

tunity for the scientists, and student to see and observe a truly untrammelled segment of nature.

Michigan Islands wilderness.—Three islands make up the Michigan Islands National Wildlife Refuge—Shoe and Pismire in Lake Michigan, and Scarecrow in Lake Huron. They contain about 12 acres and are located in Alpena and Charlevoix Counties, Mich.

The primary refuge management consideration of these three islands has been the protection of colonial nesting birds. Public use is by special permit and is generally limited to educational or scientific purposes. Few people have heard of Shoe and Pismire Islands or, if known, they are usually avoided as dangerous shoals. Consequently, the visitors to these islands are confined primarily to bird enthusiasts making the trip for bird-banding and bird observation purposes. Shoe Island is a gravel bar ranging in size from one-half to 2 acres, maybe submerged at times of high water. The only vegetation consists of scattered clumps of herbs and grasses.

In 1966 Pismire Island contained $3\frac{1}{2}$ acres and stood 10 feet above the lake. Trees are few, but shrubs are more abundant and include chokecherry, elderberry, and scattered willow clumps. Various herbs and grasses cover the exposed beaches below the high-water mark.

Scarecrow Island is much nearer to population centers, but is unattractive to many people because of the heavy use of its beaches by gulls and its trees by great blue herons and cormorants.

Scarecrow Island, containing 7 acres, is composed of large glacial boulders and is protected by its location in Thunder Bay. It has some soil overlaying the boulders and gravel which reaches an elevation of 15 feet. The better soils on the higher elevations support considerable tree and shrub growth. The island contains three small, shallow water basins which are attractive to waterfowl and shore birds.

These three islands are presently managed as natural areas.

Seney wilderness.—The proposed Seney wilderness is located within the Seney National Wildlife Refuge, Schoolcraft County, Mich., in the Upper Peninsula of Michigan. The refuge lies about halfway between Marquette and Sault St. Marie, Mich.

Seney National Wildlife Refuge contains about 95,455 acres of land and was established as a refuge by Executive order of President Franklin D. Roosevelt, on December 10, 1935. A large portion of the refuge is open marshes which have been developed for waterfowl and other wildlife species. Other portions are forested areas which have been cutover, or have been repeatedly swept by fires.

The Seney wilderness proposal is a portion of the Seney Refuge and contains about 25,150 acres. It is located in the northwest corner of the refuge, and contains approximately 26 percent of the total refuge lands. Essentially, the area is a "string bog"; so named because of a distinct geological pattern. Shifting, blowing sands formed as an outwash plain for receding glaciers have, over the years formed parallel ridges, separated by low, wet bog. Geologically, the topography is classed as subarctic, and is unusual in this southern latitude.

The sand ridges are brush and timber covered, and in conjunction with the boggy areas, constitute an almost impenetrable barrier. There are no roads, and trails are almost nonexistent and with exception of an occasional hiker, or hunter, the area is seldom visited.