

**Site Name: Mullet/Blacksod Bay Complex SAC**

**Site Code: 000470**

This large coastal site, located in north-west Co. Mayo, comprises much of the Mullet Peninsula, the sheltered waters of Blacksod Bay and the low-lying sandy coastline from Belmullet to Kinrovar. The character of the site is strongly influenced by the Atlantic Ocean and the exposed location of much of the site results in a terrestrial landscape dominated by blown sand and largely devoid of trees. The underlying bedrock is principally metamorphic schist and gneiss. The site displays an excellent range of coastal and marine habitats.

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):

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|---------------------------------------------------|
| [1140] Tidal Mudflats and Sandflats               |
| [1160] Large Shallow Inlets and Bays              |
| [1170] Reefs                                      |
| [1310] <i>Salicornia</i> Mud                      |
| [2120] Marram Dunes (White Dunes)                 |
| [2130] Fixed Dunes (Grey Dunes)*                  |
| [2150] Decalcified Dune Heath*                    |
| [21A0] Machairs*                                  |
| [3150] Natural Eutrophic Lakes                    |
| [7230] Alkaline Fens                              |
| <br>                                              |
| [1355] Otter ( <i>Lutra lutra</i> )               |
| [1395] Petalwort ( <i>Petalophyllum ralfsii</i> ) |

Blacksod Bay is 16 km in length and 8 km wide at the mouth. It is a shallow bay, reaching a maximum depth of 19 m and with weak tidal streams. The bay has a good range of representative littoral and sublittoral sediment communities, and also infralittoral reefs.

The littoral sediments of the bay consist of areas that are moderately exposed to, or very sheltered from, wave action. Characteristically, exposed to moderately exposed sediment communities are composed of coarse to fine sand and have a polychaete fauna with crustaceans. Species richness increases as conditions become more sheltered. Talitrid amphipods occur in decomposing seaweed on the strand line. Polychaete worms (*Arenicola marina*), bivalves (*Cerastoderma edule*) and crustaceans

such as *Urothoe brevicornis*, *Ampelisca brevicornis* and *Bathyporeia pilosa*, are common in the middle shore.

The sublittoral sediment towards the entrance of the bay is comprised of rather barren medium sand, with the occasional bivalve molluscs *Glycymeris glycymeris* and *Ensis* spp. Much of the sediment in the centre of the bay is composed of firm, muddy sand with the brittle stars *Amphiura* spp. and the razor shells *Ensis* spp. Towards the head of the bay the sediment is composed of muddy sand with *Turritella communis*, *Amphiura brachiata* and *Philine aperta*, and soft sandy mud with *Anthopleura balli* and decaying algae. In some areas Eelgrass (*Zostera marina*) and the reef-forming polychaete *Serpula vermiculata* are frequent. Notable species included Oyster (*Ostrea edulis*), which occurs at head of the bay, and the sea anemone *Phellia gausapata*, which is present in the middle of the bay.

Infralittoral reefs within Blacksod Bay are sheltered or very sheltered from wave action and subject to weak or moderate tidal streams. In sheltered areas that are composed of bedrock, occasional *Saccorhiza polyschides* overlie a rich assemblage of red algal species such as *Dudresnaya verticillata*, *Heterosiphonia plumosa* and *Chondria tenuissima*. Very sheltered bedrock reef communities are also characterized by foliose red algae. The sea anemone, *Metridium senile*, is abundant on the tops of the reefs and *Antedon bifida* on the steeper surfaces. Much of the infralittoral reef in Blacksod Bay is composed of boulders, cobbles and pebbles. The red algae in these areas are sand-tolerant species such as *Chondria dasphylla* and *Gracilaria gracilis*. Characterizing faunal species are the anthozoans *Metridium senile* and *Alcyonium digitatum*, the hydroid *Nemertesia ramosa* and the sponge *Dysidea fragilis*. The purple sea urchin, *Paracentrotus lividus*, occurs at two sites at the head of the bay.

Large areas of machair, a priority habitat on Annex I of the E.U. Habitats Directive, are found within this extensive coastal site. On the Mullet peninsula the habitat is best developed to the west of Termoncarragh lake, Tonamace/Macecrump and to the west of Cross Lough. On the eastern shores of Blacksod Bay, extensive areas of machair occur at Doolough, Srah and Dooyork. The vegetation of the habitat is dominated by plant species of dry dune grassland which include Red Fescue (*Festuca rubra*), Wild Thyme (*Thymus praecox*), Daisy (*Bellis perennis*), Ribwort Plantain (*Plantago lanceolata*), Selfheal (*Prunella vulgaris*), Sand Sedge (*Carex arenaria*) and Lady's Bedstraw (*Galium verum*). The main moss species are *Brachythecium albicans*, *Calliergonella cuspidata* and *Bryum* species. In damper areas of machair the vegetation is transitional to fen and contains, in addition to the typical dry machair species, such species as Fairy Flax (*Linum catharticum*), Cuckooflower (*Cardamine pratensis*) and Grass-of-parnassus (*Parnassia palustris*).

Fixed dunes with herbaceous vegetation, another Annex I priority habitat, have an extensive distribution throughout the site and are particularly well developed in the middle and south of the Mullet peninsula, e.g. at Emlybeg, Newtown and Agleam. Areas of fixed dunes are typically at their highest approximately 500 m back from the sea, and at Emlybeg and Newtown they attain a height of approximately 33 m. The fixed dune areas present within the site often form a complex mosaic with other

dune habitats such as shifting dunes and machair. Frequent plant species recorded in the habitat include Marram (*Ammophila arenaria*), Smooth Meadow-grass (*Poa pratensis*), Wild Carrot (*Daucus carota*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Harebell (*Campanula rotundifolia*) and Kidney Vetch (*Anthyllis vulneraria*). The moss cover is well developed and includes the species *Rhytidiadelphus squarrosus*, *Hypnum cupressiforme*, *Tortula ruralis* and *Homalothecium lutescens*. The conspicuous lichen *Peltigera canina* is also occasionally encountered in the vegetation. At Nakil, on the southern tip of the peninsula, there is a fine example of decalcified fixed dunes. In this habitat, there is a range of heath species such as Heather (*Calluna vulgaris*), Bell Heather (*Erica cinerea*), Sheep's-fescue (*Festuca ovina*), Tormentil (*Potentilla erecta*) and Devil's-bit Scabious (*Succisa pratensis*), along with dune species such as Sand Sedge, Lady's Bedstraw and Wild Thyme.

Smaller areas of shifting dunes with Marram are found in most of the dune areas within the site and typically occur along the most exposed ridges of sand dune systems. The vegetation is species-poor and generally sparse. Along with Marram, typical plant species include Sea Mayweed (*Matricaria maritima*), Sea-holly (*Eryngium maritimum*), Colt's-foot (*Tussilago farfara*) and the locally rare Sea Bindweed (*Calystegia soldanella*).

Saltmarshes occur in a number of places, notably at Elly Bay, Sallee Harbour, Bunnahowen, Doolough and Gweesalia. Typical species include Thrift (*Armeria maritima*), Common Saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster trifolium*), Sea Milkwort (*Glaux maritima*), Sea Rush (*Juncus maritimus*) and Saltmarsh Rush (*Juncus gerardi*). At the lower levels of the marshes, and in places extending onto the open sandflats, Glasswort (*Salicornia europaea* agg.) and Annual Sea-blite (*Suaeda maritima*) occur.

The site also includes shallow freshwater lakes, Termoncarragh Lough, Cross Lough and Leam Lough. Cross Lough is a good example of a naturally eutrophic lake. The water of the lake appears to have a permanent turbid, yellow-brown colour and is unusual in that the phytoplankton is dominated by *Spirulina* spp. and other unusual cyanobacteria. The waters of the lake have a high chloride content (118 mg/l) and a relatively high calcium content (16 mg/l). The western shore of the lake is sandy and tends to be dominated by the stonewort *Chara aspera*, with some Shoreweed (*Littorella uniflora*). Other aquatic plant species which have been recorded from the lake include Spiked Water-milfoil (*Myriophyllum spicatum*), Long-stalked Pondweed (*Potamogeton praelongus*), Slender-leaved Pondweed (*Potamogeton filiformis*) and Fennel Pondweed (*Potamogeton pectinatus*).

Marsh and swamp vegetation is well developed around Termoncarragh Lough, and of particular note is a fine example of alkaline fen. This is species-rich, with such fen plants as Jointed Rush (*Juncus articulatus*), Glaucous Sedge (*Carex flacca*), Grass-of-parnassus, Knotted Pearlwort (*Sagina nodosa*), Marsh Arrowgrass (*Triglochin palustris*), Common Butterwort (*Pinguicula vulgaris*) and Lesser Clubmoss (*Selaginella selaginoides*). The scarce Marsh Helleborine (*Epipactis palustris*) also occurs here. A feature of the fen is a strong maritime influence, with the presence of a number of

saltmarsh species such as Sea Milkwort, Buck's-horn Plantain (*Plantago coronopus*), and Sea Arrowgrass (*Triglochin maritima*).

The Annex II liverwort species *Petalophyllum ralfsii* has been recorded from damp areas of machair at Doolough and Dooyork. The Red Data Book plant species Narrow-leaved Marsh-orchid (*Dactylorhiza traunsteineri*) also occurs. Otter, a species also listed under Annex II of the Habitats Directive, is well distributed throughout the site.

This site has high ornithological importance, with seven Annex I E.U. Birds Directive species occurring regularly in winter, and a further two as rare breeders. Blacksod Bay provides ideal habitat for divers (all given counts are average maxima over the three winters 1994/95 to 1996/97), with Great Northern Diver (64) occurring in numbers of international importance and Red-throated Divers (45) in significant numbers. The site is an important wintering area for an internationally important population of Barnacle Goose (400-500), and also populations of Greenland White-fronted Goose (56) and Whooper Swans (95). Golden Plover are regular in small numbers (c. 700), while a nationally important population of Bar-tailed Godwits (552) occur. Little Tern has bred in small numbers in the past, while the site is well-known for one of Ireland's rarest breeding birds, the Red-necked Phalarope. Unfortunately this species may now be extinct as a breeding species.

A wide range of other wintering birds occur. Of particular note are Brent Goose (212) and Ringed Plover (524), both of which have internationally important populations. A further six species have populations of national importance: Common Scoter (642), Red-breasted Merganser (50), Grey Plover (60), Knot (342), Sanderling (58) and Dunlin (2,601). The site is also notable for its breeding waders, with very important concentrations of Dunlin (26 pairs in 1996) and Lapwing (43 pairs in 1996), and significant numbers of Snipe (12 pairs) and Ringed Plover (5 pairs).

High levels of grazing and associated agricultural practices, e.g. feeding of stock and fertilisation, have resulted in locally severe damage to areas of dune and machair. The damage has been intensified by the division of dune and machair commonage, which is particularly evident on the Mullet. These agricultural activities remain serious threats. Benthic communities are very vulnerable to bottom-fishing gear such as that used for fishing oysters, and this is thought to be the most damaging activity in the marine area. Bait digging is potentially damaging to littoral sediment communities if the areas are over-fished.

This site is of high importance for the range of marine and coastal habitats, many of which are listed on Annex I of the E.U. Habitats Directive, three having priority status. The Annex II species *Petalophyllum ralfsii* and Otter also occur. The site is also of particular ornithological importance, having four wintering species with internationally important populations and also important concentrations of breeding waders.