



Portion of diorama at north end of Hall 29

FEATURED EXHIBIT FOR MAY

Let's Go Uphill To Spring

LOUIS O. WILLIAMS

Chief Curator, Botany

IN the northern hemisphere spring comes to the calendar on March 21. We recognize the season not only by the date but by what the plants and, perhaps to a lesser extent, what the animals are doing. Some Chicagoans may equate spring with the arrival of the robins; others of us who haunt the woods in the vicinity may hold that spring is here when the spring beauties, the trilliums, and other early flowering plants are showing their first color.

Judged by what the plants and animals are doing, spring does not come

to all places along any given degree of latitude at the same time. On the first morning of spring this year the robins in Chicagoland may well have considered going back south, and about a week later, on Easter Sunday, winter came again. The grass, stimulated by a week of warm weather, was under a blanket of wet snow. In Rhode Island, which is about as far north as Chicago, spring was in evidence on March 21, but westward in the high mountains of Pennsylvania snow was still the order of the day, with below-

freezing temperatures at night. Down off the Allegheny Mountains and out into the Central States, spring seemed to have been in the air, even if a bit prematurely. Continuing westward and across the Missouri River into the Prairie States, where the land begins to rise again, the weather got colder as elevation was gained.

We have now added a second "condition" or dimension to spring when we find that elevation, or the lack of it, may retard or advance the arrival

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of the season.

Farther west along the latitude of Chicago, we discover that when spring—by the calendar—comes to the eastern base of the Snowy Range in Wyoming, the countryside is still held tightly in winter's grasp. If we put on skis and travel toward the pass across the Snowy Range we will go over snow perhaps five, six or even ten feet deep. Heavy snowfalls are still possible, and even probable, in the high mountains during March and April, and sometimes even into May.

By late July and early August, however, the road is free of snow and we may travel in a half hour, along a beautiful route, from summer upward to early spring.

IF at some point on the road we stop the car, we will look out at a scene very much like that depicted in this month's featured exhibit. Spring is arriving at this very moment along the edge of the snow bank to the left of the diorama before us. As we look at the spring flowers along the ridge, and our eyes travel to the right as far as the cliff where the paint brushes grow, we have progressed far into spring. Thus we find at the same place different phases of a single season.

Some of the plants in the diorama belong to the polar world and extend southward only in high mountains. The

moss campion (*Silene acaulis*), with its purple flowers, surrounds the polar regions and grows at near sea level in Alaska, Greenland, Labrador, and Northern Europe. When it comes southward it chooses the high mountains as its pathway.

The columbine (*Aquilegia caerulea*), which is near the stunted juniper and spruce along the ridge in the diorama, represents quite the opposite kind of distribution among plants. This columbine is native to and endemic in the Rockies. Here it is at the upper limit of its altitudinal range and very much reduced in size. It reaches its best development perhaps in the valley seen in the distance. The columbine has merely been following spring up the mountain slopes.

Spring is of short duration at this elevation. Spring, summer, and fall may be telescoped into a period hardly longer than a month and even during this time perhaps not a night passes when the temperature does not drop to freezing. Thus the plants that we see in the diorama are, in a sense, very special ones which have reacted to the temperature, the wind, and the short growing season. Although the spruce and the juniper may be fifty years old, they are still very small—dwarfed by the wind, the short growing season, and the temperature. Most of the flowers that we see are relatively large and brightly

colored; such flowers attract pollinators more effectively than if they were small and dull-colored. Nature selects rigorously those plants permitted to grow here. There are not many kinds that can withstand the rigors of the locality and have flowers that attract pollinators quickly; or that can grow, flower, and produce seeds in a "spring-summer-fall" which may be but a month or two long.

Before leaving the diorama, look across the way, to the high, snow-covered mountains on the other side of the valley. They are two or three thousand feet higher than our look-out into this alpine world. Fresh snow already covers their upper slopes, and from the chill in the air we feel that winter may not be too long in returning to this flower-covered ridge.

Chicago Natural History Museum

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MUSEUM NEWS—

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during her childhood in California. She attended Wellesley College and then married. When her husband's business interests brought the family to Chicago Mrs. Grey renewed her interest in biology through the Museum, where she usually worked one day a week.

Her research started with the preparation of a "Catalogue of Type Specimens of Fishes in Chicago Natural History Museum" published in 1947. Later she specialized in the study of deep sea fishes. One of her most important scientific contributions is "The Distribution of Fishes Found Below a Depth of 2,000 Meters" published in 1956.

Another important paper, "Revision of the Family Gonostomatidae," which is to appear in Part IV of the *Fishes of the Western North Atlantic*, is now in press. At the time of her death she was working on the genus *Anoplogaster* for the Dana Report.

Mrs. Grey was an amateur ichthyologist whose work was of professional quality. She was particularly conversant with the literature of deep sea fishes and taught herself Russian to keep up with current Russian publications in this field. From this knowledge she always was glad to help beginning student and advanced colleague alike. Hers was a warm, generous personality that will be greatly missed.

A. L. Rand, *Chief Curator of Zoology*



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