
THE DUNES OF INDIANA

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DUNES are found in many parts of the world, but those which enclose the sweep of the great curve of the southern end of Lake Michigan are unique. Here bordering a shore line of twenty-five miles with an average depth of more than a mile is a wilderness, easily accessible to millions of people. This area of beach, bluff, hill, valley, swamp and bog is an epitome of plant life, a paradise for the ecologist, for crowding into this area of about thirty square miles are many plants which find here their natural environment and forget their own latitude. Here are the cactus at its farthest north, the twin-flower at its farthest south, the sand cherry of the beach, the cranberry far from its northern bog, the tulip tree, the white pine, the golden glow of the spice bush in early April and the delicate tracery of the bloom of the witch hazel in November.

The name of dune suggests a dreary waste of sand with little or no vegetation, but the dunes of Indiana belie their name. The rainfall is abundant. The soil varies from the pure sand of the beach to the deep muck of the marshes, and a rich humus covering the hills and valleys produces a vegetation that is almost tropical.

Here can be found a scene for every mood and taste; the drear expanse of sand, the melancholy skeleton of some stalwart tree beaten in the struggle against living burial by the drifting sand, now after many years laid bare at the will of the shifting wind; the dense shade of mighty oaks; cool beds of moss and ferns in deep hollows or on northern slopes; the broad outlook from hilltop over lake and forest; stretches of sand unmarked except by fine lines of waving beach grass or derelict of uncovered forest, a challenge to the etcher's art; and the sylvan glade worthy the painter's brush.

From March when the skunk cabbage fills the swamps until the fringed gentian has faded, the colors of the rainbow are spread over the dunes with a lavish hand. In the first warm days of spring the birdfoot violet covers the sunny hills while in the ravines the arbutus and hepatica vie in beauty. The sand phlox lies on the lower ridges like a snowfall, and masses of

flowering dogwood whiten the hillsides; presently the lupine purples the ground with indescribable luxuriance. The yellow of the pocoon and the orange of the butterfly weed follow. So the procession moves through the summer days, crowded with representatives from the plant societies which the greatly diversified topography shelters, until the glory of the blazing star and golden rod dies away amid the pale purple and white asters. In the swamps the ferns stand shoulder high and in the watery bogs grow the choicest and daintiest flowers, pink and white lady slippers and other orchids, the pitcher plant and the sundew. Autumn brings her palette of colors to the dunes and touches the maples, the oaks, the sumacs, the aspens, and they flame forth into brilliant hues.

The hills are well covered with trees, in many places densely forested with red, white and black oak, pine, juniper, maple, cottonwood, ironwood, cherry and sassafras. Willows, birches, tamarack and white cedar fill the lowland and pepperidge far from its home borders the swamps.

One small stream flows through the dunes to empty into the lake and along its banks is found another distinct vegetation.

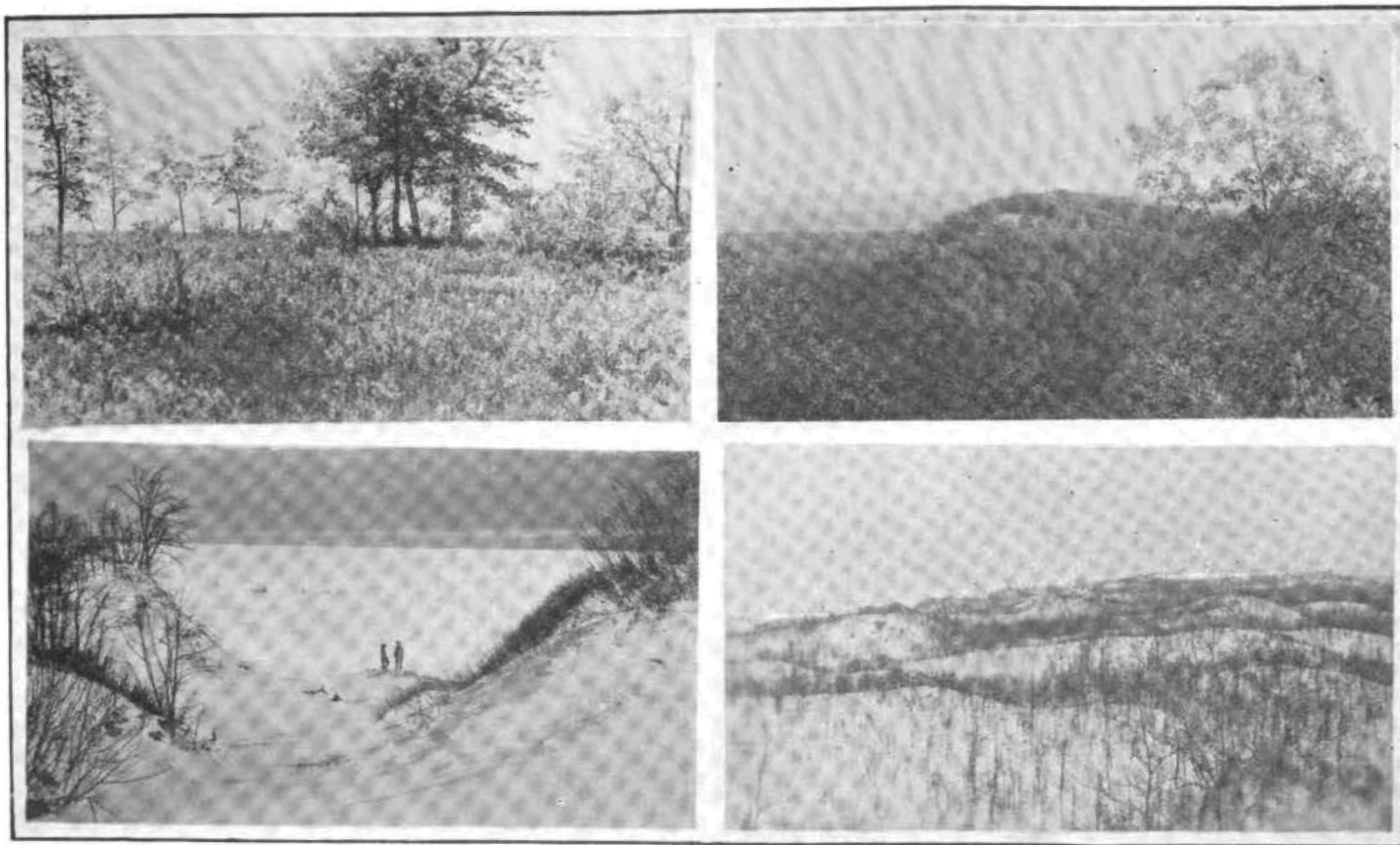
The area is not large enough to shelter the larger wild animals, but squirrels, rabbits, woodchucks, skunks, muskrats, and an occasional coon or opossum find homes here. The migration seasons crowd the thickets with birds, but there are many summer and winter residents, both of land and water varieties.

There are many varieties of insects. Spiders are well represented, notably the sand burrowing spider, peculiar to the shores of the Great Lakes, which makes itself a vertical tunnel about eighteen inches deep, the top of which is faced with a woven silk stocking to a sufficient depth to prevent the dry sand falling in and burying it in its home at the bottom.

The dunes are the creation of the wind working with the sand brought endlessly by the currents to the southern end of the lake. One storm forms a sand-bar in the lake, another brings it to the shore; the wind takes up the sand and carries it until some slight obstacle causes it to be dropped.

So the sand moves inland unless beach grass, cottonwood or beach cherry starts to grow, catches the moving sand and begins a dune, perhaps, to grow; perhaps, by a change in the wind to resume its journey inland to be caught by other shrubs and trees to form in a century or two a permanent dune upon which will stand in another century a forest of oak or pine. So the dunes are today; some ever changing, moving; others, permanent. Along the lake there is a broad beach, then a sandy bluff with here and there a blow-out, a saucer-shaped opening up which the wind carries the sand inland and drops it on the leeward side, little by little encroaching on the wooded hills and valleys.

In 1917 in one of the larger blow-outs which forms a natural amphitheater a historical pageant was staged. So perfect was the curve and so



IN THE DUNE COUNTRY OF INDIANA

Upper left, by Roy Flowers

"The lupine purples the ground with indescribable luxuriance."

Lower left, by Frances LaFollette

View down a "blow-out," showing ice on Lake Michigan.

Upper right, by Roy Flowers

"The hills are well wooded."

Lower right, by Arthur Ormes

"When the leaves fall, the snow brings the hills into relief."

remarkable were the acoustic properties that the audience of ten thousand could catch every word though in the open air.

Thus the combination of fresh blown sand, embryo dune festooned with the productive wild grape and bittersweet, and dark background of the woods is always just a little different today from yesterday, though the outlines are as picturesque and the curves as perfectly molded.

This land of beauty lies beside a great body of fresh water which not only has the beauty and *gradueur* of the open sea, but oftentimes the charm and friendliness of a little lake. Its sandy shores furnish twenty-five miles of absolutely safe bathing. In winter the same winds and currents which carry the sand in summer bring the ice and pile it up until the ridges stand far out like range on range of snowy mountains upon which one may clamber and discover fascinating ice caves and ridges.

To the dunes may go the botanist, geologist, zoologist, the lover of outdoor life and find what he seeks. This land of recreation and beauty is almost within walking distance of several millions of people and an effort is being made to have the national government set aside this bit of wilderness as a national park or monument. Then this tract will be safeguarded from fire, its greatest enemy, which every year sweeps through some part of its area. Wild life will be protected. The ruffed grouse and the quail which are still to be found here will increase. The tired city dweller at a slight expense for carfare may swim in the lake in summer, coast down the hills in winter and re-create himself at all seasons.

