

museum service

BULLETIN OF THE ROCHESTER MUSEUM OF ARTS AND SCIENCES

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MUSEUM SERVICE

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Rochester Museum of Arts and Sciences, founded by Mayor Hiram Edgerton in 1912, started as the Municipal Museum in Edgerton Park. It was reorganized in 1925 under a Commission and renamed Rochester Museum of Arts and Sciences. The building on East Avenue, the gift of Edward and Matilda Bausch in 1940—Dedicated to a Better Understanding of the Laws of Nature and the Cultural Achievements of Mankind—is operated by the City of Rochester as a community center for research and education.

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Photographs William G. Frank

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The Changing Role of the Science Museum

Across the nation cities are changing their faces. Rehabilitation of slum areas, new buildings for homes and industry, new solutions to traffic flow, are all becoming noticeable. But in a more subtle way, cities are changing their spiritual goals as well. Provision is being made to meet the needs of the mind and of the spirit. There is a growing "culture" consciousness. Enjoyment of culture can find its expression in attendance at concerts, plays and operas, in playing instruments, in painting pictures or in viewing the visual arts. But beyond these varieties, culture also extends into the vast fields of the sciences.

Exciting developments in space exploration, medical discoveries and the uncovering of new facts about the natural world heighten our interest and pique our curiosity. Fresh information on the galaxies, exploring the mysteries of a spider's web or the study of human psychic behavior, all take on new importance. Suddenly, we are becoming aware of our expanding universe. Aside from the realm of the printed word and the focus of the television screen we seek new paths toward an understanding of the domain of science. One of those paths leads directly to the science museum.

The modern museum has been undergoing a metamorphosis in the last several decades. It is a more attractive and dynamic place than it was even a few short years ago. New forms of display techniques, better lighting and the realistic effect of sound make exhibits infinitely more appealing. Science museums also seek to satisfy the needs of the inquiring mind. People are absorbed in discovering the results of human ingenuity which created those new machines that save man labor and help him in controlling his environment. For this reason, museums now give more attention to their function as interpreters of science.

To fulfill this role, museums are evolving into institutions of grand scope with complex facilities and services. Through their instructional offerings for youth and adults, they act as adjuncts for visual education to agencies of formal learning, such as schools and colleges. Their scientific laboratories and extensive collections of objects, staffed by experts, can answer the practical questions from the general public.

Proof of this changing function can be seen in the refurbishment of exhibition halls in the science museums of Philadelphia, New York, Buffalo, Indianapolis and Kansas City, and in the construction of new buildings for science and technical exhibits in Cincinnati, Detroit and Los Angeles.

Here in Rochester with our new Planetarium in the advanced planning stage and with a projected scheme for a Hall of Human Biology and a design for an additional structure on Science and Man's Environment, we, too, are caught up in the challenging process involved in the development of a museum into a *Science Center*.

—W. STEPHEN THOMAS, *Director*

The Bobcat

By Alan R. Mahl
Assistant Director

The bobcat (*Lynx rufus*) is the smallest of the wild cats of North America. Though he resembles the common house cat in general appearance, he can be identified by his larger size, long legs and short tail. His close relative, the Canada Lynx, is very similar in appearance, but is larger in size and his stubby tail ends in a complete circle of black.

Predators play an important role in nature. Trees and plants provide food for other forms of life, so do certain animals prey upon other forms of life. These predators are nature's watchdogs over population increases and declines. The number of predators fluctuates with the population of the animals upon which they feed.

As a predator the bobcat effectively keeps the population of snowshoe hares and cottontail rabbits in check. Therefore its role is extremely important in maintaining balanced animal populations.

For many years the bobcat has been accused of preying on farm animals and large game animals. There is no question that at times this is true. However, the amount of damage done to livestock by these animals has been much exaggerated. Frequently the bobcat will live near farms; its presence unknown because of its secretive habits, preferring to wander at night and avoiding man and his dwellings in all but the direst emergency.

Bounties have been in effect in many states because of this misunderstanding. Since 1727, Massachusetts has paid bounties for the killing of bobcats and many other states continue to pay for the destruction of this animal.

During the winter when deep snows cover the ground and make hunting difficult the cats will cover an area of ten or fifteen square miles in their search for food. This area is traveled in an irregular manner, the animals stopping to check almost every tuft of grass and fallen tree for possible food, frequently backtracking along the way they have just come. At daybreak the bobcat will find the closest shelter—a hollow log, the branches of a fallen tree or a sheltered spot among rocks or dense bushes. From here he continues his hunting the following night.

Mating time for bobcats is in the middle of winter, from January into late February. Although they are generally quiet, confining their noise to hisses and snarls when disturbed, mating time brings about a change. During this period the woods resound with yells and yowls, resembling the nighttime cries of the house cat amplified many times.

Some 63 days after mating the young are born. One to four kittens are born at a time, each weighing about 12 ounces at birth. They remain with the mother for the first year, after which they are on their own. The bobcat is a good mother protecting her young with great zeal.

The bobcat is found throughout the United States, in southern Canada and south into Mexico. It is considered extinct in our immediate area, but is common in the Adirondacks and is found in the counties of the southern tier. It is found in a great variety of habitats, including deserts, forests, swamps, farmland, mountains and thickets.

Tin Anniversary

By Gladys Reid Holton
Curator of History

Fans fashioned of tin
for 10th wedding anniversary.



“One of the pleasant customs which is coming into general favor is that of celebrating anniversary weddings. Special anniversaries are designated by special names indicating the presents suitable on each occasion.” So reads a very worn book of etiquette published in the 1890’s.

Today wedding anniversaries are often celebrated without regard for the name or gift that was once thought appropriate, but many persons still cling to the old custom of giving a certain type of gift on each anniversary.

The yearly anniversary of the day two persons were married is an occasion for celebration and gift giving. Peoples of many lands celebrate wedding anniversaries according to their own customs and traditions.

In the United States each anniversary gradually came to have a name of its own. These fanciful names given to the many wedding anniversaries emphasizing the popular idea that they

designate the nature of suitable gifts are as follows:

First	.....paper
Second	.....cotton
Third	.....leather
Fourth	.....books
Fifth	.....wooden
Sixth	.....candy
Seventh	.....woolen
Tenth	.....tin
Fifteenth	.....crystal
Twentieth	.....china
Twenty-fifth	.....silver
Fiftieth	.....golden
Sixtieth	.....diamond

The 60th anniversary is often reckoned the “Diamond Wedding” in place of the 75th since the 60th year of Queen Victoria’s reign was her Diamond Jubilee. There is great variation in these lists but in general all agree that the tenth is the tin anniversary and one 19th century fashion writer says:

“The invitations for this anniversary may be made upon cards covered with tin foil or upon the ordinary



Flower holders.

wedding note paper with a tin card enclosed.

"Those guests who desire to accompany their congratulations with appropriate presents have the whole list of articles manufactured by the tinner from which to select.

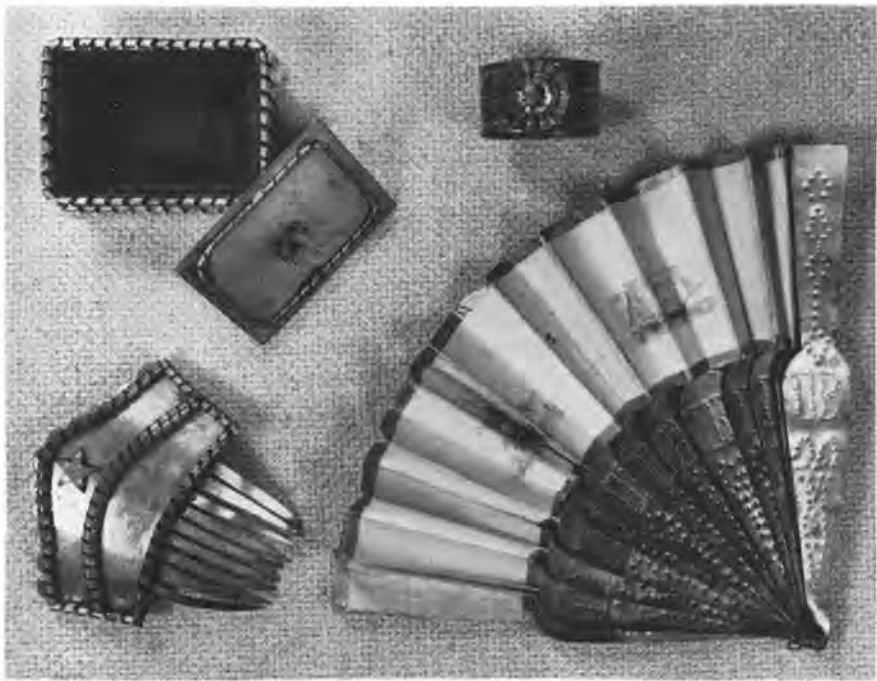
"A general frolic is in order at the tin wedding. It is an occasion for getting together old friends after ten years of married life. Gifts are usually in the form of kitchen utensils—tin candlesticks, tin fans, tin ornaments, even tin tables and chairs are offered as gifts. These cause much merriment as well as showing the ingenuity of the giver."

Today's celebration would be exciting if Mexican tinware was used for the table setting and decorations.

The reason we are specifically pick-

ing tin in this story is because the Museum has built up a unique collection of objects made of tin which have been presented from time-to-time and which were originally gifts given in observance of a tenth wedding anniversary.

In thinking of the early history of tin it is interesting to know that early Egyptian metallurgists started to look for tin in foreign countries. The inhabitants of ancient Mesopotamia were more fortunate in obtaining tin from the mountains to the north. The deposits of the Balkans, of Bohemia, of Brittany and northern Spain and, finally, those of Cornwall, England, were discovered. As these remote regions were explored, the art of metallurgy was taught to the inhabitants of Central Europe, who soon became skilled and transmitted the lore of the



The skill of the whitesmith. Objects show technique of an exacting craft.

smith to the tribes of the West. In antiquity the principal use of tin was for making bronze. By 2000 B.C. tin ores were being smelted so that instead of a trade in ore, bars of tin were produced and traded. This allowed the smiths to compound their alloys more closely. Tin mines of Cornwall, England were responsible for the Roman occupation of the island.

Sheet iron and tin appeared rather late in America because its production required rolling mills. Connecticut was one of the early centers for training of tinsmiths. As tin plate became available large quantities of tinware were produced. In an advertisement dated April 27, 1767 Benjamin Marshall, a Philadelphia craftsman, produced plain, painted, japanned and planish tinware. In 1832 in Steven's Plains, Maine, 11 shops produced a total out-

put valued at \$27,300.

Some sheet tin is made principally of iron and is therefore subject to rust. Craftsmen painted this metal to help preserve it. There was also a covering known as japanning, a technique which came to America from the East via England. This effect was achieved by the application of several coats of asphaltum over the bright tin. One coat gave a thin, transparent, light brown finish; additional applications produced a deeper, more opaque finish.

If tin and the things made of tin are of interest to you, a visit to the Tinsmith in the Hall of Culture History at the Museum will be an enjoyable one. We are sure you will be amused when you see the tenth anniversary gifts made of tin from the Museum's collection which are displayed in a small case across from the Pride Tinsmith.

Excavating An Early Historic Seneca Longhouse

By Charles F. Hayes, III

Associate Curator of Anthropology

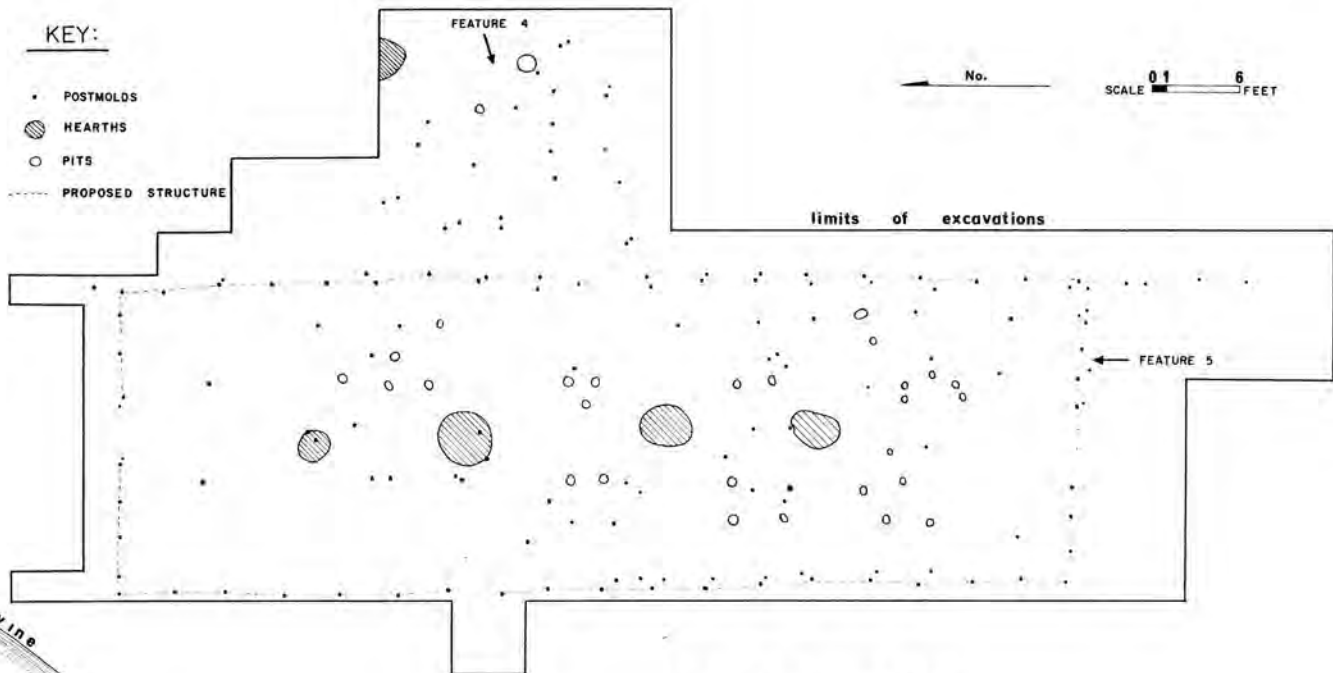
The 1964 archeological field season at the Early Historic Seneca Cornish site (Hne 9-2), West Bloomfield, Ontario County, N. Y., indicated that beyond an adequate sample of artifactual material a settlement pattern could be probably obtained (Hayes 1965). Any large excavation, however, by the Rochester Museum of Arts and Sciences would have to be dependent upon sufficient funds, time and additional personnel. Fortunately, through accumulated funds for field research from the Rochester Museum Association, it was possible during five weeks in June-July 1965 to initiate a sustained settlement pattern study of this site.

The project was under the author's direction with Daniel M. Barber, our junior anthropologist, and Joyce Holloway, instructor in anthropology at the State University College at Oneonta, N. Y., as field supervisors. Two field assistants, Larry Atkins, freshman in history at Kenyon College, and Ray De Mallie, sophomore in anthropology at the University of Chicago, made up the remainder of the full-time crew. In addition a total of twenty-three volunteers contributed seventeen man-days to the project. It is to these persons and Mr. Leo Hammond, the landowner, that the Rochester Museum of Arts and Sciences is deeply grateful, for the season could not have been completed without their continual help in the often tedious process of uncovering a settlement pattern.

The longhouse was located at the highest point near the center of the site, which lies on a 600' x 150' promontory with 10'-15' ravines on the eastern and western sides. Usually it is difficult to obtain exact measurements on any settlement pattern. At the Cornish site longhouse, however, it was possible to make accurate measurements from post mold to post mold, particularly on the exterior walls. The overall dimensions of the longhouse indicated a structure 65' long by 20' wide with entrances at the northern and southern ends. Post spacing on the exterior four walls averaged thirty-five inches. On the interior it was also possible to determine some areas probably representing compartments and vestibules.

Four hearths were found running down a central corridor and 27 pits were located in clusters in probable storage areas. The pits were narrow and cylindrical. Some contained refuse bone which, with the addition of that found over the longhouse area, has been submitted for identification to John Guilday of the Carnegie Museum in Pittsburgh, Pennsylvania. A good indication of dietary practices should be obtained, for over 30 lbs. of bone were found.

Associated with the longhouse (Feature Five) was a complex of post molds believed to represent an auxiliary structure (Feature Four) possibly for food preparation and/or storage. This



cornish site

ONTARIO CO. N.Y. W. BLOOMFIELD TWP.

SUMMER, 1965. ROCHESTER MUSEUM

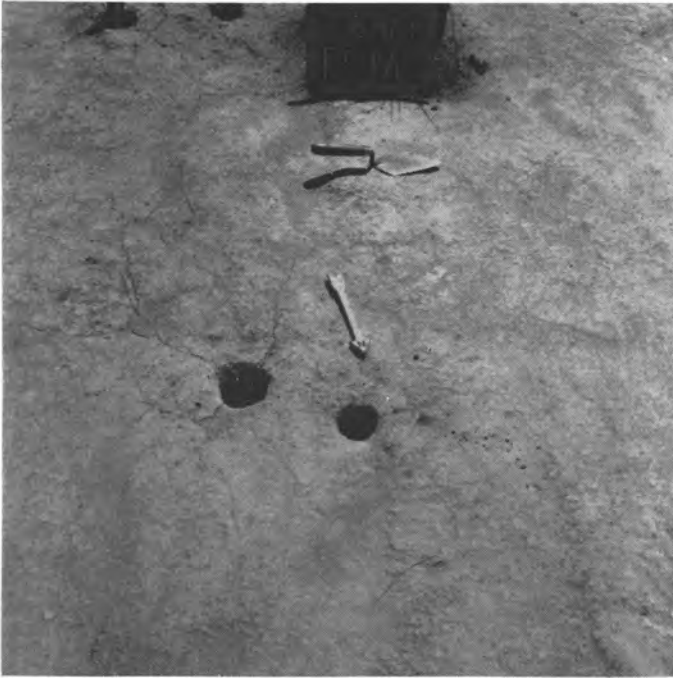
Post Mold Pattern of Longhouse and Associated Structure.
(Map drawn by Daniel M. Barber).



Partially excavated east wall of longhouse.

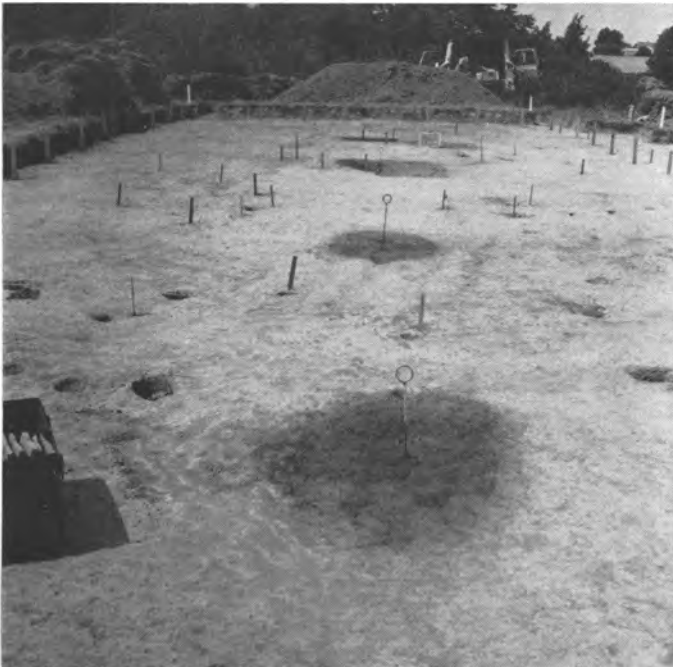
Clearing west wall of longhouse.





Close-up view of a major exterior post (left) and its interior supporting post (right).

Hearths (dark oval patches) extending down center of longhouse (looking north).





Removal of pit contents within longhouse. Miss Joyce Holloway (left), Mrs. Robert Prisch (right).

latter structure occupied a 15' by 20' area outside the east wall of the longhouse.

This is the second longhouse to be excavated by the Rochester Museum of Arts and Sciences in the Genesee region. Dr. Alfred K. Guthe, former anthropologist at the Museum, worked at the Factory Hollow site (Guthe 1957). A 56' by 23' structure was outlined, but extensive rebuilding did not allow any definite measurements to be made. The Factory Hollow and Cornish sites are probably nearly contemporaneous, both dating about A.D. 1600. European trade items have been

found at both sites.

The details of the longhouse excavation have been prepared for a forthcoming publication and will, it is hoped, provide substantial comparative data for other archeologists working in settlement pattern studies. The next step will be to continue this kind of investigation in the Genesee region on a prehistoric Iroquois time level. Eventually there may be enough information obtained to give a good idea of aboriginal architectural changes through time and the relationship of these changes to possible social organization, population and village size.

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1957

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1965

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The completed longhouse excavation (looking north).

A Longhouse construction in the Seneca Indian Village diorama.



Timekeeping

By Roxann Ware

Artist-Preparator in Charge of
Special Exhibits

Like lighting, the story of timekeeping is an ancient one, but with earlier development of mechanical devices. The reason for this is the relative importance of time to man's development.

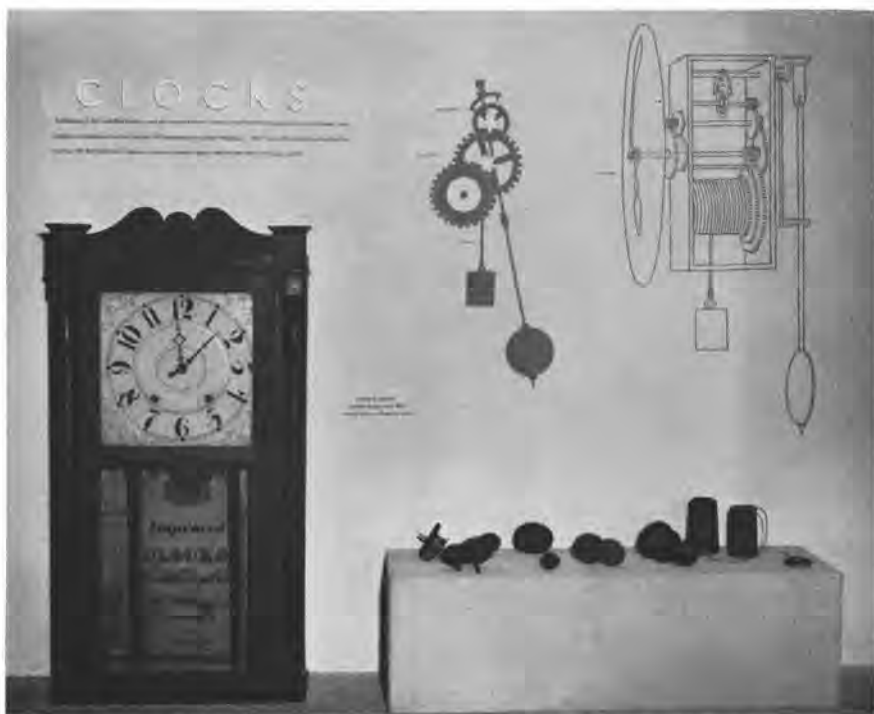
In the Classic Age, time had an element of the mystic surrounding it. Astronomer-priests were in charge of timekeeping and they jealously guarded their knowledge. By the use of sundials and the observation of the stars, they determined times for important religious observances, as well as times to plant and harvest. Before the time of Julius Caesar, the Roman calendar was used as a political tool. Politicians added months to enable them to remain in office longer and to collect more taxes.

Time is a dimension of the physical universe, it has no beginning or ending but is continually moving. There are, however, natural divisions determined by the earth's rotation around its own axis, the earth's movement around the sun and the moon's revolution around earth. The development of timekeeping is the story of man's awareness of these natural divisions and his attempts to devise instruments to accurately measure it. The basic problem is that time cannot be divided into regular segments and be in accord with "natural or solar" time because the earth's movement is irregular. Ancient civilizations attempted to adjust mean time or the average measured time to coincide with solar time. Since the days of Caesar, the civil calendar has been based on mean time which

coincides with solar time four days a year. The accumulation of the leftover time is corrected by leap year.

To early man the most obvious divisions were night and day and the recurring changes of the seasons which brought distinct weather changes important to his way of life. Sundials were the first implements used to determine time. They evolved from man's observation of the movement of cast shadows around trees or posts. The earliest known sundial was made 6,000 years ago. The sundial had limitations since it was only useful during the daylight hours and on sunny days. Each sundial had to be adjusted to its particular latitude. Oil burning lamp clocks, sandglasses and water clocks were attempts to improve the sundial. The water clock or clepsydra was the forerunner of the first mechanical timepiece because it used gears. The first mechanical clock for which we have records was Henry De Vick's weight driven clock made in 1360. It was made of iron, had a 500 pound weight, a gear train and one hand to indicate the time on the dial.

The most essential feature of all mechanical clocks is the escapement. Without an escapement to control the movement of the gears, the weight would drop all at once and the gears would move at an uneven rate of speed. There were many types of escapements, but they all were developed to control the source of power and keep it flowing at a regular rate of speed. Refinements of escape mecha-



Jerome & Darrow wooden works clock, 1824. Loaned by Mrs. Edward P. Toole.

nisms combined with the pendulum made accurate clocks possible. The law of the pendulum was discovered in 1583 by Galileo and was first applied to a clock in 1658 by Christian Huygens. A pendulum moves in long and short arcs in equal time; when it was connected to the escapement it brought increased accuracy to weight driven clocks and provided a way to regulate the speed.

Weight driven clocks had to remain stationary and upright. In 1580 Peter Henlein used a coiled spring as motive power and opened the way for the development of portable clocks called "clock-watches." The first watches were large and cumbersome and were often carried about by pages. The balance wheel replaced the pendulum and a hair spring or lever was developed as the escapement in spring driven watches. Most contemporary watches and small clocks are spring driven.

Weight driven tall case or grandfather clocks reached their high point in development in accuracy as well as refinement in case design in England during the "golden age of English clockmaking" in the 17th and early 18th centuries. They kept accurate time, struck the hours, had musical chimes, calendars and often showed the moon phases. These clocks were individually made for the privileged few. Tower clocks which announced the hour were placed in town squares for the use of the whole town. Many of these had elaborate mechanisms with moving figures appearing at appropriate times. Privately owned clocks were treasured family heirlooms passed from one generation to another.

America's first clocks were made in Europe and brought to America with the colonists. People with clockmaking skills also came and they began to build their own clocks. The first tower clock in America was in use in

1650 in Boston; New York had a tower clock in 1717 and Philadelphia in 1750. America's chief contribution to the clockmaking industry was the use of mass production of interchangeable parts. Clocks were not built individually, but could be assembled from standardized parts. This made possible inexpensive clocks nearly everyone could afford. Daniel Burnap is credited with being the first to use the principles of mass production. Eli Terry, Seth Thomas, Silas Hoadley and Chauncey Jerome are a few of the famous names in the story of the American clock industry. Terry developed a 30-hour Pillar and Scroll shelf clock with wooden works by 1814. Jerome is noted for his brass works one-day clock which sold for one dollar. Thomas and Hoadley both started

as apprentices to Terry and later had factories of their own. Simon Willard is famous for designing the banjo clock with an 8-day brass movement.

The use of electricity for motive power is also an American innovation. Electric clocks became popular in the 1920's and are a part of nearly every household today. Our clock industry makes extremely accurate clocks and watches in a range of styles and prices. It is also a vital industry since they manufacture intricate timing devices used in missiles and spacecraft.

Timekeeping has advanced from man's crude observations of the sun and his early attempts to measure it, to the development of accurate timekeeping mechanisms. Today we have devices which measure time with split second accuracy.

Zeiss Model 6 Planetarium Projector

By **Ian C. McLennan**

Director, Strassenburgh Planetarium

When the doors to Rochester's Strassenburgh Planetarium open in late 1987, the world will get its first look at the completed Model 6 Planetarium Projector, the prototype of which has been purchased by the Rochester Museum Association. The purchase follows one of the most thorough investigations of equipment ever undertaken prior to a planetarium installation. Earlier this year, the planetarium director and Dr. Robert Hopkins, of the Institute of Optics of the University of Rochester, visited Zeiss factories in Jena, German Democratic Republic, and Oberkochen, West Germany. Planetarium projection equipment and other technical facilities also were inspected in Bochum, Berlin and Lisbon.

The new Zeiss Model 6 projector

from West Germany was about half completed when viewed by the Rochester representatives. It has not been patented as yet, thus many of its features cannot be discussed in detail. Some of the major items of importance that make the projector outstanding are:

1. A new light source and completely redesigned optical system that results in substantially improving the realism of the make-believe sky. The stars are brighter, crisper, and all are scientifically correct with regard to magnitude and color index.

2. A number of technical innovations create a better transition from daylight-to-dusk, including a remarkable sunset sequence.

Zeiss Model 4
Planetarium Projector
similar in appearance to the
Model 6 purchased by
Rochester Museum Association
for Strasenburgh Planetarium



3. The new Zeiss projector also has a completely integrated solar and lunar eclipse cycle which will allow the planetarium performance to feature an eclipse at any time in history and in any selected part of the sky.

4. An effect of spaceflight towards the planets Jupiter and Saturn has been introduced, thus enhancing the dramatic appeal of the planetarium show. The planets, all in their correct places, have been designed to look more realistic than those to be seen on any existing planetarium machine.

5. A solar system projector with individually controlled planetary elements will allow planetarium visitors to see the movements of the planets around the sun, or the moon around its mother planet.

6. A completely redesigned constellation projector will allow a demonstration of a number of individual constellation images until the entire sky is filled with the creatures depicted by ancient man as he gazed at the firmament.

7. Zeiss will also design a special projector which will recreate the orbit of the now famous Comet Ikeya-Seki which shone over Rochester skies late in 1965. Another famous comet of 1857 also can be shown.

8. The control console has been redesigned, and noisy relays have been removed to a technical area adjacent to the planetarium theater in order to preserve the quietness so vital to a profound planetarium experience.

While in Oberkochen, the planetarium director and Dr. Hopkins advanced a number of suggestions for additional improvements to the planetarium projector. These are being discussed and within several weeks final details will be known.

Regardless of these items, we are assured of introducing planetarium patrons to the ultimate in planetarium instrumentation, both through the great Zeiss projector and by means of auxiliary equipment to be designed and built by residents of a technologically-oriented, space age city.



Archeological techniques contribute to the study of history.

Exhibiting The Not-So-Old Archeology

By **Daniel M. Barber**
 Junior Anthropologist

The increasing interest in the study of historic sites archeology is reflected by the Museum's recent installation of two exhibits. Both may be viewed in the Hall of Man on the second floor.

One exhibit entitled "Historic Sites Archeology" located at the rear of the Hall of Man attempts to define and re-view the meaning of New World his-

toric archeological sites and shows the contribution of archeology to the study of history. On display is a cross section of the typical artifact assemblages for the period A.D. 1492-A.D. 1900. These include such things as wrought iron nails, wine glass fragments, two-tined forks and jew's-harps, to mention only a few. These originally were found on

Trade Pipes emphasize
stylistic change
through time.



a variety of local sites. When practical, specific dates or ranges of time have been included. For the sake of authenticity, the colors used on the backgrounds are duplicates of those documented by Colonial Williamsburg. Whole objects of a non-archeological nature have also been included in the display to show what some of the small pieces might represent.

A more specialized exhibit in the same vein is located at the front of the Hall of Man and is entitled "Kaolin Pipes." It deals with only one European made trade item and, as a result, is more specific. Trade pipes are one of the more sensitive indicators of time found on historic sites and are invaluable to the archeologist.

Objects manufactured in the historic period in Europe have four important attributes which make them useful to the archeologist: (A) Rapid change of style. In recent times the

tempo of stylistic change and functional improvement has increased giving short lives to many of the styles and functions of any particular class of artifacts. (B) Documentation. These "short lives" which may be attributed to styles and functions are dated and recorded by their manufacturers. (C) Large span of geographical distribution. European articles were traded and used far and wide in the New World and in each area in which they are found they become a chronological common denominator. (D) Quantity. In many cases a large enough quantity of any historic artifact is present so that a valid study can be made.

Kaolin pipes fulfill all four criteria for dating the sites upon which they are found. They change styles rapidly through time; they have documented manufacturers; they have a wide geographical distribution and are usually found in large quantities.

Table No. 1
THE RELATIVE DISTRIBUTION OF KAOLIN PIPE BORE DIAMETERS FROM
RANDOM SAMPLES TAKEN FROM SIX HISTORIC SENECA SITES

SITES	Sample Totals	NUMERICAL COUNTS							PERCENTAGE COUNTS						
		4*	5	6	7	8	9	10	4	5	6	7	8	9	10
CANAWAUGUS	51	12	36	3					23.53	70.59	5.88				
BOUGHTON HILL	96	3	10	25	39	16	3		3.12	10.42	26.04	40.63	16.67	3.12	
ROCHESTER JUNCTION	116	6	11	35	42	21	1		5.17	9.48	30.17	36.21	18.10	.87	
DANN	58		1	5	30	16	5	1		1.73	8.62	51.72	27.58	8.62	1.73
MARSH	25	1		2	16	5	1		4.00		8.00	64.00	20.00	4.00	
POWER HOUSE	36	1	3	4	14	10	2	2	2.78	8.33	11.11	38.88	27.78	5.56	5.56

Table No. 2
A COMPARISON OF DATES DERIVED THROUGH THE APPLICATION OF BINFORD'S
REGRESSION LINE FORMULA WITH THOSE ESTIMATED BY WRAY AND SCHOFF IN 1953

SITES	Mean Bore Dia.	Mean Date	Date Span	Wray-Schoff Span Estimate
CANAWAUGUS	4.82*	1747	1741-1754	
BOUGHTON HILL	6.67	1677	1667-1687	1675-1687
ROCHESTER JUNCTION	6.55	1681	1675-1687	1675-1687
DANN	7.38	1650		1650-1675
MARSH	7.08	1661	1655-1667	1650-1675
POWER HOUSE	7.19	1657		1630-1650

*These measurements are in terms of sixty-fourths of an inch

Kaolin Pipe Stems, An Analysis of Their Value to Local Archeology

By Daniel M. Barber
Junior Anthropologist

The dating of historic period archeological sites on the basis of the diameters of kaolin pipe stem bores was first proposed in literature by J. C. Harrington (Harrington 1954) twelve years ago. Harrington's theory, based upon an extensive study of English pipe stems in England and America, asserted that pipe bores uniformly decreased in diameter during the years 1620 to 1800. This phenomenon was primarily a function of steadily increasing stem lengths which in turn required thinner and thinner wires inserted in the wet molds to prevent their being thrust through the sides.

Harrington has formulated a chart which expresses this situation in a visual way. Stem hole diameters are listed as ranging from a minimum of 4/64 inch to a maximum of 9/64 inch and each is related to a specific span of years according to its percentage of occurrences. In 1961 Lewis H. Binford (Maxwell and Binford 1961: 107-9) went a step further and translated Harrington's chart into a simple workable formula: $Y = 1931.85 - 38.26X$; Y represents the unknown date, 1931.85 is the theoretical date at which the stem bores would reach zero, 38.26 is the slope of a regression line calculated by computing the arithmetic mean (simple average) of the bore diameters for each of the time periods represented on the Harrington chart, X is the simple average of all the bore diameters in the sample (Max-

well and Binford 1961: 108).

Having withstood the tests and criticisms of nearly a decade and a half Harrington's theory has proved to be highly accurate when used properly with a large enough sample (Hume 1963: 263). Binford's derived formula improves upon Harrington's chart by giving a mean date rather than a span of years and by avoiding the necessity of juggling percentages which do not always work out so neatly as do Harrington's. The regression line formula has been tested in well documented, historic contexts (Maxwell and Binford 1961: 108-9) and has proven accurate when used correctly.

The questions which now arise are: Can the regression line formula be applied to historic sites of the Rochester area? Can they aid in the relative dating of these sites?

The answer to the first question is definitely yes, but with limits. The historic period in the Rochester area is A.D. 1550 to the present. The overall potential time span covered by the regression line formula is from A.D. 1620 to A.D. 1780. The initial date is based upon Harrington's chart whereas the cut-off date was subsequently lowered to 1780 because it was discovered that at about the close of the 18th century pipe manufacturers began to duplicate the old styles of pipe stems.

From 1620 to 1780 the majority of historic sites in the Rochester area were Seneca Indian. The earliest

known historic Seneca sites include Adams, Tram, Dutch Hollow, Factory Hollow and Cornish among others. These date from about 1550 to 1615 (Wray and Schoff: 1953) and are therefore much too early for a valid application of the regression line formula. Besides being too early to fit into the Harrington chart, sites of this period contain nearly no kaolin pipe stems. It is not until the period 1615 to 1630 that trade pipes begin to show up at all; Warren and Lima sites being examples (Wray and Schoff: 1953). Although trade pipes appear more numerous in this period and increase greatly in number toward the end, the samples found on such sites are usually so small in number that a valid application of the regression line formula is impossible. It is not until about A.D. 1630 in the Rochester area that there are available enough kaolin pipes on any particular site to constitute an adequate sample. Making no local exception to Binford's cut-off date we can therefore say that sites of the 1630 to 1780 time span are those which can potentially be dated by means of the regression line formula. By coincidence the 1780 cut-off date is approximated by the 1779 Sullivan Expedition, which routed the Senecas from their homeland and paved the way for immediate non-Indian occupation.

To answer the second question proposed in regard to the value of the regression line formula in ordering our sites chronologically I went about to find the raw material.

The selection of sites to be dated was based upon no other criterion than that it contained no less than 25 documented kaolin pipe stem fragments. Even on this rather non-selective basis I was able to use only 6 sites, exhausting the possibilities of two major collections, that of Charles F. Wray, of West Rush, N. Y., and that of the Rochester Museum of Arts and Sciences. In only two instances did I even approach an adequate sample—being here defined as about 150, ex-

trapolating from the degrees of validity for dates which I obtained. Five of the above sites had already been dated by Charles F. Wray and Harry L. Schoff in a paper entitled "A Preliminary Report on the Seneca Sequence in Western New York, 1550-1687."

The purpose of my study then, was to observe how close to the already established dates I could come to each site. Despite the small sample accuracy was at least approximated in 4 out of 6 cases; in one instance the limitations were of the formula as well as the sample.

Canawaugus Village

The Rochester Museum collection yielded a sample total of 51 pipe stems ranging in stem bore diameter from 4/64 to 6/64 inch with a mean bore diameter of 4.82/64 inch for the entire sample. On the basis of this average, a mean date of 1747 was calculated. The following site features each rendered its own statistics in terms of bore sizes.

Feature	Mean Bore Diameter (64ths of an inch)	Mean Date
Pit 1	4.93	1743
Pit 3	5.00	1741
Pit 4	4.64	1754
Refuse dump	4.81	1748
Surface	5.00	1741

The range of dates indicated by the various proveniences within our sample is 1741-1754. At first glance it appears correct. Both Cornplanter and Handsome Lake were born at Canawaugus in the 1730's, establishing the existence of the village early in the 18th century. By themselves, then, the pipe stems would date the above features to the mid-18th century, however associated artifacts date the same features as late 18th or early 19th century. This illustrates, then, the problem encountered when attempting to date a site or components of a site which had actually existed after 1780.



Stem bores of Kaolin pipes ranging from 10/64 inch (left) to 4/64 inch (right).

The problems of dating by pipe stem bores is even more complicated at a site such as Canawagus, when the occupation period passes into the 19th century. Although there must be features at this site that do date from 1741-1754, how on the basis of pipe bore diameters alone can they be distinguished from post 1780 features?

Boughton Hill Site

The total sample numbered 96. Fifty-seven of this number were from the collection of Charles F. Wray. Bore diameters covered the entire range from 4/64 to 9/64 inch. The mean bore diameter was 6.67/64 inch. The Rochester Museum's samples from the site are all from the surface. The Charles F. Wray collection is from refuse dump excavation. The regression line formula gives us a mean date of 1677. Historically the cut-off date of Boughton Hill is 1687. Ten years then subtracted from the mean date gives us a date of 1667 and results in a time span of 1667-1687. Previous information gives us the range 1675-1687 for Boughton Hill (Wray and Schoff 1953). The validity of a pipe stem mean date

for this site still must be tested by a greater sample.

Rochester Junction

The total sample numbered 116 and all stems were surface finds. Fifty of this number were from the collection of Charles F. Wray. Bore diameters again covered the entire range from 4/64 to 9/64 inch. The mean bore diameter was 6.55/64 inch and used in the regression line formula gives us a mean date of 1681. Like Boughton Hill the known cut-off date is 1687. Six years subtracted from the mean date gives us a date of 1675. We have then a time span of 1675-1687 agreeing precisely with the estimate of Wray and Schoff (Wray and Schoff 1953).

Dann Site

A total sample of 58 pipe stems were assembled from this site. Fifty were from the collection of Charles F. Wray. All examples came from the surface of the site. Pipe bore diameters ranged from 5/64 to 10/64 inch with

a mean pipe bore diameter of 7.38. The regression line formula gives us a date of 1650 based upon the above mean bore calculation. This date may be within the range for the site but it is most likely inaccurate as a *mean* date. This assumption is explained on the basis of the theory that the Senecas left the Dann Site about 1675 and built a new village at Rochester Junction. Therefore if 1650 were the mean date the span of occupation would have had to have been from 1625-1675, a rather lengthy stay. The error in this calculation lies again in a poor sample.

Marsh Site

A total sample of 25 pipe stems was used, twenty of the number from the collection of Charles F. Wray. All stems were from the surface. Pipe bore diameters ranged from 4/64 to 9/64 inch with a mean pipe bore diameter of 7.08 which gives us a mean date for the site of 1661. This date may actually approximate the mean for the site if we can believe that the people of Marsh site left that village and established the Boughton Hill site in 1667. This would give us a span of from 1655-1667 for the Marsh site. Despite a low sample number a relatively accurate date was obtained. This most likely means that the sample used was highly representative of the time range of the site.

Power House

There were 36 pipe stems in the total sample obtained and 35 were from the collection of Charles F. Wray. All were obtained by surface collecting. The pipe bore diameters ranged from 6/64 inch to 10/64 inch and the mean is 7.19. This gives us a date of 1657 calculated on the basis of the regression line formula. If we assume that our calculated date for Dann site

of 1650 is within the range we are forced to say that the date for Power House is seven years too recent. This logic is again based upon the assumption that one village gave birth to another and that the Power House people moved to the Dann site about 1650. Thus a small and inadequate sample of pipe stems again leads us astray—but not too radically.

Conclusions

The Binford regression line formula for dating kaolin pipe bore samples is certainly a potential dating factor for historic sites in the Rochester area. Because of the scope or limitations of the chronology (1630-1780) we are limited to the study of historic Seneca Indian villages, and non-Indian components are beyond reach. This factor creates still other limitations—those of sample. The Seneca villages were relatively non-populous as compared with the larger towns and forts of the non-Indians at the same time. The Senecas, besides being fewer, were poorer and less sedentary than their non-Indian counterparts. As a result today we find it difficult to assemble enough pipe stems from their sites in order to date them. The size of the sample (which should approach 150) is important when attempting to date accurately with pipe bores. The results of the above study reflect a need for a larger number of observations if we expect to attain precise results. Besides the number, the quality of the sample must be taken into consideration. Each sample should be from a documented feature or stratum within the site. Surface samples are too easily contaminated by 19th century expansion. Contamination may also result by means of disproportionate seeding of the surface assemblage by earlier or later features or by an uneven accumulation of pipe stems deposited over the span of occupancy (Binford 1962: 21).

It must be kept in mind that the date derived from the sample is that of the sample and that the degree to which the sample represents the site equals the degree to which the date represents the site. Even when a relatively acceptable date has been achieved for the sample it must be

remembered that it alone does not date the site. The archeological method requires many independent avenues of approach before a conclusion can validly be reached.

The regression line formula is not a magic tool, it is but one way to approach the problem of time.

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50th Anniversary Medal of Lewis Henry Morgan Chapter,
New York State Archeological Association.

At the 50th anniversary meeting of the New York State Archeological Association and the Lewis Henry Morgan Chapter, on April 23, 1966, a medal (illustrated above) was issued in honor of the occasion. On the obverse side is a portrait of Lewis Henry Morgan, world famous Rochester anthropologist for whom the local chapter was named. On the reverse side is the seal of Morgan Chapter.

The Medal may be obtained from Morgan Chapter at Rochester Museum of Arts and Sciences. The price of the Medal is \$2.50.

Alphonse Kolb, a Fellow of Rochester Museum, designed and executed the medal.

The Elegant, The Excellent and The Practical

By **Pauline de Haart Adams**
Registrar

This describes the character of many of the things that people give to this Museum.

This article will deal with an elegant, silver lustre pitcher dated 1812, the excellent craftsmanship of a little Shaker box from about the middle of the last century and a charming little snuffbox with snuff in it from the 1870's.

Silver Lustre Pitcher

The well-formed, silver lustre pitcher has an elaborate, foliated design which was made with the "resist" method of decoration.

Lustre pottery, which is pottery coated with a metallic, often iridescent glaze, has been known since the 7th century according to Lady Evans in her book on "Lustre Pottery" (New York, E. P. Dutton & Co.). It started in the Near East, where many beautiful examples of it have been preserved and excavated.

With the Moslem conquests, the lustre technique spread from the East and from Egypt along the North African coast to Spain. It also spread in the opposite direction around the Mediterranean, but it was from Spain that the lustre technique was introduced to Italy in the 16th century and to England in the middle of the 18th century. It became very popular and was pro-

duced throughout Staffordshire, the Etruria Works and other pottery-making centers of England.

The technique is to dip a glazed and fired vessel into a diluted platinum chloride bath and to fire it again at a much lower temperature than was needed for bisque and glaze firings. This would leave a film of silvery lustre all over the vessel. This technique could also be used in combination with the "resist" method, whereby a decorative pattern, a name or a heraldic badge was painted onto the glazed and fired surface with a sticky solution to which the platinum solution could not adhere. After the piece was fired again the painted decoration would be cleaned off and the design would so remain visible in the color of the original glaze, while the rest of the piece would look "silvered."

In the case of our pitcher we have a sample where the "resist" method was used and only the outside was lustered. In many instances vessels are coated inside and out to suggest that they are made of silver instead of pottery.

The pitcher bears the name of "James England" under the spout and the date "1812." In the picture the black areas are silver lustre and the white areas the creamy color of the all-over glaze under the lustre. A foliated

Silver Lustre Pitcher, 1812



border runs all around the neck of the pitcher. On one side the design is made up of a foliated ovoid on which a didactic verse is written in lustre and on the other side it bears a shield-like shape, topped by a heavily muscled arm swinging a mallet. This shield has a tripartite division incorporated in the design of the collection of tools that are arranged within the shield. It would seem logical that each division would contain tools of a different trade, which might be those of the cobbler, carpenter and stone mason, but there may be more trades shown. The verse is a delightful admonition and is worded as follows:

“Adopt thou the Medium
’Tis the Golden Rule
Nor aspire to the Wit
Nor descend to the Fool
For Folly and Wit are but
Brother and Brother
There’s danger in one
And disgrace in the other”

This pitcher was given to the Museum by Mr. W. Leigh Bailey. It was brought to America in 1867.

The Shaker Box

The excellence of Shaker craftsman-

ship has been a joy to both maker and user alike. The furniture and other household equipment the Shakers made are among the finest when it comes to relationships between components of the design. The quality of their workmanship alone is also of the highest nature.

The name “Shakers” comes from the fact that the religious observances of this sect involved a shaking motion of the body. Officially they are known as the “United Society of Believers in Christ’s Second Appearing.” They had a philosophy of semimonastic Christian Communism. The Shaker Societies established themselves in this country in the last quarter of the 18th century. They founded self-sufficient communities where men and women lived separately but in communal dwelling-houses with separate entrances. They formed a large family of sisters and brothers in which the chores and the work were divided and changed frequently so that no one had to engage in the same task for long.

This made for continued interest in the job at hand. They worked unhurriedly but incessantly. Children were received into their Societies as well as adults, and they all received training. Their way of life was closely



Shaker Boxes for Tithe and Snuff

related to their way of work. A fine book on the subject is: "Shaker Furniture" by Edward Deming Andrews and Faith Andrews (Dover Publications, New York 1950). Their way of life aspired to a creed of Regularity, Harmony and Order, which included Simplicity, Purity and Cleanliness. This is evidenced in the simple, ordered design of the articles that came out of their shops. One can see some of their credos quite clearly in this little box:

"Beauty rests on Utility.
Regularity is Beautiful.
There is great Beauty in Harmony.
Order is the Creation of Beauty"

Their work had to answer to their professional standards similar to the way that the Guilds worked.

From about 1798 they manufactured oval boxes which are still made today. They made them in all sizes depending on the type of things, belongings, provisions or tools they intended to use the boxes for. Nothing should be left around; everything was put in its own place. The painstaking construction consisted of taking a thin band of maple and by means of a template, cutting "lappers" or "fingers" into one end of it. It was then steamed to make it pliable and wrapped around

an oval mold. The fingers were fastened to the other end of the strip with copper or wrought iron rivets as brass was considered too fanciful. Another narrower band, in this case with one finger or lapper, was prepared in the same way for use as the cover of the box. Oval slabs of pine were then fitted into the maple bands to form the bottom and the top. When closed, the cover band of this little box is exactly one third of the total height of the box. The greatest length of its oval is exactly two and two thirds times its height. This geometric finesse is characteristic of the minute attention the Shakers paid to design relationships.

At one time someone cut a slot in the cover of this box and used it as a "tithe box." It is in this capacity that it is now on view on our third floor in the exhibit on "Religion and Rochester" until September. Inside the box was found a precious little note which reads as follows: "I was trained to love God's Holy Book, to honor God's Holy Day and to be honest with God's Holy Tithe. Of personal gifts to me in cash, and of personal (sic) earnings I was expected to see that the Lord's treasury (sic) got at least the tithe. I have yet the little box in which my tithe payments were kept and from which

I made my personal contributions to various benevolent causes." The donor prefers to remain anonymous.

The Snuffbox

This charming little snuffbox looks like it was made by a man with a purpose. Two strips of birch bark were folded around and fitted in between each other. An oval slab serves as the bottom of the box. Everything was then firmly tacked into place with nails and metal clamps. The top consists of a quarter-inch thick slab of wood with slanting sides. It fits neatly into the box and keeps the free-standing sides from losing their shape. A leather thong was doubled over, inserted into a hole in the center of the cover and knotted securely. By pulling one can slip the cover out of the box and if so inclined, try some of the snuff with which the box is still more than half full.

This box was fashioned by a man who must have been very handy with his tools and who whipped up a little

snuffbox at a time when he was in need of one. No geometric finesse here and no light coat of varnish either. Its maker is reported to have been an accomplished shoemaker, from Union Hill near Webster, who fashioned it sometime in the 1870's. The soft, mellow brown surface may have easily become so because of the shoe polish on the shoemaker's fingers. It looks like it had a lot of use, but never abuse. The thong is still sturdy; the walls stand up straight. It is a fine example of whittling done in the few spare hours of a busy man, with a family to make a living for. It is different from the abstract qualities of the Shaker style, but it has an endearing quality instead. The donor was Mr. Harlow D. Philips of this city.

Good craftsmanship only comes after long practice on the part of a person who is devoted to his work. It is a joy to behold, greatly respected and often hard to come by. The field is varied and the products have an immense variety of kinds and characteristics including fanciness, elegance and abstract excellence.

Gifts to the Museum in December 1965, January, February and March 1966

Mrs. David M. Allen

Paper doll, sewing equipment, cigaret advertising cards, an 1862 "Carriers' Greeting" for the *Rochester Evening Express*, two watches and 3 World War II pins.

Mrs. Francis J. D'Amanda

A letter from Clara Barton, penholder, sandshifter, quill pens, an inkflask, ear-spoon, spectacles, scales and a collection of marbles.

Mr. W. Leigh Bailey

Silver lustre pitcher, made in 1812 with the "silver resist" method and showing name, date, a verse and coat of arms of trades.

Miss Margaret A. Bridgeman

Miser's purse, cap, socks and lace.

The City of Rochester, via the City Comptroller, Mr. Joseph Silverstein

Firefighting equipment and firemen's accessories from the "Ever Ready Hose Co." organized in 1858 in this city. The collection includes 2 firemen's hats, 2 leather fire buckets, end section of a fire hose, a fireman's trumpet, 2 spittoons and 3 pictures. Also an 1838 hand colored engraving of the Genesee Falls.

Miss Louise Colton

Anthropological material — bead dolls, miniature mocassins, boots, a basket and a Chinese robe of the 1920's.

Mrs. Florence A. Cooksley

17 Athletic medals won by Frederick Cooksley between 1898-1905.

Mr. Edward G. Cornwell, Jr.
2 Silk brocade ribbons and a book, "Christ in Art & Symbolism," edited by the Asbury First Methodist Church of this City.

Mrs. Henry T. Curtiss
6 Huck linen half-show towels embroidered in silk.

Mr. Arthur A. Davis
4 books of the 1850's for the Library.

Mrs. Jane des Grange
An 1841 handcolored print of Buffalo Street, Rochester, N. Y.

Estate of Miss Alta Fisher
11 Volumes of "Vick's Illustrated Monthly Magazine" published by James Vick, seedsman, between 1878 and 1890. A doll and doll's carriage, trunk, bank and child's coaster, all Christmas presents of 1878. A china matchbox, clothes, personal accessories, 2 framed samplers of the 1830's and a hair wreath.

Mrs. Rudy Fried
Anthropological artifacts from the Brooksville area, Florida.

Mrs. Ellis Gay
A black bead belt, worn with 1885 gown. 2 handwoven linen towels and a Sherry Lehmann catalogue.

Mrs. Donald M. Gazley
A collection of doilies, lace, braids, trimmings, unfinished handwork, hair-pin lace tool, doll's dress, pillowslips, dresser scarves, patterns, quilting frame; a gown, aprons, nightgown, handkerchiefs, collar, shawl strap carrier, children's and baby clothes.

Mrs. Charles Green
2 Japanese napkin cases and a Japanese Christmas card.

Mrs. C. L. Hammond
3 pairs of eyeglasses and a Civil War saber.

Mr. Tom Harmon
1 adze to anthropology division.

Mr. Glenn C. Harris
Mexican pottery ladle and figurine.

Mr. Harry A. Haven
400 artifacts salvaged from shore near Fort Niagara, N. Y.

Mrs. Gordon Hazel
1929 pink wedding dress and hat.

Mrs. Bernard Held
19th century handmade bonnet.

Mrs. Elston Holton
2 Quassia cups.

Mrs. Frank M. Houston
A velvet, 1928 evening gown and coat.

Mr. Charles F. Hutchison
349 minerals, 20 books, 2 hammers, an ivory-sheathed dagger and a knife. Also an 1825 personal letter from General

Lafayette to Governor Clinton, framed in polished wood and glassed on both sides to permit viewing the address and the Albany postmark.

Mr. Frank William Kinsman
1 gray phase Screech Owl.

Miss Mary R. Leary
6 Valentines of 1966.

Mrs. L. H. Leonard
Puzzle, drawing forms, umbrella and toothpick.

Mr. and Mrs. Paul Mandina
4 boxed greeting cards.

Mrs. Glenn E. Matthews
1 ivory sculptured brooch.

Mr. Michelangelo Mazza
Photostat copy of his song: "Libertá per Cubal"

Mrs. Crawford McChesney
A pair of 1856 wedding stockings and a pair of gold knitting needles.

The Memorial Art Gallery of the University of Rochester
21 ostrich feathers packed in their original box, c. 1900.

Mrs. John C. Mitchell
A folding carpet chair.

Mrs. Anne S. Montgomery
A rosary of wooden beads and cross from St. Anne de Beaupré.

Mr. Leadley R. Morris
19th Century seeder with intricate gear mechanism.

Mr. Matthew Nelson
1928-30 G.E. radio in working condition and a 1922 toaster and iron.

Mr. and Mrs. T. Carl Nixon and Mrs. Arnold Moyer
Sample Rochester Langslow Fowler armchair in green leather upholstery—probably commemorating the airforce efforts of World War I—evident in the handcarved top designed by Martin Thume, designer for the Langslow Fowler Co.

Mrs. Bruce Patt
A collection of doilies, towels, liners, grainbags, handkerchiefs and clothing. A beaded bag, a cup and a fishing reel; 2 leaflets, a sewing case, 2 diaries, a leather book cover, a Valentine and a hem measure.

Mrs. Harold D. Phelps
Male and female Mexican pottery figures.

Mrs. David Ramsay
A 1930 pink satin negligee.

Mr. and Mrs. Fred Ratcliffe
Color photographs of 1873 doll "Mary" given by the family in 1943.

Mr. Tobias Roth
Articles of men's clothing for formal wear.

Mr. William Sabey
A drum from Haiti to the anthropology division.

Dr. Warren M. Shaddock and Mrs. Helen Shaddock Rockwell
A pair of spectacles from family of Lincoln or Montgomery, c. 1850.

Miss Wilma J. Shili
A pair of pince-nez eyeglasses, last year's car license plate, 1966 *Democrat* and *Times-Union* Newsboy calendars and 3 pairs of white kid gloves.

Mrs. Frank G. Smith
3 1965 calendars, McCurdy's and Forman's Christmas catalogues, a Pontiac catalogue of 1965 and a Gleason Works 100th Year Celebration Issue of the *Democrat and Chronicle*.

Miss Virginia Jeffrey Smith
An 1883 wedding dress, gloves, stockings and slippers.

Mrs. Gustave Strevel
A male Cardinal.

Superba Cravats, Inc.
Dacron paisley tie, representative of 1965 collection.

Mr. and Mrs. David S. Tappan
Over 100 specimens of minerals and rocks for the education division.

Clarence P. Thomas, M.D.
Ebony silver-tipped and banded baton

inscribed and presented to J. B. Kalbfleish, conductor, by the Rochester Philharmonic Orchestra, dated March 28, 1866. Also a program of the Inaugural concert of the Second Rochester Philharmonic Orchestra, March 28, 1923, at which occasion this baton was used.

Mr. W. Stephen Thomas
A wall calendar printed in Milan, Italy.

Mrs. I. Tishler
A bird's nest for the Nature Room of the education division.

Mr. George M. Tschume
1933 Book: "Edward Bausch"—an Appreciation by Edward R. Forman, City Historian of Rochester, N. Y.

Mr. Charles Wadhams
8 Copies of Peterson's Magazines between 1865 and 1875.

Miss Chung-Sook Won
Korean clothing, shoes and a child's moneybag.

Mr. Porter Van Zandt
5 projectile points to anthropology.

Mrs. Marie Van Zeilen Memorial Fund
"The Netsuke Handbook" of Ueda Reikichi, 1961 edition.

Miss Irene Westfall
A 1921 letter from George Cable to Amos T. Harrington with a clipping concerning Cable.

The Museum Shop

Summertime is outdoor hobby-time and your MUSEUM SHOP has an interesting collection of natural history field guides, kits for collectors, specimens too.

Books from astronomy to zoology. Exciting gifts for children and adults, imported items and unusual crafts.

So come to the MUSEUM SHOP when you visit the Museum.

10% discount to Museum Association members.

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to 5 p.m.**
Saturday, 10 a.m. to 4 p.m.
Sunday, 2 p.m. to 4:30 p.m.

Summer Hours:

(June, July and August)
**Monday-Saturday,
10 a.m. to 4 p.m.**
Closed Sundays

Michigan State University Museum

By **Grace L. Murray,**
Associate Professor of
Biological Sciences
Community College

Miss Murray spent one full sabbatical year and nine summers at Michigan State University studying microbiology and doing research in pseudo monads. The Museum as a resource and source of inspiration is reflected in her article.

In a small area of the extensive Michigan State University campus, enclosed by the West Circle Drive, near the residence of the University's statesman-president, Dr. John Hannah, and in the shadow of Beaumont Tower, stands the Museum, a red brick building, shaped like the letter "I," its entrance framed with ivy. Inside, its imposing staircase and marble halls suggest that one is entering the temple of the Muses.

That this beauty and spaciousness are of recent vintage, may be gathered from the report of Professor Walter Barrows,¹ that the Museum in 1893 occupied a 48 x 58 foot room in the Administration Building and was so overcrowded that its size and importance were "usually much underestimated." Nevertheless when in 1897, excursion trains brought groups to the Michigan Agricultural College campus, the Museum was one of the railroad's inducements.

One wonders how there could be room for visitors since the limited space contained over 80 mounted mammals, many of no mean size—bull moose, elk, deer, caribou, antelope, mountain sheep, local mammals, fish and birds, and the famous, horse "Old Buckskin," whose rider, Lieutenant Luther B. Baker, headed a party that captured John Wilkes Booth after the assassination of Lincoln. Barrows remarked that these collections, valued

in 1897 at \$15,000, merited a better setting.²

When in 1957 a new library was built, the dioramas of Leakey, Stack and Hope, depicting the development of man and his culture, and plant, animals and birds in their natural habitat groups, gradually took the places formerly occupied by books as the Museum moved into the vacated library — a building worthy of the treasures it was to house.

The Museum educates through the media of exhibits and research material, and by a new, separately housed, planetarium.

The simple charm of the 18th and 19th centuries in Michigan lives again in exhibits of early kitchens, bedrooms, parlors and general stores. A cooper's shop which did business in Leslie, Michigan, is being authentically reproduced. "Old Buckskin" is no longer to be seen, nor is he missed by the visitor enchanted with the talking model of the City of Tenochtitlan (1500 A.D.), awed by the antiquity of the Great Lakes, the age of each rock strata of which is depicted in a different color on a three dimensional map, or somewhat terrified when, while looking from the outside of a conventional-appearing diorama, he finds there has been a gradual, imperceptible change and he is inside an Egyptian tomb. But especially memorable is the col-

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Book Review

The Orringh Stone Tavern and Three Seneca Sites of the Late Historic Period. By Charles F. Hayes, III. Research Records No. 12 of the Rochester Museum of Arts and Sciences. (Published by the Rochester Museum Association, Rochester, New York, 1965. Pp. 82, photographs, drawings, maps. \$2.00.)

We have all been eagerly waiting for the next issue of the Rochester Museum's *Research Records*. This important series of contributions to scientific knowledge is used by scientists and students in many countries of the world. Now, after a lapse of several years, the Rochester Museum of Arts and Sciences proudly announces the arrival of number 12 in this series.

Charles F. Hayes, III, associate curator of anthropology, presents to us the story of the Rochester Museum's excavation of the Orringh Stone Tavern in the town of Brighton. He then compares the artifacts found there with those excavated several years ago on three Seneca sites near Canandaigua, Avon and Geneseo, New York. This excellently written report continues the tradition of high quality we have grown to expect of our museum's publications.

Mr. Hayes points out that there has been a rapid growth of interest in Late Historic Archeology in the last few years. The excavation of the Stone Tavern Site opens up a whole new chapter for those interested in Colonial Archeology. It is now possible to compare the trade artifacts found on late historic sites with those used by the pioneer settlers in this area. Perhaps now we will be able to assign a date to some of the artifacts found on late historic Seneca sites as well as pioneer house sites.

A major part of the report deals with the description and dating of kaolin trade pipes manufactured in Europe and exported in great quantities to the New World after 1650. The Indian and his European contemporary used the same kaolin pipes. Tavern sites and Indian villages yield large quantities of the fragments of these pipes. The author of this part of the report is Mr. H. G. Omwake, one of the foremost kaolin pipe authorities in this country. These pipe fragments are described in detail and methods of dating them are explained. Both the student and pipe collector will find this of great interest. This section of the report is important and long enough to have been a separate chapter.

There are many places in the text where the reader is puzzled and surprised by the statement "unfortunately these are no longer available for study" or "unavailable but were recorded." What has happened to some of the valuable historical specimens painstakingly excavated by the Museum's expeditions in the past?*

Glass beads were a popular trade item with the Indian and all late historic sites have many varieties. The description of the beads in this report, although carefully and accurately done, emphasizes the need of a definitive work on glass beads for Historic Archeology.

The trait tables are so complete that even chips of mortar and several not so late historic traits have been included. Some of these are flint arrowpoints, a flint drill, bone beads and awls, and a stone celt. These probably are the result of contamination in the intrusive Late Historic Pits. These pits were dug in ground containing scattered traces of older occupations.

A close study of the trait tables leads this reviewer to wonder about the date of the Big Tree Farm Site. It may very likely be as much as fifty years earlier than the proposed 1770 date. The high percentage of native pottery and pipes, and the lack of kaolin pipes is enough evidence to cast some doubt of its being Late Historic.

Mr. Hayes has made sure to give credit to all who have aided him in any way. This is certainly commendable. His first major scientific publication assures us the anthropology division of the Rochester Museum of Arts and Sciences is in good hands. We look forward to further research and many more publications by Charles F. Hayes, III.

—CHARLES F. WRAY, *Fellow of Rochester Museum*
Head of Mineral Dept., Ward's Natural Science Establishment, Inc.

**The location of these objects is not known; it is believed some were stolen, others may have been misplaced in the transfer of the thousands of objects from the old Edgerton Park location. Ed.*

Michigan State University Museum — Continued from page 101

lection of Chinese teapots of jade, cloisonné and enameled metals. Seventy-five thousand dollars worth of teapots! But who could put a prize on the Oriental ceremonies, charm, leisure, intimacy or philosophizing which were as much a part of their history as the steam which rose from their brew?

The research material is of two categories: 1) large collections of animals and skins which can be taken from the cases to nearby tables for study and 2) over 250,000 manuscripts and items including governmental and industrial records, all R. E. Olds automobile plans, diaries, writings from the Gold Rush era, numerous documents from the Civil War period and other social and business communications of the people of Michigan.

The Museum is not "a relic of the Barnum and Bailey days," but an actively growing, teaching institution. Its director, Dr. Rollin H. Baker, its assistant director, Dr. Leslie C. Brew, and their able staff are actively engaged in collecting material and mak-

ing it available for study and research. Classes visit exhibits as part of their learning activities. Scholars and other interested citizens find the manuscripts and specimens rich sources of information. The Museum not only contains valuable records of the past but, as a part of the University, is a vital force in disseminating culture.

Dr. Shao Chang Lee, professor emeritus and former chairman of the Foreign Studies Department at Michigan State University, who is a generous donor of Chinese treasures, said something about museums that is provocative of considerable thought. "One does not have to visit the countries of the world to see their choicest treasures. The best examples of the world's culture are to be found in the museums of America."

¹History of Michigan Agricultural College 1915, W. J. Beal, Ph.D., D.Sc., p. 126.

²Partially adapted from Professor W. B. Barrows (curator) in *Michigan Agricultural College Record*, Nov. 3, 1896, p. 249.

SPECIAL EVENTS

- May 4 (Wednesday) Preview of special exhibit **KENYA: A LAND IN TRANSITION** and reception in honor of Rt. Rev. Festo Olang, Bishop of Maseno, Kenya, and the Rt. Rev. George W. Barrett, Bishop of the Episcopal Diocese of Rochester. 4 p.m.
- May 7 (Saturday) Registration for **SUMMER YOUTH PROGRAM**—Nature, Science, Anthropology and History. 9:30-11:30 a.m. Also Monday through Friday (May 9-13) from 9:30 a.m. to 4:00 p.m.
- May 15 (Sunday) **GERMAN-AMERICAN WEEK**. Opening of exhibition in tribute to Würzburg, Rochester's twin city. 2-5 p.m.
- June 15 (Wednesday) Dedication of Memorial in the Garden of Fragrance to **MRS. THOMAS G. SPENCER** who planned and developed the garden of Colonial herbs and roses. 4 p.m.
- June 18 (Saturday) Opening of **GARDEN OF FRAGRANCE**. 2-6 p.m. Reception by Women's Council of the Rochester Museum Association. Mrs. William B. Webber and Mrs. N. Gorham Parks, co-chairmen.
- June 18 (Saturday) **46TH ANNUAL ROSE SHOW** sponsored by the Rochester Rose Society. 9 a.m. to 5 p.m.

COMING EVENT

- August 27 (Saturday) **27TH ANNUAL DAHLIA SHOW** sponsored by the Rochester Dahlia Society. 11 a.m.-5 p.m.

SPECIAL EXHIBITIONS

- 1st Floor **German-American Week**—Tribute to Rochester's twin city of Würzburg. Posters, maps, native costume; also objects from Museum collection. May 15 to June 15
- The World of Toys**—wooden animals, clowns, the circus, transportation models, furniture and dolls of yesteryear from Museum collection. To September
- Mezzanine **Dressed for Understanding**—dolls of many lands in the doll collection of the school service division reflect the occupation and culture of foreign lands. To June
- Exhibits for Young People**—science, history, anthropology. Mid-June through August
- Library **Garland of Flowers**—in song, poetry and decoration. May 15 to September 15
- 2nd Floor **Kenya: A Land in Transition**—the story of today's Kenya in pictures and also objects loaned by Rt. Rev. and Mrs. George W. Barrett and Mr. Ralph K. Dakin, F.R.M. May 4 to June 17
- Timekeeping**—calendars, clocks and how they work. Through June
- 3rd Floor **Religion and Rochester**—the Faiths and Denominations of various religions in the Rochester area (1817-1900). To September 15
- The Skill of the Whitesmith**—objects relating to the 10th wedding anniversary. On view opposite the Pride Tin Shop. To October 1
- Jewelry of the Three Kingdoms**—animal, vegetable and mineral. To August 1

MUSEUM HOURS

- 9 a.m. to 5 p.m. daily 2 p.m. to 5 p.m. Sundays
Closed on National Holidays and Sundays June through August

Meetings in the Museum

Academy of Science		
Astronomy Section	1st Friday, Oct.-June (No meeting in October)	8 p.m.
Botany Section	2nd Tuesday, Nov.-March	8 p.m.
Mineral Section	3rd Tuesday, Oct.-May (No meeting in December)	8 p.m.
Ornithology Section	2nd Wednesday, Sept.-June	
Antiquarian League	4th Tuesday, Oct.-April (No meeting in December)	8 p.m.
Antiquarian Study Group	2nd Friday, Oct.-June	1:30 p.m.
Aquarium Society	1st Wednesday, Sept.-June	8 p.m.
Burrughs Audubon Nature Club	2nd and 4th Friday, Nov.-Apr. (No meeting in December)	8 p.m.
Button Club	3rd Tuesday, Sept.-May	1 p.m.
Cage Bird Club	1st Thursday, Sept.-June	8 p.m.
Dahlia Society	1st Thursday, Sept.-June	8 p.m.
Genesee Cat Fanciers Club	1st Wednesday, Sept.-June	8 p.m.
Genesee Valley Antique Car Society	3rd Friday, Nov.-Apr. (No meeting in January)	8 p.m.
Genesee Valley Gladiolus Society	3rd Thursday, Sept.-June	8 p.m.
Genesee Valley Quilt Club	Last Thursday, Sept.-May (3rd Thursday, Nov.-Dec.)	10:30 a.m.
Hobby Council	2nd Tuesday, Sept.-May	8 p.m.
Jr. Numismatic Club	3rd Friday, Sept.-June	7:30 p.m.
Jr. Philatelic Club	1st and 3rd Thursday, Sept.-May	7:30 p.m.
Men's Garden Club	4th Wednesday, Sept.-June	8 p.m.
Monroe County Hooked Rug Guild	3rd Wednesday, Sept.-May	10 a.m.
Morgan Chapter, N.Y.S.A.A.	2nd Friday, Sept.-June	7:30 p.m.
Numismatic Ass'n	2nd and 4th Tuesday, Sept.-June	8 p.m.
Philatelic Ass'n	2nd and 4th Thursday, Sept.-June	8 p.m.
Rochester Rose Society	1st Tuesday, Oct.-June	8 p.m.
Seneca Zoological Society	4th Wednesday, Sept.-June (No meeting in June)	8 p.m.

Sunday Family Programs — Movies 2:30 and 3:30 p.m.

- May 1—The Shape of the Earth and Indian Hunters.
- May 8—Location: Niagara and Story of a Book.
- May 15—Germany: Three of Its Faces and The Rhine.
- May 22—Calgary Stampede and Bahama Holiday.
- May 29—Kid Stuff in New York State and Unusual Cameras.

Flower Shows

The 46th Annual Rose Show will be held at the Museum on Saturday, June 18, from 9 a.m. to 5 p.m. This exciting event is sponsored by the Rochester Rose Society. Arrangements for the show are under the direction of John P. Lehr, vice-president of the Rose Society.

On the same day, the Museum's Garden of Fragrance (Colonial Herb and Rose Garden) will open for the season. The Women's Council of the Rochester Museum Association will be hostesses from 2 p.m. to 6 p.m. Mrs. William B. Webber and Mrs. N. Gorham Parks, serve as co-chairmen. Mr. Philip B. Wickes, the head gardener, will answer questions and describe features of the garden.



The Rochester Dahlia Society is making plans for the 27th Annual Dahlia Show at the Museum from 11 a.m. to 5 p.m. on Saturday, August 27.

Mr. Raymond Lanzafame is chairman of the show and invites anyone who grows dahlias to participate. There are four sections: 0, for non-members; 1, novice for members who have never won a sweepstake; 2, amateur for members who do not grow more than 150 hills; 3, open to all; 4, seedlings. All sections compete for ribbons, trophies or awards. Prizes are awarded at the annual banquet Saturday, August 27 at 6 p.m. at the Museum.

Summer Program—1966

This summer the Rochester Museum of Arts and Sciences in cooperation with the Rochester Museum Association, is offering a series of activities for young people which is designed to give them insight into the worlds of nature, science, and anthropology and history.

An important part of this program are two workshops which will give young people the opportunity to pursue their interests in the fields of anthropology and history and in the natural sciences. These programs will run for a period of two weeks each, four days each week. In addition to research and study in the Museum, the group will go on several all-day field trips to further their knowledge.

Another innovation this summer is the addition of four pre-school groups. These groups will undertake activities which will introduce them to the wonders of nature and the fascinations of history. Registrations in the preschool program will be limited to one group per child.

As in past years there will also be a series of once-a-week courses for children from first through ninth grades. A staff of qualified leaders has been obtained to conduct these activities and we are looking forward to a meaningful summer for those young people who attend. Included in the activities to be offered will be groups on puppetry, folk dancing, crafts, geology, nature, anthropology and history.

All activities are limited in enrollment and will be filled on a first come, first served basis.

Alan R. Mahl *Assistant Director*



Do you know this path to beauty and relaxation?

It is the gateway to the garden of old-fashioned roses and herbs. Follow the marker around and to the rear of the Museum building.

This aromatic garden is planted in geometric beds following the early tradition of Tudor and Stuart gardens. Herbs in lovely lavender shades, mints to taste and an aroma to enjoy blend with 220 rose bushes that bloom from June through September. All edged with spicy, neatly trimmed boxwood and shaded on a hot summer day with lovely old trees.

There are labels for learning and benches for relaxing.

Garden of Fragrance. Open from 9 a.m. to 9 p.m., June-September.



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