BIOLOGY

NATURE RAMBLINGS

By Frank Thone

Hay Fever Weeds

Thousands upon thousands of hay fever sufferers are sneezing their lives into a lingering misery, or fleeing to mountains or sea from a country that has become accursed to them. For the ragweeds, the chiefest offenders against sensitive mucous membranes, are in bloom, and scattering billions of grains of their light, dusty pollen to all the breezes. If the ancient Persian priests, who believed that the world was equally the work of the good and evil principles, had known the ragweeds, they would unquestionably have assigned them rank among the chiefest creations of Ahriman, the Bad, and would have gone forth armed with scythes to do a meritorious act by mowing them down.

There are two species of ragweed common in this country. The tall ragweed is a terrific grower, making rank jungles twelve or fifteen feet in height, and taking possession of whole acres of rich, moist soil in swales and roadside ditches, and along river bottoms. Its leaves are broad and coarse, and are divided into three main lobes, whence its specific name, *trifida*. It is hard to eradicate completely, but so easy to sweep down with a heavy scythe that there is little excuse for permitting it to reach the pollen-forming stage in closely settled communities.

The low ragweed has finely divided leaves, like those of a carrot though somewhat coarser. Its height averages only about waist-high. Like its giant cousin it likes rich soil, but can get along perfectly well on considerably less water. It has a habit of invading dry pastures and turning them into weed patches, for it is so bitter that not even a goat will eat it. It is much harder to keep down than the tall ragweed, for it branches freely and bears clusters of pollen-scattering flowers on each branch.

GEOLOGY

Clay Tells of Ice Age

In the Hackensack meadows of New Jersey, previously famed for their mosquitoes, there has been found a natural calendar record of the retreat of the last great ice sheet that covered America not less than 20,000 years ago.

The clays that form the meadows tell a graphic story of the northward retreat of the ice.

Dr. Chester A. Reeds, of the American Museum of Natural History, will head an expedition to these meadows this summer to complete his study of the clays. For the last few years he has been collecting glacial clays from the Hackensack valley and other points along the Hudson. He has analysed and tabulated his findings to date. These findings plus the results of this summer's expedition will present in compressed form the geological history of this part of the country at the close of the last ice age.

The clay deposits tell their tale in this manner: With the gradual retreat of the ice fresh-water lakes formed in the lower portions of the enclosed basins in front of the glaciers. During the warm summer months of each year the ice melted and retreated a little to the north. With the melting process swollen rivers which flowed out from under the ice mass picked up fine sand and clay particles and carried them down to the lakes. These particles collected in the still waters of the lakes. The heavier particles of fine sand and coarse clay settled on the lake bottoms to form the sandy summer layer. The finer clay particles were held in suspension in the milky water throughout the summer. But with the coming of winter even the fine particles sank and covered the lake beds with a dark deposit of pure clay. By the next summer the water was clear again and the process repeated itself. Thus a sharp line has been drawn between summer and winter deposits. The summer deposits are sandy and light in color; the winter deposits, pure, dark clay.

By excavating the clay just as it stands and by the tedious process of counting the light and dark layers Dr. Reeds is able to trace the northward movement of the ice. Two deposits, a light summer layer and a dark winter one, equal a year. Dr. Reeds has already found in a forty-five foot depth of clay a continuous

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ARCHÆOLOGY

Indian Mound Hides Graves

A large Indian mound near Bainbridge, Ohio, is being sliced like a loaf of bread by exploring archaeologists who have found thirty Indian burials and a complicated internal structure.

What appears to be an elongate earthen pyramid is buried under the external surface of the so-called Seip mound. Seen from the outside the mound looked merely like a great rounded heap of earth, 240 feet long, 150 feet wide and 300 feet high.

The basis of the mound is a lower mound, shorter and narrower than the covering structure, rounded on top and covered with a layer of gravel. Presumably this lower mound was for ceremonial purposes for under it are found the Indian burials. Covering this inner mound is a mass of earth with steeply sloping sides, like the roof of a house or a long pyramid, and over this in turn there is another mass of earth, noticeably different from the "pyramid" in color and texture, which gives the outer mound its final rounded shape. Over this again is a layer of river gravel, thin at the top and thicker at the sides and held in place at the bottom by a wall of large stone slabs. All this great hill of earth was toilsomely built many centuries ago, by Indians whose only way of carrying it was in baskets on their backs or heads.

The peculiar and puzzling structure of this mound has been disclosed only by the methodical system pursued in opening it. The work is being done under the direction of Dr.

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ARCHÆOLOGY

To Study Ancient Races

Evidence of the antiquity of man, from the caves of Europe and the deserts of the Near East, will be collected this year by an expedition of the Field Museum of Natural History of Chicago, headed by Henry Field, anthropologist. From the caves and anthropological sites of France, Spain, Germany, Austria, Hungary and Czecho-Slovakia, Jugo-Slavia, Switzerland and Belgium there will be brought specimens and artifacts, together with notes, sketches and plaster casts to be used in exhibits in the Field Museum's proposed hall of prehistoric man. Mr. Field will also visit the North Arabian desert and the excavations of Kish in Mesopotamia.