

Field Museum News

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ABOVE THE TIMBERLINE, WHERE SPRING, SUMMER AND AUTUMN FLOWERS MEET

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A habitat group of Rocky Mountain alpine plants, just completed, marks the appearance in the botanical halls of the large panoramic type of exhibit long employed successfully in other Departments of the Museum. It is the first in a series of such groups designed to show characteristic plant formations.

Representing the vegetation above timberline, this diorama forms a striking addition

The conditions which produce this stunted plant life include low temperatures, a short growing season with intense sunlight, and a great amount of wind and consequently high evaporation—conditions typically arctic, and common alike to circumpolar regions and high altitudes of mountainous areas. The vegetation of the latter differs so little from that generally prevailing in the frigid zone that it must be considered only a special type of the arctic flora. As such it was chosen for representation here because

brief period of existence. Usually these have large and brightly colored flowers conducive to ready insect-pollination.

The thirty-odd kinds of plants shown produce a veritable flower bed. The profusion, proximity, and mass effect portray without exaggeration conditions normally found in spots favored by suitable drainage, exposure and moisture conditions. Over the flatter, drier and more windswept portions of the alpine meadow, however, more of the sward would probably be taken over by the



Garden Beside the Snow

The curious profusion of flowers, ranging from spring through summer to autumn types growing almost side by side, as found under arctic-alpine conditions, is represented in this habitat group of a scene above the timberline in the Rocky Mountains of Wyoming. This, the first in a series of botanical habitat groups, has just been completed in the Hall of Plant Life. It was prepared under the supervision of Mr. Emil Sella, who also made necessary field studies and collected required material.

to the Hall of Plant Life (Hall 29). Against a background of snow-covered mountains is shown a bit of alpine plant life as it exists during the summer months in the Medicine Bow Range of southeastern Wyoming. The exact locality is at an elevation of about 12,000 feet, not far from the University of Wyoming summer camp near Laramie. The exhibit presents an open vista, facing northeast over a field of alpine wild flowers at the edge of a mountain snow bank, as it appears about two o'clock in the afternoon. Everywhere at this elevation or higher, the scene assumes a similar and continuous aspect—a green sward interspersed with brightly colored flowers, a formation having the effect of a plains area and often referred to as an "alpine meadow." The absence of trees is more keenly felt because of their presence in abundance in the valley below. At this level appear only the dwarf juniper, seen in the upper left foreground, and the prostrate spruce at the right.

of its widespread occurrence in the United States and ready accessibility in western national parks.

To such unfavorable environmental conditions the alpine-arctic plants show characteristic growth responses. The necessary growth and production of fruit must be accomplished in the course of a few months. The cold temperatures and high winds necessitate protective structures and habits, and many of the plants have developed leaves which are either very small or needle-like as in the grass sandworts, fleshy-succulent as in the red and yellow stonecrop, or thick and leathery as in the bearberry or mountain cranberry. Similar protection is afforded by the dense matted turf or tufts of interlacing stems and root systems of the moss campion and alpine phlox.

Other plants such as the adder's-tongue, Parry primrose, snow buttercup, or marsh marigold, with more exposed surface, and thinner, more delicate leaves, have a very

growth of grasses, sedges, rushes and mosses.

The brief growing season of the alpine flora and its retardation in spots by lingering snowbanks makes it possible to find spring, summer and autumn types growing almost side by side. The whole seasonal progression compressed within a few yards is seen to advantage in the diorama. Beginning at the left almost in contact with the snow are the early spring types, such as yellow-flowered adder's-tongue, pink spring beauty, purple Parry primrose, and white marsh marigold, followed closely by pink lewisia, yellow snow buttercup, white-flowered anemone, grass sandwort, rock cress, and lilac-colored pasque flowers. The parade of the flowers advances toward summer with yellow-flowered sieversia, deep pink moss campion, lilac alpine phlox, blue alpine speedwell, bluebell, and white sandwort. These are followed by the purplish violet, white and purple daisy fleabane, white-

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Field Museum of Natural History

Founded by Marshall Field, 1893
Roosevelt Road and Field Drive, Chicago

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Field Museum is open every day of the year (except Christmas and New Year's Day) during the hours indicated below:

| | |
|---------------------------------------|------------------|
| November, December, January, February | 9 A.M. to 4 P.M. |
| March, April, September, October | 9 A.M. to 5 P.M. |
| May, June, July, August | 9 A.M. to 6 P.M. |

Admission is free to Members on all days. Other adults are admitted free on Thursdays, Saturdays and Sundays; non-members pay 25 cents on other days. Children are admitted free on all days. Students and faculty members of educational institutions are admitted free any day upon presentation of credentials.

The Museum's natural history Library is open for reference daily except Saturday afternoon and Sunday.

Traveling exhibits are circulated in the schools of Chicago by the N. W. Harris Public School Extension Department of the Museum.

Lectures for schools, and special entertainments and tours for children at the Museum, are provided by the James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures.

Announcements of free illustrated lectures for the public, and special lectures for Members of the Museum, will appear in FIELD MUSEUM NEWS.

A cafeteria in the Museum serves visitors. Rooms are provided for those bringing their lunches.

Chicago Motor Coach Company No. 26 buses go direct to the Museum.

Members are requested to inform the Museum promptly of changes of address.

MEMBERSHIP IN FIELD MUSEUM

Field Museum has several classes of Members. Benefactors give or devise \$100,000 or more. Contributors give or devise \$1,000 to \$100,000. Life Members give \$500; Non-Resident Life and Associate Members pay \$100; Non-Resident Associate Members pay \$50. All the above classes are exempt from dues. Sustaining Members contribute \$25 annually. After six years they become Associate Members. Annual Members contribute \$10 annually. Other memberships are Corporate, Honorary, Patron, and Corresponding, additions under these classifications being made by special action of the Board of Trustees.

Each Member, in all classes, is entitled to free admission to the Museum for himself, his family and house guests, and to two reserved seats for Museum lectures provided for Members. Subscription to FIELD MUSEUM NEWS is included with all memberships. The courtesies of every museum of note in the United States and Canada are extended to all Members of Field Museum. A Member may give his personal card to non-residents of Chicago, upon presentation of which they will be admitted to the Museum without charge. Further information about memberships will be sent on request.

BEQUESTS AND ENDOWMENTS

Bequests to Field Museum of Natural History may be made in securities, money, books or collections. They may, if desired, take the form of a memorial to a person or cause, named by the giver.

Contributions made within the taxable year not exceeding 15 per cent of the taxpayer's net income are allowable as deductions in computing net income for federal income tax purposes.

Endowments may be made to the Museum with the provision that an annuity be paid to the patron for life. These annuities are guaranteed against fluctuation in amount, and may reduce federal income taxes.

ABOVE THE TIMBERLINE

(Continued from page 1)

flowered mouse-ear chickweed, yellow and red stonecrop, and the prominent single-stemmed white bistort overtopping its lower-growing alpine associates. The delicate nodding harebell appears here and there, while an occasional white and blue Rocky Mountain columbine is seen hugging the side of the prostrate spruce.

Passing on to the late summer and autumn flowers, the principal types farthest removed from the snow are the deep blue-violet Rocky Mountain gentian, its cream and purple cousin—the arctic gentian, the showy yellow, sunflower-like Rydbergia, masses of the golden yellow ragwort, and pale greenish-yellow and brilliant red paint brush or painted cups. Various grasses, sedges, rushes, and mosses play a prominent part in the composition of the flora.

The drainage lines which normally occur on a slope next to a glacier, are shown throughout the foreground, and make one feel as if he were standing on the edge of an escarpment which gullies down into the alpine lake and forested valley below. The granite, schist and gneiss rocks are covered with various types of crustose lichens, and studded with tufts of rock cress, alpine phlox, and snow buttercup. In the upper left of the foreground, a Rocky Mountain cony peers out upon the scene, as characteristic an inhabitant of the alpine zone as any of the plants mentioned.

The preparation of the group has been materially aided by the skillful assistance of various Works Progress Administration artisans assigned to the Museum working under the supervision of Mr. Emil Sella, chief preparator, who also made the field studies and collected the material. Aid and advice were given him in that task by Professor Aven Nelson of the University of Wyoming. The background was painted by Mr. Arthur G. Rueckert from photographs and a preliminary sketch made by the late Charles A. Corwin, former Staff Artist.

STONE AGE MUSICAL INSTRUMENTS

By HENRY FIELD

Curator of Physical Anthropology

In Europe about 30,000 years ago prehistoric man made whistles and flutes from leg bones of geese, swans, eagles, chamois, and reindeer. These musical instruments, the oldest yet discovered, were fashioned with sharp, flint gravers, and were probably derived from pierced animal bones worn by the ancient hunters as trophies of the chase. Inevitably it was discovered that by blowing across a perforated tubular bone different sounds could be made.

In all probability Paleolithic Man could whistle, as even primitive modern peoples such as the Hottentots of South Africa do this extremely well. In New Guinea flutes became objects of an erotic cult. Other primitive groups use whistles for attracting attention, and particularly for communication during warfare or hunting. In Ashanti there is a veritable whistling language. Among the Hamibs four short blasts mean that an attack is imminent, while one shrill note indicates the discovery of water.

George Catlin, famous artist and traveler (1796-1872), found a war whistle among the American Indians. Whale teeth were made into whistles in New Zealand, a splendid analogy with the flute prepared from a lion's tooth, excavated from Aurignacian deposits at Wistonice in Czechoslovakia by Dr. Karl Absolon, archaeologist in charge of prehistoric sites in Moravia. At the invitation of Dr. Absolon, Dr. H. Kaslik, Czech musi-

cian, has studied the tones produced by prehistoric whistles and flutes, one of which gave the first four sounds of the diatonic scale.

On exhibition in the Hall of the Stone Age of the Old World (Hall C) is a Magdalenian perforated bone, which probably once served as a whistle. It was excavated at Sergeac near St. Léon-sur-Vézère, Dordogne, France.

AMERICAN ORIENTAL SOCIETY MEETS AT MUSEUM

The Midwest Branch of the American Oriental Society, one of the oldest learned societies of the United States, founded in 1842, will hold its annual meeting in Chicago on April 1 and 2. On April 1 the members will have luncheon at Field Museum, and will hold their afternoon session in the small lecture hall of this institution; other sessions will be held at the Oriental Institute.

Three members of the Staff of the Museum will speak before the delegates. Director Clifford C. Gregg will give an address of welcome; Mr. C. Martin Wilbur, Curator of Chinese Archaeology and Ethnology, will present a paper on "Legal Aspects of Slavery in the Han Period of China"; and Mr. Richard A. Martin, Curator of Near Eastern Archaeology, will speak on the Museum's collection from Kish (Iraq) and conduct the members on a tour of the hall now in course of preparation for the display of this collection. Professor Sheldon H. Blank, of Hebrew Union College, Cincinnati, President of the Midwest Branch, will be chairman of the meeting. Professor Leroy Waterman, of the University of Michigan, National President of the Society, will also attend.

HENRY JAY PATTEN 1863-1938

Henry Jay Patten, advisor, supporter and friend of institutions and researchers working in the field of Near Eastern archaeology, died in Chicago on February 25. A Life Member of Field Museum, he contributed some of the Coptic textiles in the Egyptian Hall, as well as cuneiform tablets from ancient Mesopotamia (now Iraq). He was the donor also of funds to enable the Field Museum-Oxford University Joint Expedition to Mesopotamia to continue excavations during 1928 at the site of Jemdet Nasr, near Kish, and to cover the expenses involved in publishing the Kish Sasanian sculptures in a forthcoming book entitled *A Survey of Persian Art*. His generous gifts resulted in his election by the Trustees to the membership classification designated as Contributors. His enthusiasm and interest in following the work of archaeologists engaged in filling in the missing pages of man's cultural history will long serve as inspiration for those who reconstruct the life of the ancient Near East.—H. F.

Myrrh

Myrrh is a resin exuding spontaneously as light colored drops or "tears" from the bark of several species of trees (*Commiphora*) of the torchwood family. Its native habitat includes Ethiopia, Somaliland, and southern Arabia. From earliest times myrrh has been burned as incense, and it is employed in the Near and Far East in religious ceremonies. It contains a volatile or essential oil which is distilled and used in perfumes and for scenting soap.

This and other unusual resins such as dragon's blood, frankincense, asafetida, etc., obtained from various parts of the world, are on display in the northwest section of Hall 28 in the Department of Botany.



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