

## SPARTINA ANGLICA

*Spartina anglica*, or, to use its English name, Common Cord-grass, is the tussocky plant which occurs as small or sometimes larger patches around the shores of Morecambe Bay and other parts of the British coastline. It is not the only species of *Spartina* found in this country but it is better known and more frequently encountered than the other species, and so it is often simply referred to as "Spartina". Its presence in Morecambe Bay has aroused interest and indeed controversy and so here we present some notes on its history and ecology.

*Spartina anglica* is a relatively new member of the British flora. Briefly, the plant arose as a fertile strain of a hybrid between a native and a non-native species in the Southampton area at the end of the nineteenth century. The *Spartina* was found to possess characteristics not present in the parents, being able to grow at lower levels on the shoreline and having more vigorous growth. Another important feature of *Spartina* is that it is able to colonise sediments that are mobile, rather in the manner of those plants which stabilise sand dunes. These characteristics impressed entrepreneurs of the time and the "new" *Spartina* was extensively planted to assist in the processes of coastal defence and land claim from the intertidal area.

The first *Spartina* planting recorded for north-west England was on the Ribble in 1932, with apparently natural spread to the Wyre first noted in 1942. *Spartina* is thought to have appeared in Morecambe Bay in the mid to late 1940s, with early sightings at Rampside, near Cark, the west side of Humphrey Head, and by Holme Island. These earliest populations of *Spartina* established in the Bay remained as apparently stable clumps and small patches and did not increase in extent. Expansion to other locations was slow, with only a few new sites appearing by the end of the 1960s. This initially slow spread of *Spartina* is likely to be related to two factors. The first of these is that *Spartina* flowers profusely but very rarely produces any viable seed. The second is that *Spartina* will only spread into areas where there is deposition of the intertidal sediments. The initial appearance of *Spartina* would have been where there was some active build up of sediment: this build up ceased and so did the spread of *Spartina*. This can be seen more recently at Teal Bay, where *Spartina* first appeared in the late 1950s. A colony of moderate size developed but this has remained of constant size for twenty years or more, suggesting there has been no further sedimentation.

The situation has been different in the Grange-over-Sands area. Since the 1970s the channel of the river Kent has moved from the Grange shore across to the Silverdale side of the Bay. This has allowed for the build up of intertidal sediments at Grange and made conditions more suitable for the establishment of *Spartina*. The initial spread (mainly from the Humphrey Head direction) was relatively slow, but has accelerated in recent years. This is considered to be a result of a "good seed year". What is interesting about the Grange area is that sedimentation is continuing, allowing the *Spartina* to be invaded by saltmarsh plants, most notably Common Saltmarsh-grass (*Puccinellia maritima*). This appears to enhance the process of sedimentation and encourage the establishment of a variety of saltmarsh plant species. Contrary to popular belief, *Spartina* is not an "aggressive" species and as the invasion progresses it is gradually replaced by the plants of the higher saltmarsh. This can be seen by inspecting the "older" areas closer to the eastern side of Humphrey Head. In due course it seems likely a complete cover of traditional Morecambe Bay saltmarsh will develop along the Grange shoreline.

So why do people seem to dislike *Spartina* so much?

One argument is that, as *Spartina* colonises areas of intertidal sands, it takes up areas used by feeding waders and other shorebirds. In a large estuarine complex such as Morecambe Bay, with its constantly shifting areas of sands, new feeding areas appear as others disappear. The feeding areas are still present seaward of the *Spartina*. Birds are still seen foraging in places where the clumps of *Spartina* have sand flats between them. Denser growth of *Spartina* can provide cover for bird species – this has been seen at Sandscale Haws (to the west of Morecambe Bay) and by Humphrey Head.

Some people refer to *Spartina* as an "aggressive invader" which pushes out other plants of the intertidal and saltmarsh zones. This is not the case in Morecambe Bay – as we have noted above, it is in fact the saltmarsh which may invade the *Spartina*! *Spartina* may grow in the creeks or pans of a saltmarsh, often where previously no plants grew. Wave damage to the edge of a saltmarsh may create suitable sites for *Spartina* establishment. At some such sites the damaged saltmarsh may re-establish itself around the *Spartina*, giving the mistaken impression of "*Spartina* invasion". In the Walney channel and at Grange the development of areas of *Spartina* has allowed for the establishment within them of often large patches of annual species such as Glasswort (*Salicornia*) and Sea-blite (*Suaeda*), plants previously of relatively restricted

occurrence within Morecambe Bay. In this case the Spartina is actually enhancing the biodiversity of the area and should thus be considered beneficial!

Like it or not, Spartina seems to be here to stay. It is but one component of the complex interaction of physical and biological processes which constantly interact to give us the Morecambe Bay we know.

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