

sand-banks are deposited in the beds of channels, several years may elapse before seedlings of *Salicornia radicans* become established and the hummock stage is inaugurated. These interruptions can be avoided by planting *S. radicans* dug from some other part of the marsh. Such an experimental plantation on a sand-bank in the main channel of the estuary is shown at Plate XX (above), after the clumps had settled in. In due course hummocks were formed, but this particular experiment was destined to be overwhelmed ultimately, owing to flood water from the land after rain undercutting the entire bank on which the original plantation had been established. In another creek a similar plantation survived. The hummock system charted in fig. 47 arose in two years from the date of planting the sandbank with *Salicornia radicans*, and is identical in all respects with a naturally-produced system of hummocks.

The phenomena of these sand-banks are constantly in operation on the bare flats towards the mouth of the estuary (Bouche d'Erquy), where the colonized and bare unstable areas abut. Roughly a zone some 10 feet wide of the latter is occupied each year by the pioneer plants. The chief obstacle to rapid colonization in this region is mobility of ground, for where this is overcome by accidental causes, colonization proceeds apace. Thus carts sometimes cross a corner of the marsh, on their way to and from a place in the dunes where sand is dug, and in the ruts so formed a vegetation springs up forthwith (Plate XX, below). The rut acts as a trap which catches the drifting seed, and the soil below the rut is consolidated by pressure so as to give the

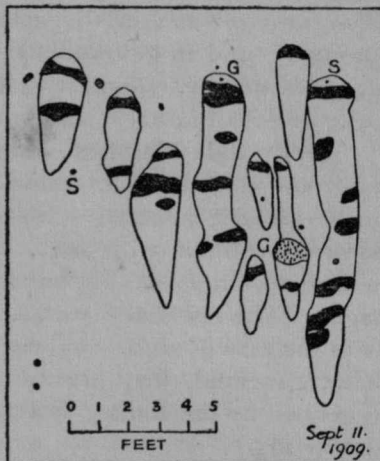


Fig. 47.—Chart of *Salicornia radicans* Hummocks, showing beginning of secondary colonization two years after plantation made. Black belts = *S. radicans*; G = *Glyceria maritima*; S = *Suaeda maritima*. Other dots represent isolated *Salicornia* plants.