Too much blowing sand from eroding dunes can bury pasture: but if no sand blew inland the unique habitat called machair in Gaelic wouldn’t be there at all. It’s the grassy plain behind the dunes, rich in flowering plants. Machair occurs only in north-west Scotland and Ireland, where you find the magic ingredient - shell sand pounded by Atlantic breakers and blown in by the gales and 70% of this is found on the western coastline of the Western Isles. The biodiversity of machair is incredibly rich and includes corncrakes, twite, corn buntings, 12,000 breeding waders, a diverse range of plant species as well as the great yellow bumblebee and a wide variety of other invertebrates.

Shell sand is calcareous - lime rich. It sweetens the peaty soil of the islands and makes it better draining and easier to warm up in the spring. Though bleak and scoured by sand and salty winds in winter, the machair is transformed in summer into a spectacular flowery meadow. The best examples of machair are where grazing and cultivation are carefully managed together.

The machair is the best place for flower freaks! In the fallow areas can you find wild pansies, wild carrot, birds’ foot trefoil, lady’s bedstraw, thyme, white clover and yarrow. In cultivated plots and bare ground look for, long-headed poppy, corn marigolds and forget me not and silverweed. In damp spots you might find ragged robin, spotted and marsh orchids.

How many of these flowers can you find?
The machair is a very special wildlife habitat, but it is not ‘wild’. For centuries crofters have grazed sheep and cattle on the flower-rich pasture and cultivated strips for oats and potatoes. Well-managed grazing keeps the machair in good shape by animals selectively eating the plants and cattle droppings are really good manure. Cattle's hooves poach the ground in winter and make perfect nesting spots for waders such as lapwing, ring plovers and dunlins.

How many of these birds can you spot?

Dunlin

Lapwing

Ring plover

Redshank

Some of the best parts of the machair are divided into strips and different families of crofters have shares. These strips of nice light dry soil needs to be given a rest between crops so crofters practice a rotation of growing potatoes in the first year, and/or oats or a corn mix, the next year and followed by a year or two years of fallow (no crop). Grazing animals are kept off the machair for most of the summer in some of the most special flower-rich plots. These might have special designations for conservation.

The corn and fallows of different years stripe the landscape with bands of brilliant colours. Not only does it look and smell beautiful, the richness of wildlife is greater because the huge variety of plants increases the range of insects and birds which feed and breed there. Look out for the rare and protected great yellow bumblebee which has a band of black hair across its thorax and the moss carder bee which is now very rare in England. The moss carder bee has a ginger brown thorax and yellow ginger abdomen with no black hairs. To find out more about bees go to www.bumblebeconservation.org

Really special and rare birds found on the machair include the corn bunting and the secretive corncrake. Everyone loves the corncrake because it’s the bird of the summer but you feel like throwing a boot at it by the time it’s kept you awake until 3 am.

Have you managed to hear one yet?

The corncrake is the star of the show in the machair townships. They spend the winters in Africa, arriving in Europe to breed from late April onwards. Male corncrakes choose an area of suitable habitat big enough to provide insect food to feed a family. Once he’s found a good spot he lets female know he’s there and looking for mate and other males know his patch is occupied. The male crakes most of the day and all the night through the breeding season and any rival within earshot, crakes back.

The habitat a corncrake needs is just like the old-fashioned hay meadow. Due to the disappearance of these meadows and other changes in modern agriculture, they are now terribly endangered birds and the Hebrides and Ireland are their last strongholds.