

NOTE ON PRIMULA LAURENTIANA IN MAINE

In 1906 Joseph A. Cushman accompanied by S. N. F. Sanford visited Libby Island, Machiasport, Washington County, Maine, and reported the occurrence of *Primula laurentiana* (Rhodora 9: 217, 1907). He noted that this *Primula* was only to be found around the light and the nearby oil-house. He suggested that seeds of this plant were probably introduced here by birds being killed by flying into the light and falling at its base which is, of course, a regular occurrence. He also remarked that the soil near the buildings had been disturbed by grading.

A visit by the author to this same island in 1962 showed *Primula laurentiana* to be still present in the neatly mowed turf around the base of the light. It gave the appearance of a lawn weed so thickly did the rosettes of leaves dot the ground. From certain angles the intensely white undersides of the farinose leaves gave a most unusual appearance to the light-keepers lawn. The plants were abundant within ten or 15 feet of the base of the light tower and completely absent further away. Several hours careful search of the rest of the island failed to reveal a single plant growing in any other location. There were several spots of disturbed soil such as flower beds, paths and grading about buildings in addition to a considerable space maintained as lawn. In any of these areas this aggressive primrose could conceivably have established itself. An examination of rock-crevices and niches in cliff-faces where one would normally expect to find this plant failed to show any. The soil on the island was uniform being a deep layer of humus typical of Maine coast islands. The vegetational cover was largely of ericaceous and other acid soil plants including: *Empetrum nigrum*, *Vaccinium vitis-idaea*, *Ledum groenlandicum*, and *Rubus Chamaemorus*. *Sedum Rosea*, *Iris Hookeri* and *Campanula rotundifolia* were also present.

The vigorous growth of *Primula laurentiana*, a well-known calciphile under such circumstances and in such a restricted area, can possibly be explained by the whitewash which is applied to the granite tower of the light semi-

annually. Small flakes of the whitewash could be seen on the surface of the ground near the light, the chalky surface of the tower being continually eroded by wind and rain and largely deposited on the surrounding soil. As whitewash is almost entirely lime this would serve to make calcium available in the immediate vicinity of the light and thus provide an essential element for the growth and continued survival of *Primula laurentiana*.

The use of ordinary paints, which have no calcium in their pigments, on the other buildings on the island probably explains why the plant does not grow near these other structures.

Cushman postulated that other outlying islands and headlands along the Maine coast may have had seeds of *Primula laurentiana* introduced by migrating birds similar to the situation on Libby Island. He found the plant near the Moose Peak Light House on Mistake Island and on Black Head on Head Harbor Island. It has also been found on Crumple Island still further west and on Schoodic Point in Acadia National Park.

A visit to Moose Peak Light on Mistake Island, in September of this year showed *P. laurentiana* to be present in great vigor in rock crevices under and beside the elevated walkway which leads from the keeper's living quarters to the light itself some hundred yards away. The guard rails on this walkway have been whitewashed and again this is a possible explanation of the long continued presence of this plant. Along with the primrose *Lomatogonium rotatum* was also growing — a great rarity on the Maine coast.

Black Head on nearby Head Harbor Island has changed a great deal since Cushman's visit more than a half century ago. According to Mr. Thurman Alley who was born and brought up on the island the growth of trees has changed Black Head so that he can now hardly find his way. This may account for the fact that the author was unable to find any Primulas. However, the quantities of broken shells of crabs, sea urchins, clams and mussels all over the cliffs indi-

cates that there would be a source of calcium for *Primula laurentiana* when other conditions are right.

It is interesting to think that the continued presence of the rare *Primula laurentiana* in at least two places on the Maine coast may be due to the whim of the U. S. Coast Guard as to the kind of paint it uses.

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