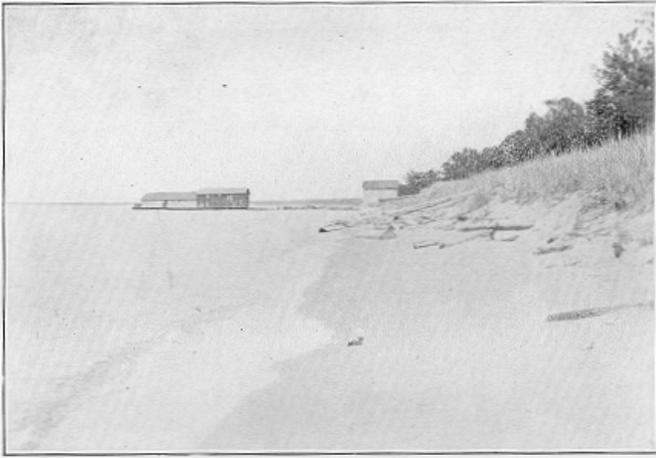


APPENDIX B.

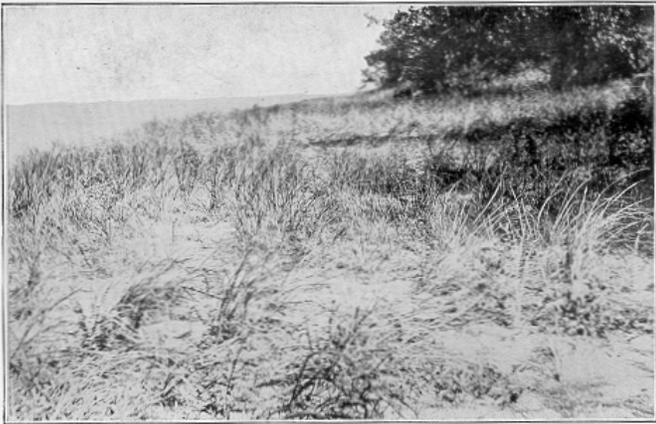
ADDITIONAL REMARKS ON THE BIOTA AND CLIMATE OF THE
SAND DUNE REGION.

BY ALEXANDER G. RUTHVEN.

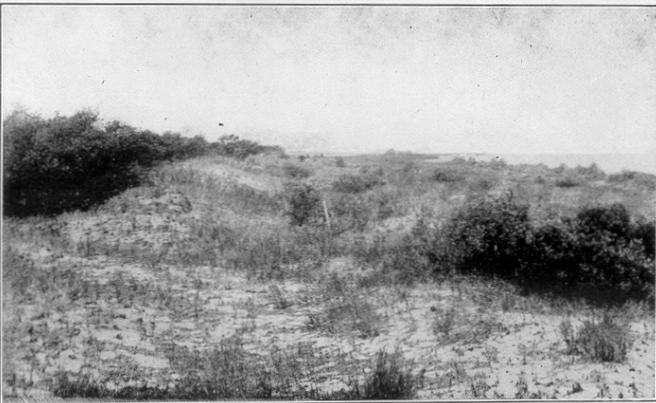
Since this report was written the United States Weather Bureau has issued a bulletin (V) "on the length of the crop-growing season, as determined from the average of the latest and earliest dates of killing frost". According to the charts in this paper the influence of the lakes in checking early and late frosts is not as great along the east as along the west coasts, but still appreciable. The average date of the first killing frost in the autumn comes between 5 and 10 days later and the last killing frost in the spring probably about 5 days earlier on the east coast than in the interior, and the former about 5 days earlier and the latter about 10 days later than on the west coast in the same latitude. This is in harmony with the fact that there are apparently only a few southern forms that push farther northward along the east coast than in the interior.



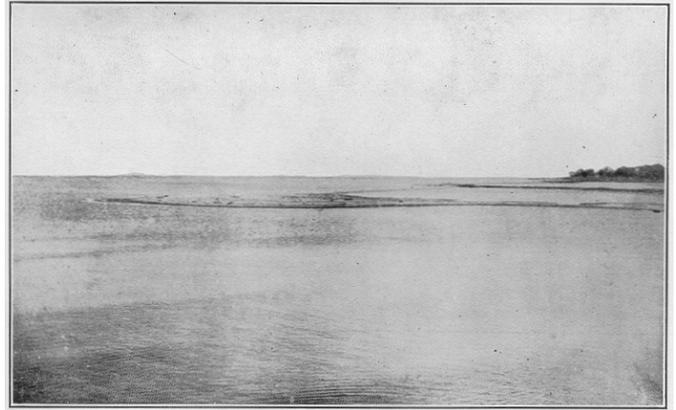
(A) BEACH ON THE NORTH SIDE OF SAND POINT.



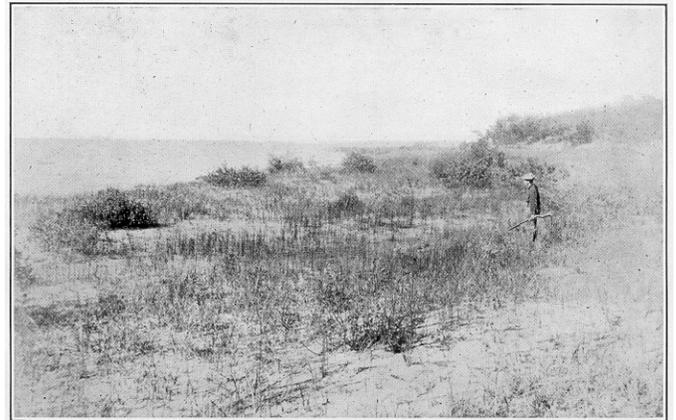
(B) FACE OF OUTER DUNE AT OAK POINT. NOTE SAND-BINDING GRASSES.



(A) NORTH SIDE OF SAND POINT TOWARD THE END. NOTE SPARSE VEGETATION ON WINDWARD SIDE AND GREATER GROWTH ON LEEWARD SIDE OF BEACH DUNES.



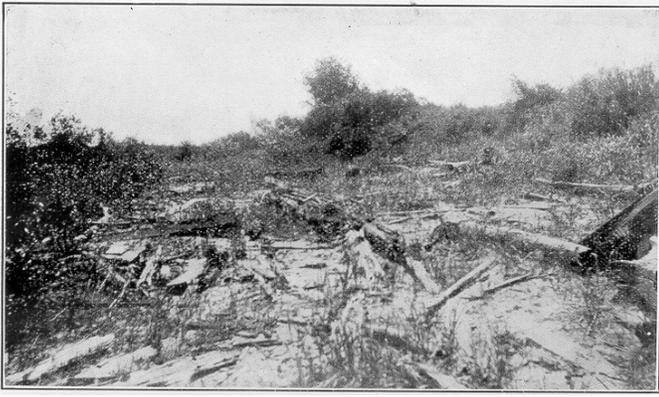
(B) LOOKING NORTHEAST AT THE WEST SIDE OF OAK POINT. EMBRYONIC BARRIER BEACH, SANDSPITS AND ENCLOSED LAGOONS. THESE SAND AREAS ARE SOON CLOTHED WITH THE USUAL DUNE SPECIES.



(A) SAND FLAT WEST OF LITTLE OAK POINT. NOTE EMBRYONIC DUNES.



(B) BLOWOUT IN OUTER DUNE RIDGE, SHOWING OLD BEACH UPON WHICH THE DUNE IS SUPERIMPOSED.



(A) FOSSIL BEACH NEAR THE END OF SAND POINT.



(B) GRASSY MARSH ON STONY ISLAND.



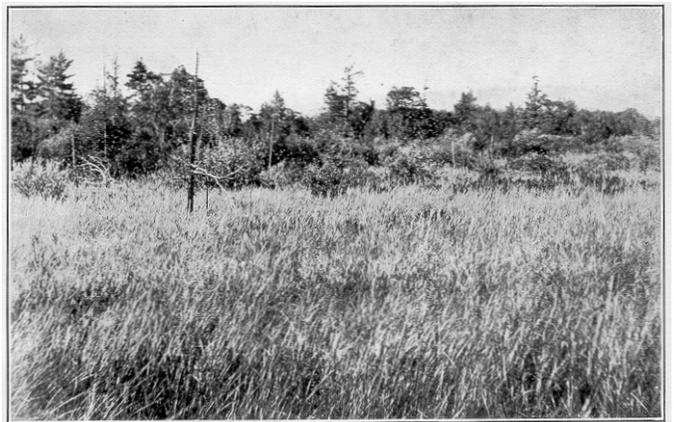
(B) JACK PINE FOREST ON THE MORE RECENT DUNES. RIDGES CLOTHED WITH PSAMMOPHYTES, VALLEYS MOSTLY NEARLY RAISED TO BASE LEVEL, UNDERGROWTH BEGINNING TO BE MESOPHYTIC.



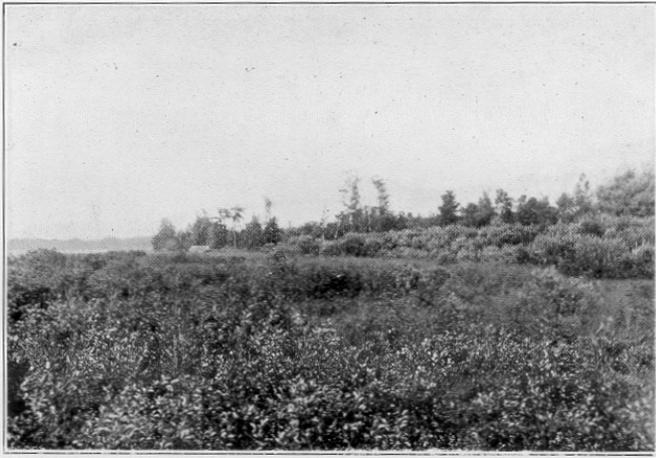
(A) PRAIRIE AT THE BASE OF SAND POINT. PHRAGMITES ASSOCIATION WITH "WOODY ISLANDS," THE LATTER TERRACED.



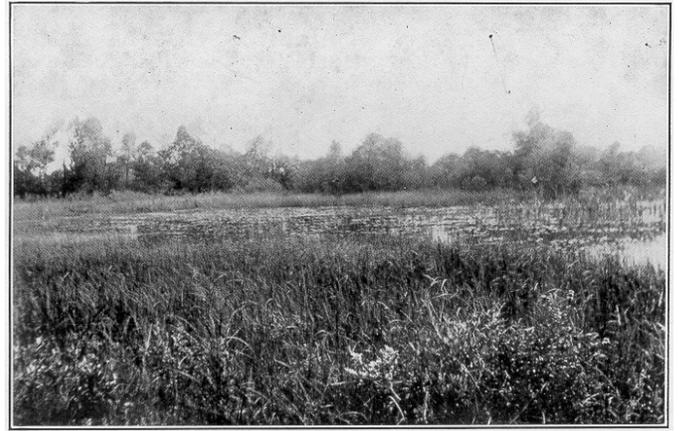
(A) GRASSY MARSH ON STONY ISLAND.



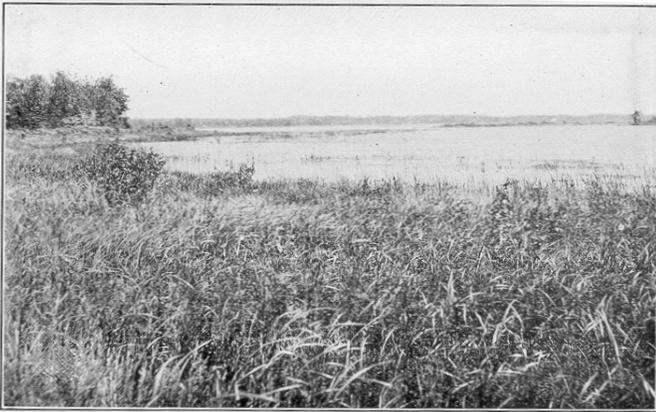
(B) MARGIN OF THE PRAIRIE AT THE BASE OF SAND POINT. PHRAGMITES ASSOCIATION IN THE FOREGROUND, ALNUS ASSOCIATION IN BACKGROUND.



(A) OPEN MARSH AT THE EAST END OF RUSH LAKE.



(B) PERMANENT POND ON STONY ISLAND.



(B) OPEN MARSH ABOUT TURTLE BAY ON SAND POINT.



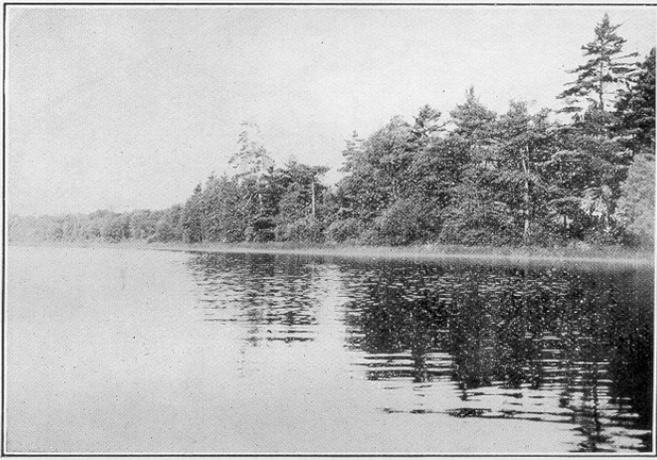
(A) GENERAL VIEW OF RUSH LAKE.



(A) GRASSY SWALE BETWEEN SAND DUNES NEAR RUSH LAKE.



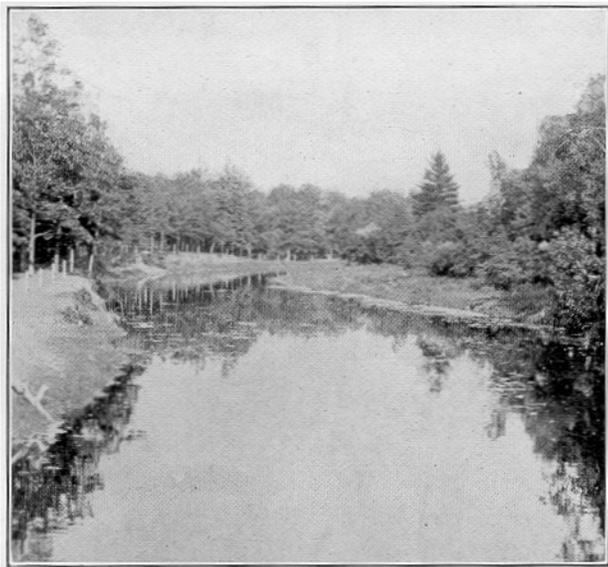
(B) RAYMOND'S POINT ON THE NORTH SHORE OF RUSH LAKE.



(A) DUNE POINT ON THE NORTH SHORE OF RUSH LAKE.



(B) DEAD-WATERS OF THE PIGEON RIVER ABOVE CASEVILLE.



(B) PIGEON RIVER ABOVE CASEVILLE.



(A) GENERAL VIEW OF LONG LAKE, SAND POINT. SHOWING SCIRPUS AND JUNCUS ASSOCIATIONS IN THE WATER AND CAREX ASSOCIATION ON THE WATER-SOAKED EDGE.



(A) LOOKING INTO THE OX-BOW POND OFF THE PIGEON RIVER AT CASEVILLE.



(B) END OF LONG LAKE, SAND POINT. ASSOCIATIONS AND PROGRESSIONS AS IN TURTLE BAY.



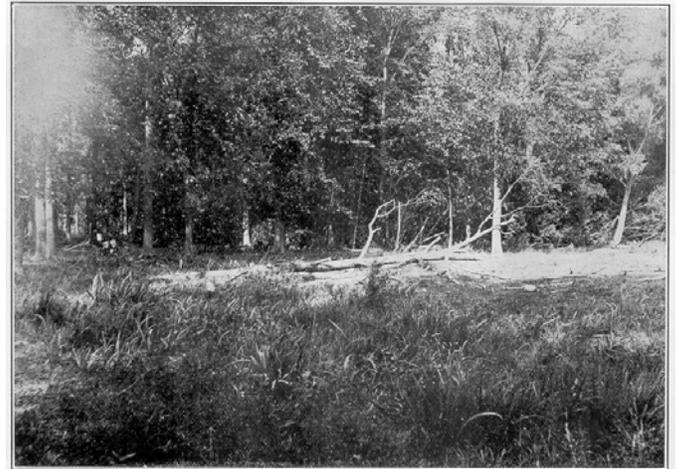
(A) MARGIN OF LONG LAKE, SAND POINT.



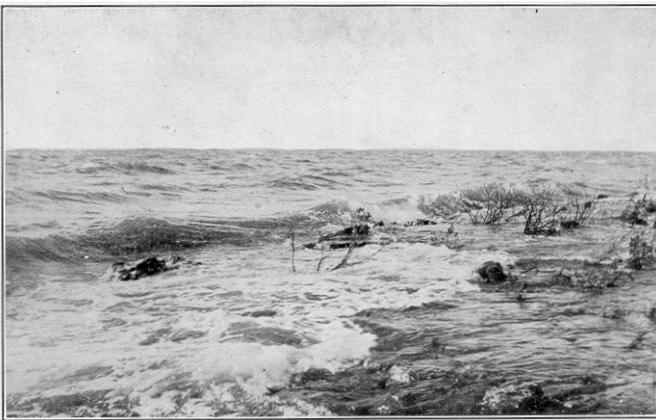
(B) ROCK BEACH ON STONY ISLAND.



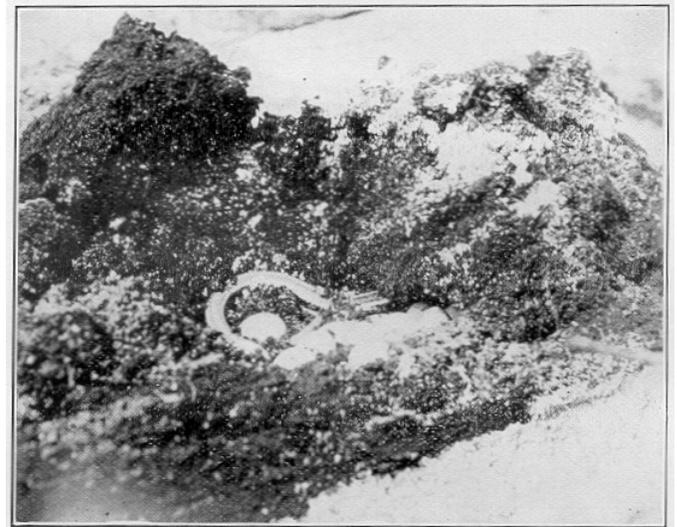
(B) TURTLE BAY, SAND POINT. QUIET WATER AND RESULTANT HYDROPHYTES, LARGE AREAS OF LILY PADS INTERSPERSED WITH ALISMA, SAGITTARIA AND POTAMOGETONS: SEDGE AND PHRAGMITES ASSOCIATIONS ON THE BORDER.



WOODED SWAMP AT EAST END OF RUSH LAKE.



(A) ROCK BEACH ON STONY ISLAND.



(A) NEST AND EGGS OF *EUMECES QUINQUELINEATUS* IN DECAYING LOG. PARENT SKINK PARTLY COILED ABOUT EGGS.



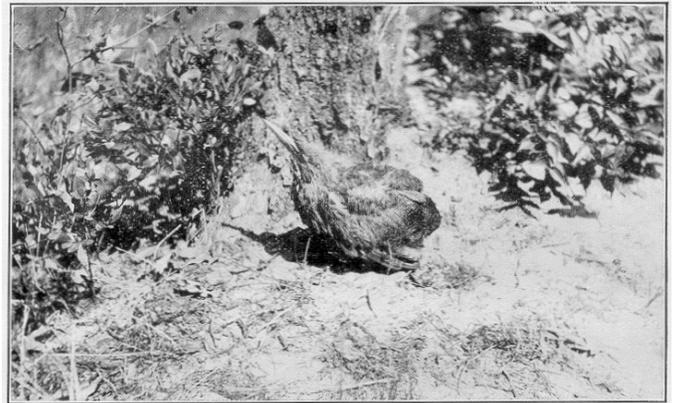
(B) NEST AND EGGS OF *EUMECES QUINQUILINEATUS* IN DECAYING LOG. PARENT SKINK PARTLY COILED ABOUT EGGS.



(A) *ELAPHE VULPINUS*.



(B) *HETERODON PLATYRHINUS*.



(A) IMMATURE AMERICAN BITTERN.



(B) NEST AND EGGS OF OVENBIRD.



NEST AND EGGS OF SPOTTED SANDPIPER.