Nature of Marsh Vegetation.	Mean Loss on Ignition, per cent of Dry Weight.
Mature salting with Obione	21.39
Pelvetia-Salicornia marsh	17.85
Young marsh under *Fucus limicola* ...	8.39
Mud with *Vaucheria Thuretii*	7.30
Mud with *Microcoleus chthonoplastes* ...	4.86

For comparison with these results the corresponding losses in dune sand fixed by the moss *Tortula ruralis* was 0.69 per cent; and in a sample of heavy clay loam in a kitchen garden manured in spring the following percentage losses on ignition were determined, six months after manuring: Runner beans, 13.32; potatoes followed by cabbage, 16.26; maize with leaf mould, 21.55.

We find generally that the soils of Obione saltings are very rich in organic matter; so, too, is the soil of a large Salicornia marsh, the surface of which is densely covered with the curious, non-attached fucoid *Pelvetia canaliculata*, forma *libera* (cf. p. 227).

The three other determinations in the table are of interest, as they refer to quite young marsh soils occupied by various species of Algæ. The source of the organic matter in these cases is, doubtless, the filaments and thalli of the Algæ which have become buried in the ordinary process of accretion.

Mud and sand-banks, of course, often arise without the intervention of plants, but these are turned over by every tide and are liable to be shifted from one place to another with changing winds and currents.

The process of warping, too, as practised in the Bay of Fundy marshes (and presumably elsewhere), is also stated to be quite independent of the presence of vegetation.[1] This shows that the marsh reclaimer is able by technical skill in his art to dispense on occasion with the services of plants.

It is the power which plants have of organizing and retaining ground which gives them value in this connection, and makes it desirable to ascertain in detail the part which each species of

[1] See Ganong, "Vegetation of the Bay of Fundy Marshes", *Botanical Gazette*, Vol. XXXVI, p. 167, Chicago, 1903.