



Site Name: Tranarossan and Melmore Lough SAC

Site Code: 000194

This scenic site in Co. Donegal encompasses the west coast of the Rosguill peninsula from Gladdaghlan Bay up to Tranarossan Bay, and the whole of the peninsula north of this point (including Rosses Strand and Gortnalughoge Bay). The site rises from sea level to 163 m. Geomorphologically, the site is dominated by calcareous soils overlying acid intrusive bedrock. The main habitats are machair, sand dunes, shingle beach, rocky coast, heathland and wetland areas.

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
- [1210] Annual Vegetation of Drift Lines
- [1220] Perennial Vegetation of Stony Banks
- [1230] Vegetated Sea Cliffs
- [2110] Embryonic Shifting Dunes
- [2120] Marram Dunes (White Dunes)
- [2130] Fixed Dunes (Grey Dunes)*
- [2140] Decalcified *Empetrum* Dunes*
- [2170] Dunes with Creeping Willow
- [2190] Humid Dune Slacks
- [21A0] Machairs*
- [3140] Hard Water Lakes
- [4030] Dry Heath
- [4060] Alpine and Subalpine Heaths
- [1395] Petalwort (*Petalophyllum ralfsii*)

Machair, a priority habitat on Annex I of the E.U. Habitats Directive, occurs as extensive, flat to gently undulating plains at both Tranarossan and Melmore. At Melmore, dry dune grassland vegetation is the dominant vegetation. Typical plant species of the habitat include Red Fescue (*Festuca rubra*), Daisy (*Bellis perennis*), Ribwort Plantain (*Plantago lanceolata*), White Clover (*Trifolium repens*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Crested Dog's-tail (*Cynosurus cristatus*), Lady's Bedstraw (*Galium verum*), and the mosses *Brachythecium albicans* and *Rhytidiadelphus squarrosus*. At Tranarossan, dry dune grassland vegetation is also present. However large areas of the machair plain here are comprised of extensive wet flats largely dominated by Creeping Willow (*Salix repens*) and accompanied by Red Fescue,

Common Sedge (*Carex nigra*), Marsh Pennywort (*Hydrocotyle vulgaris*) and the moss *Calliergon cuspidatum*. The machair grades into fixed dune, another Annex I priority habitat, and here species such as Marram (*Ammophila arenaria*) and a range of bryophytes and lichens (notably *Peltigera canina*) occur, in addition to the species typical of machair. Other dune types which occur are dune slacks, shifting Marram dunes, embryonic dunes and a distinct annual community associated with the strandline. The humid dune slack area is small but well-defined. Areas of Marram dunes are scarce within the site, occurring in a mosaic with embryonic and fixed dunes. Species-poor high dune dominated by Marram is particularly well-developed between Boyeeghter Bay and Melmore Lough. Here the dunes attain heights of 20-30 m. The site contains at least one area of embryonic dunes. These habitats are sparsely vegetated, with species such as Sand Couch (*Elymus farctus*) and Lyme-grass (*Leymus arenarius*). The habitat 'annual vegetation of drift lines' is noted for this site. Species typical of this habitat which have been recorded at the site include Oraches (*Atriplex* spp.), Sea Mayweed (*Matricaria maritima*) and Sea Sandwort (*Honkenya peploides*).

Of particular importance is the occurrence of decalcified fixed dunes with Crowberry (*Empetrum nigrum*), a rare habitat in Ireland and another priority habitat on Annex I of the E.U. Habitats Directive. This habitat occurs on calcareous sands amongst the rocky knolls and in addition to *Empetrum*, characteristic species are Juniper (*Juniperus communis*), Bracken (*Pteridium aquilinum*) and Hoary Whitlowgrass (*Draba incana*), a Red Data Book species.

A population of the rare liverwort, Petalwort (*Petalophyllum ralfsii*), a species that is listed on Annex II of the E.U. Habitats Directive, has recently been recorded from a grassy hillside over Tranarossan Bay.

Melmore Lough is a good example of a hard water lake. It lies in a highly exposed location at the top of the Rosguill peninsula, between the flat machair plain and a steep hill of granite. Despite its small size it has considerable depth (>10 m). Much of the lake bed consists of steeply shelving sandy mud with occasional rock outcrops. A small sand shelf runs along the northern shore while the south and east shores are of steeply shelving rock. At one area there is a shallower zone with sandy mud at a depth of 4-6 m. Melmore has a very high chloride content at 120 mg/l, while calcium concentration is in the region of 10.5 mg/l. The stonewort flora is well developed, especially on the sand shelf. Species recorded include *Chara aspera* var. *curta* (= *C. desmacantha*), *C. hispida* var. *hispida*, *C. vulgaris* var. *contraria* and *C. globularis* var. *virgata*. It also has a good pondweed flora, including Broad-leaved Pondweed (*Potamogeton natans*), Fennel-leaved Pondweed (*P. pectinatus*) and Curled Pondweed (*P. crispus*). Shoreweed (*Littorella uniflora*) also occurs, along with Spiked Water-milfoil (*Myriophyllum spicatum*). Below the vegetation limit, freshwater sponges are abundant on rock outcrops.

A good example of intertidal sand flats occurs at Rosses Strand. This north-west facing shore is approximately 1 km in length. The communities present are characteristic of a shore with clean sand exposed or moderately exposed to wave action. The upper shore is characterised by the sandhoppers *Talitrus saltator* and

Talorchestia deshayesii. The mid shore supports amphipods such as *Bathyporeia pelagica*, *Haustorius arenarius* and *Eurydice pulchra*. In the low shore the polychaetes *Nephtys cirrosa* and *Scolecopsis foliosa* are common to abundant and the amphipod *Haustorius arenarius* is present.

Dry heath is fairly widespread in this site but is best developed on hills and headlands towards the north of the site. It occurs on shallow, sloping peat, at altitudes of between sea level and c. 150 m. The vegetation of the habitat is generally dominated by low-growing mats of Heather (*Calluna vulgaris*), accompanied by acidophile plant species such as Bell Heather (*Erica cinerea*), Carnation Sedge (*Carex panicea*) and Sheep's-fescue (*Festuca ovina*). Throughout the site the habitat forms complex mosaics with related vegetation types such as blanket bog, acid grassland and also some alpine heath. Due largely to the low altitude of the site, the examples of alpine heath found are not particularly well-developed. Species such as Crowberry, Juniper, Mat-grass (*Nardus stricta*) and Mountain Everlasting (*Antennaria dioica*) are found.

Sea cliffs form an important habitat within this site. The best developed areas of cliffs are found at Melmore Head, Rosses Point and in the south-west of the site, to the north of Claddaghlahan Bay. Cliffs are composed of alternating bands of Fanad granite and Falcarragh pelitic schists, which have resulted in rather low cliffs (typically attaining heights of between 10 and 50 m). Frequent plant species recorded growing on maritime cliffs throughout the site include Thrift (*Armeria maritima*), Sea Samphire (*Crithmum maritimum*), Common Scurvygrass (*Cochlearia officinalis*), Sea Campion (*Silene vulgaris* subsp. *maritima*) and the saxicolous lichen *Ramalina siliquosa*. The scarce succulent plant Roseroot (*Rhodiola rosea*) grows sparingly on sea cliffs throughout the site. Also recorded from here is the Red Data Book species Scot's Lovage (*Ligusticum scoticum*).

Vegetated shingle or stony banks have a rather restricted distribution within the site, being largely confined to small, enclosed bays, which face in a northerly or westerly direction. The development of the habitat is generally good with the most extensive areas of the habitat to be found at Rosses Strand and Doagh Bay. Typically these areas of shingle beach are exposed and subject to intensive wave action. As a result, the vegetation is quite sparse, however plant species such as Curled Dock (*Rumex crispus*), Common Couch (*Elymus repens*), Sea Sandwort, Sea Mayweed, Frosted Orache (*Atriplex laciniata*) and Silverweed (*Potentilla anserina*) are a common feature of the habitat. The Red Data Book species Oysterplant (*Mertensia maritima*), which is also protected under the Flora (Protection) Order, 1999, is a feature of this habitat.

The combination of cliffs and unimproved grasslands make this an attractive area for Choughs (6 pairs were recorded in 1992). This species is listed on Annex I of the E.U. Birds Directive. Another Annex I species, Peregrine Falcon, breeds within the site. Small numbers of seabirds, mostly Fulmars (20+ pairs), Cormorants (60-70 pairs) and Shags (50-60 pairs), breed on the cliffs

The main land use is sheep grazing, although tourism is also an important part of the local economy with several large caravan parks in the area. This site is of considerable scientific importance, primarily for the extensive and relatively unspoilt machair, which stretches between Tranarossan Bay and Gortnalughoge Bay and also in the vicinity of Melmore Lough. A range and diversity of additional good quality coastal habitats, including two other Annex I priority habitats, occur; their value is enhanced by the fact that they provide habitat for four rare plant species, including one that is listed on Annex II of the E.U. Habitats Directive, and two E.U. Birds Directive Annex I bird species.