



**Site Name: Bunduff Lough and Machair/Trawalua/Mullaghmore SAC**

**Site Code: 000625**

This site is situated on the south side of Donegal Bay, 5 km south-west of Bundoran, and it falls in the counties of Sligo and Leitrim. The part of the site west of Mullaghmore Head is very exposed to the prevailing wind and swells from the Atlantic, whereas the head itself affords moderate shelter to the eastern part of the site. The underlying geology is of sedimentary rocks including limestone, shale and sandstone. Windblown sand is common in places, covering much of the underlying rocks and shingle.

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):

- [1140] Tidal Mudflats and Sandflats
- [1160] Large Shallow Inlets and Bays
- [1170] Reefs
- [2120] Marram Dunes (White Dunes)
- [2130] Fixed Dunes (Grey Dunes)\*
- [2190] Humid Dune Slacks
- [21A0] Machairs\*
- [5130] Juniper Scrub
- [6210] Orchid-rich Calcareous Grassland\*
- [7230] Alkaline Fens
- [1065] Marsh Fritillary (*Euphydryas aurinia*)
- [1395] Petalwort (*Petalophyllum ralfsii*)
- [1351] Harbour Porpoise (*Phocoena phocoena*)

Machair is common throughout the site, occurring mostly in the flat areas between dune ridges and areas of alkaline fen/marsh. Although areas with typical dry machair grassland can be found close to dunes ridges, much of the habitat is wetter than is usually seen, and there are large areas that are considered to be transitional to alkaline fen. Typical dry machair grassland species present include Red Fescue (*Festuca rubra*), Wild Thyme (*Thymus praecox*), Daisy (*Bellis perennis*), Ribwort Plantain (*Plantago lanceolata*), Common Bird's-foot-trefoil (*Lotus corniculatus*) and Lady's Bedstraw (*Galium verum*). The plant species indicative of fen conditions include Bog Pimpernel (*Anagallis tenella*), Flea Sedge (*Carex pulicaris*), Common Sedge (*Carex nigra*), Marsh Pennywort (*Hydrocotyle vulgaris*), Knotted Pearlwort (*Sagina nodosa*), Common Twayblade (*Listera ovata*), Ragged-Robin (*Lychnis flos-cuculi*) and

Lesser Spearwort (*Ranunculus flammula*). Other notable fen species include Grass-of-parnassus (*Parnassia palustris*), Common Spotted-orchid (*Dactylorhiza fuchsii*) and the uncommon Marsh Helleborine (*Epipactis palustris*). Moss cover is well-developed, frequently attaining 90% cover. Typical species include *Campylium stellatum*, *Scorpidium revolvens*, *Ctenidium molluscum*, *Calliergonella cuspidata* and *Philonotis fontana*, most of which indicate the presence of wet, base-rich conditions. The fen vegetation is best developed to the south-west of the Bunduff Lough. These areas of wet machair/alkaline fen are very species-rich, often containing 40-50 plant species in an area of 4 m<sup>2</sup>. The E.U. Habitats Directive Annex II liverwort species *Petalophyllum ralfsii* has recently been recorded from areas of machair within the site.

The fixed dune habitat is well represented at the site. Areas of fixed dunes with a high cover of herbs and mosses are found on the dune systems at both Bunduff strand and Trawalua. The habitat typically occurs as a prominent zone on gently sloping ground between the more exposed and species-poor white dune vegetation, and the flat areas of dune grassland that comprise the machair plains. The vegetation is typically dominated by Marram (*Ammophila arenaria*) and Red Fescue, and these are generally accompanied by species such as Lady's Bedstraw, Yorkshire-fog (*Holcus lanatus*), Ribwort Plantain, eyebrights (*Euphrasia* spp.), Wild Thyme, clovers (*Trifolium* spp.) and the mosses *Rhytidiadelphus squarrosus*, *Homalothecium lutescens*, *Brachythecium albicans* and *Calliergonella cuspidata*. In addition, the distinctive lichen, *Peltigera canina* agg., is quite frequent. Other noteworthy components of the vegetation are Pyramidal Orchid (*Anacamptis pyramidalis*) and, occasionally, Bee Orchid (*Ophrys apifera*). At Bunduff, well back from the high dune areas, there are also extensive areas of fixed dune grassland without Marram, occurring on unusual low sandy mounds. These distinctive areas are dominated by mosses and with a high cover of Wild Thyme, Glaucous Sedge (*Carex flacca*) and Hairy Rock-cress (*Arabis hirsuta*). The rare parasitic plant, Dodder (*Cuscuta epithymum*) grows in close association with this moss-rich habitat.

There is a relatively large dune slack located behind the fixed dunes in the south of the Trawalua site. It is composed of low-growing Creeping willow (*Salix repens*) and is grazed by sheep and cattle. There are low, fixed dune ridges towards the back of the slack and in some places the slack grades into the machair. The dune slack vegetation is characterised by typical species such Glaucous sedge, Sand sedge (*Carex arenaria*), Common sedge (*Carex nigra*), Marsh Pennywort, Water mint (*Mentha aquatica*), Lesser spearwort, Rush spp. (*Juncus* spp.), Common Marsh-bedstraw (*Galium palustre*), Silverweed (*Potentilla anserina*), Autumn Hawkbit (*Leontodon autumnalis*), Selfheal (*Prunella vulgaris*) and Yorkshire-fog.

Shifting dunes with Marram are best-developed at Trawlua in the south of the site. In exposed areas Marram is the only species present, however, further back species such as Colt's-foot (*Tussilago farfara*), Sand Couch (*Elymus farctus*), Sand Sedge and Common Ragwort (*Senecio jacobaea*) are found. Mosses are typically sparse.

Orchid-rich calcareous grassland is found in fragmentary form in a small area to the north of Bunduff Lough, where it forms a mosaic with heath and dune grassland.

Characteristic species include Kidney Vetch (*Anthyllis vulneraria*), Yellow-wort (*Blackstonia perfoliata*), Flea sedge, Quaking-grass (*Briza media*), Mountain Everlasting (*Antennaria dioica*), Frog Orchid (*Coeloglossum viride*), and many others.

Bunduff Lough is a shallow, sandy-bottomed lake situated at the back of the dunes and machair. The marginal vegetation of the lake is well-developed and dominated by Sea Club-rush (*Scirpus maritimus*), Common Reed (*Phragmites australis*), Bulrush (*Typha latifolia*) and Water Horsetail (*Equisetum fluviatile*). Where the substrate is stony and unable to support the reedswamp community, the margins of the lough are dominated by Amphibious Bistort (*Polygonum amphibium*). At the north-eastern end of the lough, where conditions are drier, wet grassland occurs. Here, Rough Meadow-grass (*Poa trivialis*), Yorkshire-fog, Soft Rush (*Juncus effusus*) and Marsh Cinquefoil (*Potentilla palustris*) are dominant.

Heath, dominated by Crowberry (*Empetrum nigrum*), occurs near Skerrydoo.

Trawalua Strand, a sandy beach, is backed by high Marram dunes and flat machair areas, similar to drier areas at Bunduff. These two dune areas are separated by Mullaghmore Point and Classiebawn Woods. Classiebawn Wood is a plantation woodland of Maritime Pine (*Pinus pinaster*) with a very interesting ground flora, including plants such as Marsh Helleborine, Broad-leaved Helleborine (*E. helleborine*), Common Twayblade and Fragrant Orchid (*Gymnadenia conopsea*). As is typical for a coastal site in Ireland, the site has a notable butterfly fauna including the E.U. Habitats Directive Annex II and red-listed (VU) Marsh Fritillary (*Euphydryas aurinia*). A colony is found in at least two locations in the machair and fixed dune grassland mosaic with the webs often placed on the low sandy mounds which remain unflooded during the winter. Other red-listed and near threatened species present are the Small Blue (*Cupido minimus*), Dingy Skipper (*Erynnis tages*), Small Heath (*Coenonympha pamphilus*) and Dark Green Fritillary (*Argynnis aglaja*) (VU)

The terrestrial and freshwater habitats support a rich and varied fauna in other insect groups. Notable species recorded from the site include the hoverflies *Cheilosia ahenea*, *Paragus haemorrhous* and *Pipizella viduata*, the moths *Parasemia plantaginis* (Wood Tiger) and *Adsticta statites* (Forester), the dragonfly *Orthetrum cancellatum* (Black-tailed Skimmer) and the aquatic bugs *Corixa panzeri* and *Arctocoris germari*. Two near threatened bumblebee species *Bombus lapidarius* and *Bombus muscorum* have been recorded.

The site features characteristic intertidal sediment communities which are often found in association with large bays. There is a well-developed zonation of benthic communities and high species-richness in the littoral sediments. In places the low shore is dominated by the burrowing urchin *Echionocardium cordatum*, with razor shell species (*Ensis siliqua* and *E. ensis*) abundant. The exposed rocky shore is of interest from both ecological and geological viewpoints. Marine invertebrates present include the Purple Sea Urchin (*Paracentrotus lividus*).

Bunduff Lough is locally important for waterfowl. In winter, Whooper Swan (57), Teal (64) and Mallard (61) are regular, along with Golden Plover (150) at certain times (figures are average maxima for winters 1994/95 to 1995/96). Resident species include Coot, Water Rail, Mute Swan and Little Grebe. Both Whooper Swan and Golden Plover are listed on Annex I of the E.U. Birds Directive. The site also provides habitat for breeding waders, notably Lapwing (16 pairs in 1996) and Snipe (5 pairs in 1996). Shag, Fulmar, Raven and Chough are all reported from the cliffs at this site.

The machair and dunes within this site are grazed by sheep and cattle. Amenity use close to Mullaghmore village is high, with fishing and shooting also occurring nearby. Bunduff Strand is a busy recreational beach and water sports are popular here. A sewage discharge at Thumb Rock may be having a deleterious effect on water quality and sediment communities.

This extensive coastal site contains a good range of habitats, including several listed on Annex I of the E.U. Habitats Directive, and three which are listed with priority status. The machair found on the site is of particular importance because of how it grades into wet fen-like vegetation, and because it is intact and has not been subdivided by fences, which is commonly seen at other sites.