Field Museum of Natural History

Founded by Marshall Field, 1893

Roosevelt Road and Lake Michigan, Chicago

FIELD MUSEUM NEWS

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Field Museum is open every day of the year during the hours indicated below:

November, December, January 9 A.M. to 4:30 P.M.
February, March, April, October 9 A.M. to 5:00 P.M.
May, June, July, August, September 9 A.M. to 6:00 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.

Cash 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 under Article 251 of Regulation 69 relating to the income tax under the Revenue Act of 1926.

Endowments may be made to the Museum with the provision that an annuity be paid to the patron for life. These annuities are tax-free and are guaranteed against fluctuation in amount.

METEORITE SOCIETY ORGANIZED

The Society for Research on Meteorites was organized at meetings held on August 21 and 22 in the small lecture hall of Field Museum. This institution was chosen as the meeting place because of its important meteorite collection, largest in the world in number of falls represented.

Dr. Oliver C. Farrington, Curator of Geology, was elected honorary president of the society, and Associate Curator Henry W. Nichols was elected a member of the council of the organization. Scientists from all over the country attended. Dr. Frederick C. Leonard, chairman of the department of astronomy at the University of California at Los Angeles, was elected president; Dr. C. C. Wylie of the University of Iowa and Dr. W. F. Foshag of the United States National Museum, were elected vice-presidents; and Professor H. H. Nininger of the Colorado Museum of Natural History, was chosen secretary-treasurer. Councilors include L. F. Brady of the Museum of Northern Arizona, Dean G. M. Butler of the University of Arizona, Professor Raymond E. Crilley of Iowa Wesleyan College, Dr. W. T. Whitney of Pomona College, and Dr. F. R. Moulton of the University of Chicago.

MUSEUM CLOSING HOUR CHANGES OCTOBER 1

Beginning October 1, visiting hours at Field Museum of Natural History will be from 9 a.m. to 5:30 p.m. daily until October 31. Since June 1 the Museum has been open every day from 9 a.m. to 7 p.m. for the convenience of visitors to A Century of Progress.

On November 1 the Museum will resume its regular schedule of visiting hours, which varies slightly at different seasons, as follows: November, December, and January—9 a.m. to 4:30 p.m.; February, March, April, and October—9 a.m. to 5 p.m.; May, June, July, August, and September—9 a.m. to 6 p.m.

PARA RUBBER

BY B. E. DAHLGREN
Acting Curator, Department of Botany

Rubber is essentially an American product. At the time of the early Spaniards in tropical America the Indians in Mexico used rubber playing balls, and in South America they were acquainted with the latex of the rubber tree and its use as waterproofing for rain capes. The Amazonian Indians made syringes of rubber with a perforated stick of wood for a nozzle. The first scientific report on rubber was made by Condamine and Bouguer in 1736 to the Paris Academy of Sciences.

Nevertheless, in Europe and North America rubber was almost unknown until about a hundred years ago. The English chemist Priestley is said to have discovered its usefulness as a pencil eraser. A practical process for impregnating cloth with a rubber solution was patented in Great Britain in 1823 by Mackintosh, whose name has since become a synonym for raincoats. With the discovery of the process known as vulcanization, consisting of the treatment of rubber with sulphur, the usefulness of the new material was greatly increased. Its present enormous importance dates, of course, from the invention of the pneumatic tire, which has made the crude "coucho" or caoutchouc of the Indian an indispensable raw material of the industrial world.

There are many kinds of rubber. All of them consist of the dried latex or sticky juice of certain plants. The list of rubber-yielding plants known is now very extensive, including hundreds of species scattered over all continents. The latest to be announced is from Russia, a dandelion-like plant of western Asia with a rubbery root, that may be grown far to the north in the temperate zone. Of the large number of plants from which rubber may be obtained only a few have actually been found to yield a product of great commercial importance, and of these only one yields a rubber of really prime quality for most purposes, viz., the Brazilian rubber tree, *Hevea brasiliensis*, of the Amazon. This furnishes the Brazilian product known as Pará rubber, so named from its chief port of exportation. It is this species which, transplanted to the moist tropics of the East Indies on a large scale, now furnishes practically all of the so-called plantation rubber.

Formerly the Amazon was the only source of supply. The rubber industry is still important there, but in the virtual absence of producing plantations, is confined to tapping the wild trees of the forest. These yield a superior product but at a cost of time and effort much greater than that expended on plantation rubber. The rubber trees in the forest are scattered. The gatherer of rubber must live far from his kind, establish and maintain himself in the forest, often under very difficult conditions, far from sources of supply. He must find a sufficient number of trees more or less convenient of access within a reasonable range of his camp and cut a path for himself from tree to tree before he can begin his daily round of collecting.

Most of the Amazon rubber thus obtained comes to market in large balls, formed gradually by pouring the collected rubber latex on a stick revolved over the smoke of a palm nut fire, which causes the milky juice to coagulate. This is continued daily until the ball of rubber grows to such dimensions that it becomes unmanageable or inconvenient for one man to handle, the average weight of the balls being about sixty pounds when fresh.

A plantation rubber tree showing the now usual manner in which the bark is cut in shallow V-shaped incisions, and a wild rubber tree showing the effects of tapping in the crude manner formerly in use on the lower Amazon, have been placed on exhibition among the raw plant materials in Hall 28 of the Museum. Shown with these are the tools used for making the incisions, and specimens of Pará rubber in the form in which it comes into the market. This exhibit was made possible by gifts of material received from Van Cleef Brothers and the Wilkinson Process Rubber Company of Chicago, and by collections obtained by the Marshall Field Botanical Expedition to the Amazon in 1929.

To illustrate the botanical characters of the Hevea rubber tree a fruiting branch of this tree obtained by the Amazon expedition has been reproduced in the Stanley Field Plant Reproduction Laboratories of the Department of Botany. The whole forms an instructive and important nucleus for an exhibit which will include the principal kinds of rubber from various other sources.

An unusually fine carved lacquer screen from China, eighteenth century, deposited by Mrs. Marshall Field, Sr., occupies the North Gallery above Stanley Field Hall.