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NOTE ON THE FOOD PLANTS OF RABBITS ON BLAKENEY POINT, NORFOLK[1]

BY WILLIAM ROWAN

(*With Plate* 15)

During the course of numerous visits to Blakeney Point at all seasons the present writer, in the intervals of other faunistic studies, has devoted a good deal of attention to the habits of the rabbits which abound on the sand dunes, with especial reference to the plants they feed upon.

Since these data, all of which have come under his own observation, may be of interest to ecologists, a summary is embodied in the present note.

As the topography of Blakeney Point has already come before the readers of this JOURNAL it is unnecessary to give further description here. With the exception of the "Hood," an isolated sand hill of some size, and nearest Cley of all the dunes, the whole of the rabbit range was worked. These remarks refer therefore to the area west of the Hood only, including especially the dune systems known as the Long Hills and the Beacon Hills.

The burrows appear to be confined to the dunes. The Long Hills are certainly the most perforated. The whole system seems to be a warren. One side of this range of sand hills looks on to mud-flats, the other side on to shingle banks and marshes. *Senecio Jacobaea* grows all over these dunes in great profusion, making ideal cover for bolting rabbits. This plant is apparently untouched by these animals, but is over-run with caterpillars and consequently so eaten by them that it is hard to decide. On another part of the dunes we came across an isolated specimen of this species and the leaves certainly had the appearance of having been attacked by a rodent. This particular specimen had no caterpillars on it and was surrounded by rabbit droppings which only existed in the immediate neighbourhood of the plant.

From these dunes the rabbits make excursions on to the mud-flats, where they get *Salicornia europaea*, which they undoubtedly eat, and *Obione portulacoides* which they may or may not eat. A lot of twigs and leaves gnawed off are always to be found about. On the other side of the Long Hills, in the lows, *Statice Limonium* and *S. binervosa* are considerably eaten, the latter in particular. *Silene maritima* is also eaten. Here large areas of *Glyceria maritima* are browsed. One specimen of *Sonchus arvensis* was found here eaten to the ground, undoubtedly by rabbits.

It might be mentioned here that rabbits have actually been watched eating most of the plants mentioned. By means of a powerful acetylene lamp it was hoped to make some observations by night but this scheme unfortunately fell through. The next best thing to do was to sleep out on various parts of the area with a pair of binoculars and then to watch from daybreak at about 2.30 a.m. onwards. At that hour the whole rabbit world seems to be out for breakfast. On one occasion when sleeping on the edge of the mud-flats, primarily to keep in touch with wild fowl throughout the night, I woke up to find two rabbits within a few feet of me. They were then sharing some Salicornia.

[1] Blakeney Point Publication No. 9.

The Suaeda habit has been amply referred to in this JOURNAL by Professor Oliver[1]. The extent of the damage can hardly be imagined. The marshes, without exception, are lined with the drift of *Suaeda fruticosa* branches that these animals have wantonly wasted. Obione appears to be treated in the same way.

From the Beacon Hills, the rabbits make huge inroads on the *Aster Tripolium* of the marshes (Pl. 15, Fig. 1). So persistently do they attack this plant that they make permanent roads in the Salicornia through which they have to pass, visible at all times of the year (Fig. 2). A flowering spike is a rarity. This and Psamma are the two main foods in this part of the Point at all events. Even the old tough Psamma is extensively eaten. On more than one occasion rabbits have been watched busy on this plant. *Carex arenaria* is again a much eaten species. To demonstrate the effects of the rabbits we are giving two photos of this plant side by side—Fig. 3 a normal patch, Fig. 4 after rabbits have been at it. The contrast is striking. In this part of the dunes there are one or two large areas of *Convolvulus Soldanella*. Instead of being one mass of flowers in July as may be seen along the Spit, towards Cley, where no rabbits occur, not a blossom is visible. The petals are devoured wholesale. The flowers are eaten away to the ovary (Fig. 8). The leaves of the plant appear to be untouched. *Silene maritima*, mentioned above, is attacked in a similar way. Several specimens of *Cnicus arvensis* were found eaten very considerably. Another example of the destructive powers of this animal is afforded by *Cakile maritima* (Fig. 5). This sample came from the Great Sandy Low on the seaward side of the Beacon Hills.

In a January visit we found the rhizomes of *Glaux maritima*, in the Glaux Lagoon, dug up and devoured in large quantities by this rodent (Fig. 6). The imprints in Fig. 7 show clearly the method employed in this work. Among the patches of sand dug up was an island. How the rabbits knew they could find Glaux on it is a problem, for they could neither see nor smell it, for it was underground. Yet the impulse must have been a strong one, to induce the crossing of water, a habit rarely indulged in except under compulsion.

An idea of the volume of destruction due to rabbits on Blakeney Point is conveyed by a visit to the several enclosures put up in the last year or two. In the case of each species wired off the contrast, inside and out, is most striking.

DESCRIPTION OF THE PHOTOGRAPHS ON PLATE 15

1. *Aster Tripolium* with leaves nibbled by rabbits. Other plants present: *Suaeda maritima*, *Obione portulacoides*, *Salicornia europaea* and *Glyceria maritima*.
2. Rabbit runs on the Salicornia-Pelvetia marsh.
3. *Carex arenaria*, unbrowsed.
4. *Carex arenaria* eaten down by rabbits.
5. *Cakile maritima* eaten down by rabbits. The smaller plants are *Salsola Kali*.
6. Glaux Low with hummocks of *Glaux maritima* visited by rabbits (winter phase).
7. Imprint of rabbit in damp sand from a Glaux hummock.
8. *Convolvulus Soldanella*; flowers bitten by rabbits marked × in margin.

All the illustrations are from photographs taken by the author at Blakeney Point, Norfolk.

[1] Oliver, F. W. "Some remarks on Blakeney Point, Norfolk." *Journ. Ecol.*, **1**, 1913, p. 14.

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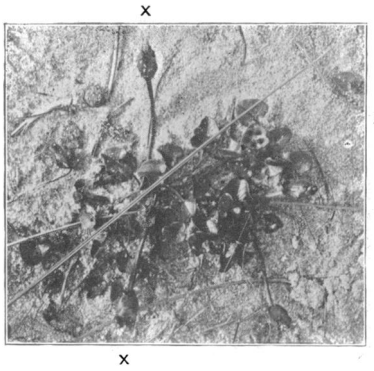

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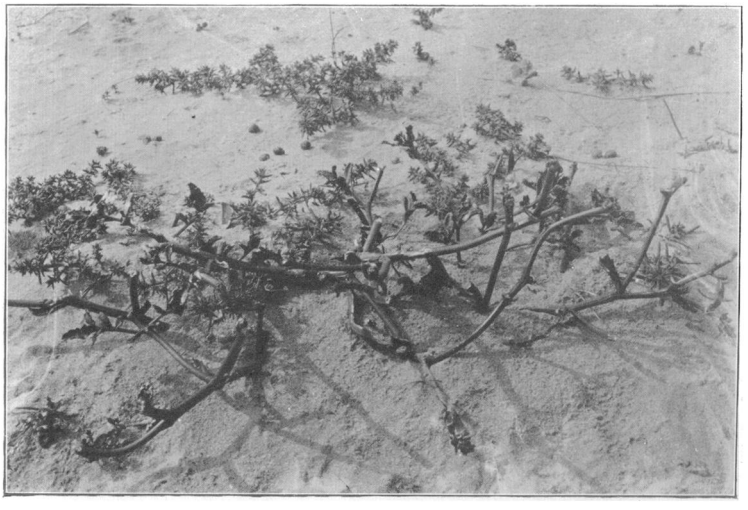

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