

compound hooks, whilst the interstices are commonly wider at the distal than at the proximal ends. The hook on which the Watch House stands, and the one immediately to the east of it, are good examples of simple hooks; most of the others are compound.

The terminals of the hooks are all of them bent round at a right angle, so that they lie east and west. Probably this adjustment has been caused by ancient storms from the west or south-west, just as recently the tip of the Long Hills bank was turned through a right angle in the course of a single winter (cf. p. 230). The result is that the marshes between the hooks are narrow-mouthed, and sheltered from wave action on the south, a condition that must have promoted their colonization by halophytes and a rapid raising of their level by deposition of silt.

The hooks of the Marams stand much higher than those which project into the Salicornia marsh of the Headland, and are not covered by any of the spring tides. Except for their ends, which are exposed to some extent to scour from the waters of the harbour, the shingle of the hooks has become stabilized, and carries a continuous vegetation. This vegetation is zoned, the principal zones from below upwards being characterized by *Suaeda fruticosa*, *Festuca rubra*, *Statice binervosa*, and the vegetation of the crest. The *Suaeda* of the hooks is continuous with that of the marginal belt of the main beach; its growth, however, is less vigorous on account of the dormancy of the ground.

The marsh units of the Marams are the bays between the hooks, each irrigated and drained by its own creek. The height of these marshes is such that they are overrun by the higher spring tides only. Accretion, though still in progress, hardly exceeds $\frac{1}{4}$ inch per annum.

The westernmost marsh of the series, adjacent to the Watch House bank, is a typical "mixed salting", bearing most of the commoner perennial halophytes. Its margin, however, has already been invaded by the Sea Purslane (*Obione portulacoides*), which plant has become dominant over most of the other marshes of the series (Plate XVI, p. 176, lower). The occurrence of this