and Carnation Sedge. These areas sometimes intergrade with calcareous fen.

Mediterranean and Atlantic saltmarsh both occur at this site, and are largely confined to the Dooaghtry area. Species found here which are associated with the Atlantic type include Sea-milkwort (*Glaux maritima*), Red Fescue, plantain species (*Plantago* spp.), Autumn Hawkbit (*Leontodon autumnalis*), Thrift (*Armeria maritima*) and Common Saltmarsh-grass (*Puccinellia maritima*). The Mediterranean type is represented by small, ungrazed areas dominated by Sea Rush (*Juncus maritimus*).

Corragaun Lough is a medium-sized (10 ha), shallow (1 m), sedimentary lagoon with a dune barrier. The dunes have been considerably reduced in size since early maps were drawn due to infilling of the lagoon and onshore movement of the sand. When the lagoon was visited in 1996 it contained only approximately 50% of the area shown on the O.S. Discovery Map, much of the seaward end having been infilled with sand and become saltmarsh/dune grassland. A small river enters at the south-east end of the lagoon through a reedbed which is being eroded and much of the bed of the lagoon at this end consists of unconsolidated peat. Salinity varies considerably with large volumes of tidal water and occasional freshwater floods entering this small, shallow area. The extreme fluctuations in salinity and the unstable bed of the lagoon result in a very limited flora and fauna. That said, Corragaun Lough is one of only six lagoons of this type in Ireland.

The E.U. Annex I habitat type 'Annual vegetation of drift lines' is found at Dooaghtry. It occurs on dry, flat sand in front of embryonic dune vegetation. Typical species occurring include Sea-holly, Sand Couch, oraches (*Atriplex* spp.) and Prickly Saltwort (*Salsola kali*).

The whorl snails, *Vertigo angustior* and *V. geyeri*, both of which are listed on Annex II of the E.U. Habitats Directive, occur at Dooaghtry. Freshwater Pearl Mussel (*Margaritifera margaritifera*), also an Annex II species, is found in several rivers within the site. The Erriff River system supports an important population of Salmon (*Salmo salar*), also listed on Annex II. Arctic Char has been recorded from Doo Lough and there is a pre-1930 record of this fish species from Lough Glenawough. Arctic Char is listed in the Irish Red Data Book as threatened in Ireland. Otters are known to breed in the lakes at this site, and this species is also listed on Annex II of the E.U. Habitats Directive.

Bird counts made over three seasons (1984/85 - 1986/87) for the coastal wetlands from Emlagh Point to Killary Harbour indicate nationally important numbers of Ringed Plover (average peak 245) and regionally/locally important numbers (average peaks) of Mute Swan (42), Whooper Swan (38), Barnacle Goose (38), Golden Plover (403), Wigeon (119), Teal (72), Mallard (56), Tufted Duck (37), Dunlin (292) and Curlew (220). Dooaghty itself is also a nesting area for Chough. Several of these bird species are listed on Annex I of the E.U. Birds Directive.

The shallow lakes at Dooaghtry are used by a great variety of wintering waterfowl, waders and passage migrants.

The patchwork of lowland blanked bogs at this site provides an important traditional feeding and roosting area for the Erriff/ Derrycraff flock of Greenland White-fronted Goose. Numbers recorded have fluctuated in recent years (276 in 1986/87, 78 in 1990/91, 176 in 1992/93), partly due to the difficulty in censusing such a wide ranging flock in remote, mountainous terrain.

Extensive areas of hillside vegetation at this site have been over-grazed by sheep in the past, and in some areas this continues. Peat erosion occurs in places. The vast areas which were formerly covered by lowland blanket bog are now fragmented, often by coniferous forestry plantations.

The Mweelrea/Sheeffry/Erriff Complex is an extremely large site containing a wide range of habitats, including many that are listed on Annex I of the E.U. Habitats Directive. Five of these are listed with priority status - blanket bog, petrifying springs, lagoons, machair and decalcified dune heath. The site supports populations of rare and threatened plants (mosses, liverworts, stoneworts, ferns and flowering plants) and animals (invertebrates, fish, birds and mammals). Overall it is of exceptional conservation interest and value.