

Vaucheria Thuretii is a green filamentous Alga and *Microcoleus chthonoplastes* a blue-green. Otherwise they play closely similar rôles in mud-fixing, the *Vaucheria* on low marsh, *Microcoleus* over a wider range—from ordinary low-water mark to ordinary high-tide level. The embedded portions form a close meshwork of mucilaginous consistency, which holds the mud so tenaciously that practically none of it is washed out even when the surface layer is rubbed between the finger and thumb under a tap of water. The ends of the algal tubules project above the surface as a short-piled velvet, and trap any silt that the tide drifts along. These two Algæ between them occupy extensive surfaces otherwise bare, and within the limits of their zones are most efficient catchers and holders of mud.

Microcoleus sometimes does its work so well that the surface cake is impenetrable to germinating seedlings. However, in dry weather the cake is apt to crack in hexagonal fissures, and seeds, finding their way into these fissures, germinate and establish under the most favourable conditions. (Plate XV, upper photo., seedlings of *Suaeda maritima* are arising in this fashion in the cracks of *Microcoleus*-covered ground.)

The relation of almost all plants to the silting process is fundamentally the same as these two Algæ. The portions of the plants which project above the surface tend to slow down the rate of flow of the layers of water that pass over them, with the result that the silt in course of transport is dropped and becomes entangled. The plant continues its growth through the new surface, and the process is resumed. The principle is just the same when Marram grass catches wind-borne sand, or *Suaeda fruticosa* shingle from a passing wave. It is the eternal tendency of plants to stabilize the ground they occupy and to detain such fresh particles as enter their net.

The Higher Plants.—These are technically called “Halophytes”, to distinguish them from the ordinary terrestrial and freshwater flowering plants.¹ Numerically, the halophytes form not more than 1½ per cent of the total flora. Higher plants

¹ The term “halophytes” is used to designate plants that grow rooted in soils impregnated with salts. Strictly, marine Algæ are excluded, though it is evident the two groups have in common their relation to a saline environment.