

## HEADLANDS DUNES STATE NATURE PRESERVE Dedicated — May 1976

Extensive development along the shores of Lake Erie has all but totally eliminated the presence of sandy beaches and dunes at the western mouths of river bays and inlets from Sandusky Bay to Dunkirk, New York. Headlands Dunes State Nature Preserve remains today as one of the last of its kind in the entire State of Ohio.

This community is much more than merely an accumulation of sand along a shoreline. It is a living assemblage of fascinating and highly specialized plants and animals occurring in an environment too hostile for most other organisms to survive.

The establishment of Atlantic Coastal Plain species into the Great Lakes Region probably took place many thousands of years ago during Algonquin Time. This was a period of time when the sea extended into the present basin of Lake Ontario due to a depression of the basin brought on by the weight of continental glaciation.

Until recently, several East Coast species persisted as pioneers on the dunes east and west of Cleveland, but these dune grasses and forbs were virtually eliminated by "beach improvements" and other forms of land development along Lake Erie. One isolated locality for sandy beach and dune communities still persists here at Mentor Headlands.

Atlantic Coastal Plain species such as sea rocket, beach pea, seaside spurge, beach grass, and purple sand grass still persist on the sand dunes at Mentor Headlands. These coastal plants are not found growing naturally farther inland in Ohio. In addition, many species not found generally in northeastern Ohio grow abundantly along the Headlands dunes, such as switchgrass, Canada wild-rye, wafer ash, and wild bean. Many western xerophytes, i.e., plants tolerant to dry conditions, such as winged pigweed, clammy weed, sand drop-seed, and four-o'clock are afforded eastern range extensions due to the Headlands dunes.

The most important dune developers along the Lake and Ashtabula County coast are switchgrass and/or beach grass (Hicks, 1934). Switchgrass or beach grass becomes established on the upper beach along with annuals such as cocklebur and sea rocket. These lone grass plants quickly spread into huge root-like mats. Sand rapidly drifts into the relatively quiet vicinity of the switchgrass crown, and deposition occurs. Switchgrass and beach grass have an adaptation shared by many dunal plants (e.g., cottonwood, red osier, Canada wild-rye, sandbar willow, etc.): coincidental with the accumulation of sand around its crown, switchgrass or beach grass continues to grow upward through the sand.