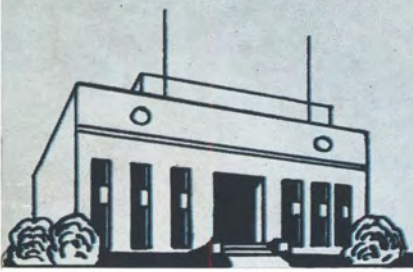

MUSEUM SERVICE

Bulletin of the
Rochester Museum of Arts and Sciences

VOL. 33 NO. 6 • JUNE 1960

Rochester— Science City

Should Rochester be called the Science City? This was a question asked thirty-two years ago in this publication and it can rightfully be asked again today. Certainly, our city possesses an unusual combination of industrial scientific development along with rich assets for investigation and research as well as unique potentialities for education and interpretation in science, not the least of which is the Rochester Museum's plan for expanding development. Writing in *Museum Service*, in 1928, Dr. Arthur C. Parker, museum director, observed, "Already the scattered elements are here . . . Research men, chemists, physicists and technical experts, specialists in medicine and surgery, skilled artisans and mechanics . . . Is there any reason why Rochester should not move forward in a concerted way to become the scientific capital of America?"

This statement seems even more fitting at the moment, for our city has become a scientific stronghold. Our material lives are based on the expanding frontiers of science, and science touches us at every point of our daily existence. Research in the pure sciences, especially physics, has increased its tempo. The fact that Rochester, because of the fame of its University and the department of physics, headed by Dr. Robert E. Marshak, has been chosen as the site of the biennial International Conferences on Higher Energy Physics is also highly significant.

Teaching of science, too, has improved at the elementary and secondary school levels. But beyond this, we find evidence of the increasing awareness of young people in the fabric and method of science, not merely in their classroom hours but in their leisure time. This spring several hundred high school students, many of them working outside school in home workshops and laboratories, produced an amazing series of exhibits demonstrating scientific principles and discoveries. These displays, many of them original and ingenius, were entered on a regional basis at the Brockport Science Fair. In the week following Easter, the Rochester Museum of Arts and Sciences displayed a selection of the top award winners among the entrants. Subjects showed a wide range of interest, varying from "The Mini-Mike" and "Vacuum Tubes in Action" to "Dynamic Symmetry in Nature" and "The Laws of Probability." One can see that a city and region which nurtures young people gifted with skills and science-mindedness reflects the trends which have been built over years.

At the present moment, the plans being developed for the creation of a greater Rochester Museum of Arts and Sciences, eventually to evolve into the Science Center of Rochester and Monroe County, indicates that this metropolis is a science city with unfolding wings.

—W. Stephen Thomas, *Director*

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Rochester Museum of Arts and Sciences — *Dedicated to a Better Understanding of the Laws of Nature and the Cultural Achievements of Mankind* — is administered by the Municipal Museum Commission for the City of Rochester.

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President's Message

When Members' Night was held at the Museum on April 20, Mr. George H. Hawks, Jr., president of the Rochester Museum Association, reviewed accomplishments of this voluntary body of citizens for the past year. It was an impressive account of what had been achieved in the sponsorship of courses, series of junior clubs, adult and youth lectures, research and acquisition.

In the course of his remarks President Hawks pointed out that—"Twenty-five years ago the Rochester Museum Association received its provisional charter as an educational institution from the New York State Board of Regents. Ever since, as a voluntary body of citizens, now numbering over 2,000, it has been assisting and promoting the Municipal Museum in a vital way.

"In reviewing the Association's events so closely tied with the daily activities of the Museum, we can see that our organization has come a long way in its beneficial career from small beginnings, for without it we *know* that the Museum would not be as strong or as widely used as it is."

And we liked his closing comment—"Perhaps, most significant is the pioneer work of the Planning Committee . . . with its plan for a Science Center."

Spring Planting in Our Herb Garden

Our gardener's problems in an herb garden are typical of those of any gardener—but larger. Since we have 104 varieties of herbs his problems are numerous. Plans must be made well ahead because many plants are annuals, some are biennials and, of course, the largest number are perennials. As you can see, Mr. Harry Cohalan and Mr. Aleksander Bielak are having a busy time.

The annuals must be grown from seed every year, the biennials must be grown from seed every second year. Even the perennials, although they may live for a long time, must be divided or pruned back or even re-grown from cuttings in order to keep them compact and attractive enough for the garden. A few which are not hardy here must be treated as annuals and grown every year from seeds or divisions.

In addition to the potted sweet geraniums, rosemary and sweet bay, we are slowly adding trees found in old gardens. We have Medlars (which give an apple-like fruit), the native wild crab apple and a few old varieties of apple—Yelow Transparent, Red Astrakhan and Smoke House. Since some of these were grafted by me we are all waiting to see what success we will have. Maybe we will have to ask an expert to bud these same trees in August or to re-graft them next March.

The new trees planted are *Malus coronaria*—Native Crab Apple grafted onto McIntosh apple root stock. Two are planted about 10 ft. north of the hybrid perpetual roses. *Mespilus germanica*—Medlars (4 as of 1960) are planted about 5 ft. north of hybrid perpetual roses. *Malus pumila*—Smoke House apples (2) grafted on McIntosh root stock—about 25 ft. east of center of herb garden. *Malus pumila*—Yellow Transparent apple planted about 10 ft. northwest of the west post of automobile gate in the south side of our 8 ft. fence. *Malus pumila*—Red Astrakhan apple planted about 40 ft. north of Yellow Transparent apple (i.e., 50 ft. north of west gate post to driving gate).

We have added 16 more varieties of old roses to our collection, bringing it to the total of 57 different kinds.

You may be interested to know that the following Annual Herbs are in our garden:

*Basil
Blessed Thistle
Borage
*Chervil
Flax
Fumitory
*Marjoram, Sweet
(perennial grown as annual)
*Nasturtium
*Orach
Pennyroyal
Sage, Meadow
*Sage, Pineapple
*Savory, Summer
Wormwood, Sweet

Our Biennial Herbs are:

Foxglove
*Parsley
*Sage, Clary
Woad

**These herbs are the ones most often grown in local gardens for food or seasoning.*

(Continued on page 96)

Vanishing Crafts

By Gladys Reid Holton, *Curator of History*

WE ARE always interested in early crafts—how useful things were made, as well as how they were used—at the Rochester Museum of Arts and Sciences. So it was of special interest to find a book entitled, "Vanishing Crafts and Their Craftsmen." This book, written by Rollin C. Steinmetz and Charles S. Rice, was published in 1959 by Rutgers University Press, New Brunswick, New Jersey. Some of the chapter headings are BLACKSMITH, WOOD CARVER, LIME BURNER, CANDYMAKER, CHARCOAL BURNER, CIGAR MAKERS, POTTER, WREATHS AND BASKETS, ARTIST WITH AN AX, ONE-ROOM SCHOOL, BUTTONS AND COMBS, GLASSMAKERS and ILLUMINATOR.

In picture and text, this book tells the stories of people who are heirs to the ancient crafts and have kept their heritage alive. The stories are basically about the individual's respect for and devotion to what he has learned to create with his hands and his skill. Of special interest is the challenge of the old-time craftsman in teaching his special know-how to a younger person so that a particular craft would not be lost.

In the Hall of Culture History there is an exhibit of useful articles made of horn. This craft is discussed in one chapter of the book. It tells of the industry and how combs, buttons and drinking cups were made during off-hours at Valley Forge. With the techniques handed down through the family it is possible to still make just as good buttons, just as good horn cups and combs as those George Washington's ragged soldiers bought with their Continental dollars. The authors also tell us that, "as early as 1821 Aaron Benedict, of Waterbury, Connecticut, was manufacturing horn buttons with the aid of machines to stamp, bore and polish." Some of the horn objects in our display are examples of work of contemporary craftsmen, such as several types of buttons designed to be worn on sport clothes. There are types of jewelry both ancient and modern, and an example of the archer's bow with the horn tip. This was highly prized in Robin Hood's day and may still be made by archery enthusiasts in the same way. In Colonial times, when muzzle loading muskets were used, the powder horn was a necessity. Several fine decorated and dated examples are displayed. There is a Scottish shepherd's crook, as well as shoe horns, combs and snuff boxes.

In the preface of the book, the authors state: "Today, people are living longer. They have more time at their disposal. The hands of millions of older Americans still hold knack and knowledge which they can pass along. Younger people have the desire to use their lesure in creative activity, as the social scientists say they should. In addition to the vast number of spare-time handworkers, there are many people who would be happier, more productive, and more prosperous working full-time with their hands."

American greatness once reposed in the skilled hands, clear eyes and proud hearts of its craftsmen. Today, in a world of mass production, the people written about in this fascinating book are still practicing old American arts and skills, and are truly keepers of an ancient heritage.

Fossils in Then Light and Now Light

By Carleton Burke, *F.R.M., Honorary Curator of Photography*

THE REAL and true fossil can only be a replacement, or the mold of a likeness in what is now stone, or something left over, dropped, lost behind, yet indicative of past life. All must have once been living, or must have come from the living. How much more living in time there was behind the first of the fossils we may never know, because for one thing an amoeba had not the qualifications for monumental immortality, and every primordial blob of life sparked and bi-sparked and died without a Cro-Magnon's ego or a Pharaoh's vanity. Yet in earth's ancient rocks there may still be found the little line written by algae, or even a contrasting spot marking the place where bacteria once held carnival with cosmic chemistry.

These things are not good for mortal man to view unless he can breast himself strong against the winds of space and hug himself warm before the shock of icy time.

When you were Cro-Magnon the sun was blinding, the moon strange, the stars mysterious unknowable and shadows haunting mischievously dire. Yet you found fire-light and on a cave's walls painted your gist of immortality. You were a boy-man, tying up, binding your ego time.

When you were Pharaoh you, man-child, blazoned your soul with the sun-disk, hawk winged and hovering immortal over the golden scintillating top plates of your pyramids. Your bones and your beard slept below, mummied and entombed in the blessed darkness.

And you now, Man-Man and Over Man, sun-chaser, planet-hound, star-hawk, will you ever be fossil—will your likeness ever be turned in some after light to reveal in terms of texture and replacement what once you were?

Is light the fossil of a star?

In the *now light* what does a fossil look like? First the light must find it after a darkness of four hundred million or so years. You strike a flat slab of rock on its edge. It cleaves at the line of its entombed fossil. It opens like a book and the story is there: the replacement together with its mold of a likeness in what is now stone. The *now light* shines upon it and reveals a contrast of color and a difference of stone texture which is all there is left over into time of what once lived and moved and enjoyed its swift moment of reproduction and died. The *now light* strikes it at an angle to reveal by delicate tracery and pattern and form what manner of life it was, that it may be classified somewhere in the pigeonhole knowledge of man. Suppose it has a jointed stalk and a top resembling a flower; it is not a flower, not even a lily, but an animal, a crinoid. Or it may have long or wide spread wings; and a child will gaze and shout, "See, it is a butterfly in stone"—but it is not a butterfly, not even an insect. It shows itself to be a mollusk-like thing, and because it was once arm-footed it is called a brachiopods. Sometimes an open

rock-book portrays with many fossils the intricate family and communal life that once took place eight hundred million years ago on a warm and shallow sea-floor. This may be reasonably simple compared to that which flourished after it in four hundred million years. Crinoids, brachiopods, trilobites, gastropods, sponges, cup corals and coralines, to mention but a few, lived all together in a close-packed environment. All had home burials in one mud level of existence where their mud became rock, the rock a slabstone cemetery in which these creatures wrote their own epitaphs.

All we can do now is look intently with a knowing eye, and possibly employ a scientific method whereby these fossils can be lifted from their stone pages and replaced on some semblance of their own times' stage down in the shallow waters of a Cambrian, Ordovician, Silurian or Devonian sea.

How shall we see them? What light did they have? What was their *then light?*

In Cambrian milleniums eight hundred million years ago the light filtering down through the waters of some shallow sea where life could live, might have been ruthlessly steely bright and deadly with radiant energy by day. By night there may have been precious little blessed darkness over long times, for the dull red glow of tremendous volcanoes harassed the waters with death fire and raining hissing pumice. The light must be blue and silver, orange and purple.

In Devonian times, a period many millions of years later, the waters had changed, continents had moved, the atmosphere had grown denser near earth and extended higher towards the sun. The sun waxed and waned not so pitiless daily. Yet nightly at times there were still those orange bursts and red glows. Vulcan was not yet an old man. The colors were softer and the light less deadly. Something is happening on the land. There is a new color and it will be green. So the colors are blue and blue-green and blood-orange and violet. Such may have been the passing *then light* of the fossil. How can we know, what can we know for sure? Is light the fossil of a star?

Slowly and finally there would be dawn-light, noon-brightness, twilight and after-glow, moonlight, and once in awhile the peace of blessed darkness. For the creature the light would die. Over its fossil darkness would reign for many million years.

As this home-planet Earth turns and the daylight through changes reveals the features of the land, so, if you break to the light the fossil, you must turn it, angle it, shift it in the sun or in one of the sun's lesser lamps; you must hold it just so and gaze on it long because in its *now light* the fossil may tell what its creature life was like in the days of its own *then light.* And you will be proud and humble as you gaze, living under the same sun.

COVER PICTURE—An original specimen of an eurypterid from the Upper Silurian embedded in Bertie limestone. This is displayed in the case of typical fossils of the Middle and Upper Silurian Period. Reconstructions are shown in four Devonian-Silurian dioramas in the Undersea Alcove. This alcove is dedicated to George H. Clark, donor of the dioramas, and was completed in 1946.

The Troubled World and The Forgotten Lessons of History

By John R. Williams, M.D., *Chairman, Board of Commissioners*

ANTHROPOLOGISTS estimate that man, genus homo, has been on earth upwards of 500,000 years during which time he has undergone much skeletal development. During the past 25,000 to 35,000 years, since Cro-Magnon era, however, there has been little significant change in his physique. The size of the skull and its brain capacity have not altered, nor have the lobes or convolutions of the brain increased.

The historical period of man extends back upwards of 10,000 years, in which time archeologists and historians have had an opportunity to evaluate his mental abilities and creative skills. Their studies reveal that his moral, social and political philosophies have not changed significantly. The course of his thinking has altered from time-to-time, but the motivating factors that determine his character and govern his conduct toward his fellow man have not altered appreciably. As primitive man reproduced his kind in various parts of the world, races and tribes of people arose, differing physically and mentally in many ways. The differentiations, such as color of skin, shape of skull and physical stature may have been due to many causes; such as, genetic status, inbreeding and isolation. Certain it is that environment played a large part in both physical and mental variations. These factors could well account for such racial groups as the Mongols, peoples of India and the numerous cultures of Europe.

The mentality of early man was influenced by the violence of the elements, the destructiveness of disease and other calamities. He readily became a victim of fear. Lacking an adequate explanation, his undisciplined mind conjured up such beliefs as the mystical and the supernatural. This afforded to natural leaders the opportunity for both mass guidance and exploitation. In some instances this directive took the form of a cruel despotism, in others it was an unique beneficent personality of wisdom and creative ability. The pattern of life of many of these leaders was similar, an obscure birth, little or no formal education and no previous training. Leading a simple life, often that of an ascetic, he would start out as a novice, talking to all who would listen. Glamor and pageantry were not a part of his technique. At first he was ridiculed and scorned, then later widely accepted. The next step in the evolution of the new beneficial philosophy would be for his followers to organize into sects for the purpose of promoting this better way of life. The medium of approach, invariably, was some form of social or religious philosophy. So far reaching were these teachings, in many cases, that they were handed down to future generations as an accepted national faith or racial policy.

The fate of the early sage or founder did not always have a happy ending. Even though he may have built up a large following and had been accorded high honors, dissidents often arose, with enthusiasm giving way to complacency. The dissenter then assumed control, the teachings were discredited

and the heroic leader repudiated and dishonored. If not summarily executed, he would spend the remainder of his life in ignominy. Years pass. The verity and value of his teachings are rediscovered; new generations realize their priceless worth. The forgotten leader is reborn. To give him the stature of a glorious Messiah or Prophet, his second birth would be a miraculous one, a virgin birth. He thus becomes a divinity, and is so worshipped. But the original teaching methods of simplicity and forbearance are replaced by ritual and pageantry.

For centuries mankind has been persistent and often adamant in his belief that racial superiority and nationalism are divinely bestowed, that might makes right and that freedom and human rights are not equally applicable to all peoples. The purpose of this paper is to point out that the problems which beset the world today are the same as those which troubled man thousands of years ago, and also that solutions proposed by these ancient sages and philosophers are pertinent and worthy of serious study by our present world leaders. A few of these are briefly cited out of the many that could be named. Details as to their careers, teachings and contributions should be sought in authoritative historical records.

Mo Ti, 500-420 B.C., a Chinese saint, founded a religion comparable to both Christianity and Buddhism. In its day it had wide influence but was lost to the world for over 2,300 years. Recently it was rediscovered by Chinese scholars. His wisdom and phophetic point of view are evidenced in the following: *Mo Ti sounded a warning to all nations that border on the Pacific Ocean, indeed to the nations of the earth, to be wary of aggressors and to take precautions to ensure their safety and security.* He taught that the only satisfactory solution for international problems was the doctrine of love and brotherhood. At the same time, he believed, as did Theodore Roosevelt centuries later, in adequate self-defense. A famous quotation throws light on his philosophy—"Robbers love their homes, but not the homes of others. Kings love their own countries, but not others, so they fight. Where there is mutual love there is peace; where there is mutual hatred there is war." Another quotation—"Of all sins, attacking a country in war is the greatest. People who talk of morality and virtue but do not try to abolish war are concerning themselves with small things, not essentials." Mo Ti surely was a far-seeing statesman.

Buddha, the great leader of India, was born 563 B.C. in a home of wealth and influence instead of poverty and obscurity as was the case with most of the sages and saints of these early days. Up to thirty years of age he lived a life of luxury and idleness. Then suddenly his whole philosophy of life changed to one of action and helpfulness. One of his many achievements was to found a religion which has endured, the essentials of which today are the abiding faith of at least one-fifth of the population of the earth. It is largely a philosophy of personal conduct. He recognized human frailties and suggested in numerous maxims and writings that most of the misery and unhappiness that man undergoes is due to unsound thinking and unwise practices. He, it was, who said, "Hear no evil, speak no evil and see no evil. No one can

obtain real peace of mind who lives by taking advantage of others." H. G. Wells, the English historian, assesses the contribution of Buddha to mankind as the nearest approach to a Kingdom of Heaven on Earth this world has ever seen. It embodies three important doctrines—*the sacredness of all life, the importance of tolerance and the value of man's inner life.*

KING ASOKA, 273-233 B.C., of India, was a follower of Buddha. He should be numbered among the great humanitarians of mankind. For his pioneering work in social uplift, education, hygiene, religious freedom and last, but not the least, soil conservation, he is numbered among the first six great men of history. He was perhaps the first and only ruler to make pacifism really work. He renounced war as a policy and substituted for it one of peace and prosperity which was effective.

Among the really great men of antiquity was MARCUS AURELIUS, who in spite of his faults was one of the greatest of Roman emperors. SOCRATES, 470-399 B.C., the Greek stoic and philosopher, was another.

SOCRATES, too, must be rated as one of the wisest men of all time. One writer sums up his contributions to humanity as follows: "For many of the principles that guide modern science, many of the fundamental ideas behind our present form of government, some of the educational methods used at the present hour in our schools and colleges, can be traced back to Socrates. All informed citizens ought to be as familiar with the life of Socrates as they are with that of Jesus Christ." Another historian states that, "He was the originating genius of common sense, the great teacher of morals and intellectual veracity, and one of the profoundest influences in Anglo-Saxon civilization." The quotation attached to Stanley Gordon's fine sketch of Socrates reveals the freshness and pertinence of his point of view.

The writer makes no pretense of being a historian or an expert in the fields of government. In the preparation of this text he has been greatly helped by the reference department of the Rush Rhees Library of the University of Rochester. He is particularly grateful to Dr. David Rhys Williams for his masterful book, "World Religions and the Hope of Peace." While Dr. Williams' approach to the subject has been from the viewpoint of religion, his social-political views are those of a statesman.

In late years the mind of man has deviated from the earlier processes of thinking to the fields of science and industry, but it by no means follows that his thinking is sounder or his conduct of human affairs more enlightening or progressive. It is within the truth to say that the causes which are now upsetting the world are the same as they were 3,000 years ago and that the methods by which we are attempting to correct them, that is by force, will fail as it has done all through the centuries. It is encouraging that many statesmen and scholars in all parts of the world today believe that the only philosophy that offers any hope of success is that which was suggested by these sages of long ago. Numbered among these is our beloved president, Dwight D. Eisenhower, who has taken an unswerving position of leadership in the Titanic struggle now going on.

Ours is, indeed, a troubled world and we are both forgetting and ignoring the lessons of history.

All on a Summer's Day

By Helen R. Gordon, *Librarian*

BEFORE the automobile made possible a picnic on a moment's notice, preparations for summer outings were made and planned a long time ahead, for transportation was not so simple. However, there were many places around Rochester that could be reached by trolley, carriage or boat and were the scenes of summer outings. With Lake Ontario and its many beaches to be reached by trolley, Sunday School and family picnics were held as far away as Manitou Beach. Trolleys often made special runs for such large groups. Ontario Beach Park at Charlotte, more easily accessible, had bath houses, a large hotel, merry-go-round, dancing pavilion, shooting galleries. The Windsor Ferry could be taken across to Summerville where summer camps were first built along the lake during the 1860's. By 1872 most of the lots along the lake were sold. Tents with wooden floors gave the name of White City to one section and many families spent the summer there to escape the heat.

Irondequoit Bay has been a resort area for many years. A steamer ran down the river from the upper landing near Maple Grove to Charlotte and around to the bay and return. There were many resorts built up along the bay. The Glen Haven Railroad brought passengers from Main Street down to Glen Haven, then along the bay to Sodus. In the spring it was especially popular and called the Apple Blossom Special because of the many orchards along the way. To make the line more popular the Glen Haven Hotel was built. There was a merry-go-round, open-air theater and fireworks in the evening as added attractions. Newport House was a very early bay resort and could be reached by steamer. Many clubs built cottages along the Bay and were used by members for fishing—like Birds and Worms built in the 1870's.

One of the favorite places for a Sunday in the summer was the Glen House built in the 1870's on the river below Driving Park Avenue Bridge. It became very popular after an elevator had been built to eliminate the long climb. Boats were available for fishing, and an excursion steamer carrying 700 ran down the river to Charlotte. Falls Field, on the east side of the river overlooking the upper falls, was also a favorite spot for picnics but later was the cite for the circus, balloon ascension and other commercial enterprises.

Driving Park Association, a member of Grand Trotting Circuit, was a favorite of racing fans. It was also used for agricultural fairs, Buffalo Bill's Wild West Show, and in 1880 Maud S. broke all previous records before a tremendous crowd of more than 15,000.

Bicycling became popular in the 1880's and a Bicycle Club was organized. A cinder bicycle path was built to Charlotte and eventually there were nine bicycle clubs.

Although Rochester was backward about establishing parks, probably because there were so many places around the city that were readily reached, by 1888 a Park Commission had been formed and the gift of twenty acres of land, which later became Highland Park, had been accepted from Ellwanger & Barry. Seneca, Durand Eastman, Genesee Valley Park, as well as all the

small parks, Jones Square, Cobb's Hill, Washington Park, provided restful places all around the city. Band concerts were revived in 1901 and the Park Band Concert each week at Maplewood, Seneca or Genesee Valley Parks, was a pleasant way to spend a summer evening.

Sunday School picnics were a highlight of summer. Strawberry Socials and Lawn Socials put on by the Ladies Auxiliaries of the churches, Fourth of July Celebrations with wonderful displays of fireworks, parades on Memorial Day. Water Carnivals at Genesee Valley Park, all added to the simple pleasures of a summer's day.

During the summer an exhibit in the reading room of the library of pictures, advertisements, tickets, programs of these resorts will recall pleasant memories of long ago summers in Rochester.

Herb Garden — *(Continued from page 88)*

Our garden is at its best from about June 20, when the old roses are in full bloom, until frost time in the fall. Of course some herbs look flourishing from May 1 on but new annual and biennial plants are put in the beds after the middle of May and take about a month to attain exhibition size.

We hope that you will all visit the garden from time-to-time, not only to see the plants in their various stages but to see the additions of wild flowers and bird-attracting trees and shrubs in other parts of the grounds.

Warblers

The Wood Warbler family is the second largest family of North American birds. Only the Sparrow family is larger.

A few of the Wood Warblers nest here. The most common found nesting locally are the Northern Yellow-throat, Yellow Warbler, Ovenbird, Black-throated Green Warbler.

Most of them nest in the northern mountains and in Canada. They often nest in bogs in Canada.

In late summer our Warblers start their southern migration. Most of them spend their winter in the Caribbean Islands, in Central and South America. They travel for the greatest part at night, in large flocks.

In spring, warblers show butterfly tints of yellow, orange, red, chestnut brown, green and blue, as well as black, white and shades of brown and grey. In fall, their bright colors are missing or faded and their patterns are dull and protective.

In the spring the male warblers of each species have distinctive and quite melodious little songs. A few, such as the Chat, the Ovenbird and the Yellow-throat, have quite loud insistent songs and are familiar background music during vacation days.

All are insect eaters.

—Edward T. Boardman, *Assistant Director and Curator of Natural Science*

Poisonous Plants

By Babette Brown Coleman, *F.R.M., Assistant Professor of Botany, University of Rochester*

LEST anyone feel too secure in his non-sensitivity to plants that may be poisonous to touch, let me report that never seriously bothered by poison ivy in my life, I have treated it with respect. I have never feared to walk through a patch of it and never more than casually sought to avoid it in my work, study or rambling in the field. This spring on our first balmy Sunday, March 26, the woods lured me and I went exploring. I brought home with me, although it did not dawn on me for a couple of days, a good old-fashioned case of poison ivy. In the very midst of this, the editor of *Museum Service* asked me to write something about poisonous plants for the bulletin. It is with real humility that I offer the following and urge that you, the reader, never underestimate the power of a poisonous plant.

Of the more than 300,000 kinds of flowering plants known to man, relatively few have poisonous properties. A detailed investigation will reveal that among poisonous plants may be included those causing a dermatitis when touched, those poisonous for human beings and animals to eat for a variety of reasons, those causing undesirable flavors in various products and those causing mechanical injuries. Particular interest, as the growing season advances and everyone will be spending more time in the out-of-doors, centers in plants which cause skin irritations or a dermatitis when any or several of their parts come in contact with the human skin. Some plants affect many people from lightly in all degrees to severely; some affect only a few persons. An individual sensitive at one time to the toxic effects of a plant, may at another period be relatively insensitive. Because conditions in the human body vary from year-to-year and season as do also conditions in the plant body, it is well to be aware of the fact that a number of common plants around Rochester do cause misery in many people annually. Better still, it is entirely desirable to make the acquaintance of these troublemakers in order that one may avoid any possible entanglements or contacts with them. Even when one thinks he knows these plants, it is not always possible to escape them because of their inconspicuous nature during the winter or season of dormancy. In the summer they merge into the general pattern of verdure in a woodland, thicket, pasture or meadow. At times during the year their attractiveness in leaf, flower or fruit weakens one's better judgment and one touches them.

Most common and serious offender is, of course poison ivy (*Rhus radicans* L. of Fernald's eighth edition of *Gray's Manual of Botany*). It may grow as a short shrub or a luxuriant climbing vine with many tiny aerial roots holding it to its support. In either case the alternately arranged leaves are three-parted. "Leaflets three, let it be" is no idle warning. The three parts of the compound leaf of poison ivy show striking variability in that they are red in color when young and first expanding from the winter bud, and shiny or dull green when mature. The edges of the leaflets may be with-

out indentations or they may be toothed or apparently lobed. This characteristic accounts in part for some of the different common names given to the plant in different localities. One of the best reasons for preserving our native vegetation in undisturbed and natural areas is to keep poison ivy out. It may not compete so successfully if introduced into a plant community in which the competition for light, water, minerals and space by the existing members of the community has reached a dynamic balance. Once this condition is disturbed by agriculture, lumbering, bulldozing or other catastrophic disturbances, undesirable plant invaders may enter. Witness the poison ivy along farm fence rows and the edges of woodlands.

Rhus radicans L. Poison ivy
Drawing by Erik Hans Krause

Late in the summer and during the fall, clusters of small, white, waxy and berry-like fruits should assist the outdoorsman in avoiding poison ivy. During these times of the year its relative, poison sumac (*Rhus vernix* L.), may also be shunned for the same reason. Much less common than poison ivy and limited to swamps and somewhat boggy situations in its distribution, poison sumac is a handsome shrub. It is rarely seen except by bog-trotting ornithologists, naturalists and botanists who should abstain from grasping its spreading branches with their gray bark and alternately attached compound leaves. The latter have 7-13 leaflets on a red leaf stalk which serves as a warning to the careful observer. Anyone seeking colorful foliage in the fall should think twice before collecting it from a beautiful shrub in a bog or swamp.

Among the other dermatitis-producing plants in the Rochester area the parsnip (*Pastinaca sativa* L.), introduced as a vegetable for its edible roots, has escaped long since from gardens and has become a weed of roadsides and waste places. It is often around ponds or on the gravelly beaches of lakes where bathers may come in contact with is pinnately compound leaves or flat-topped clusters of small yellow flowers.

In recent years another member of the parsley family (*Umbelliferae*), probably brought into the city as a large and showy ornamental, has also escaped. First noticed along both sides of Elmwood avenue in the Lilac Drive section and eastward, before the present building surge, *Heracleum mantegazzianum* Somm. and Levier has since been reported from other sections of Rochester and its environs. A somewhat recent inquiry about it came from Naples. Under favorable conditions this perennial plant attains twelve feet

in height although its stems remain herbaceous. Its flat-topped umbels of minute white flowers may be four feet in diameter and its compound leaves three feet long. Small boys playing near spots where it has gained a foothold, attracted by its size and succulent stems, have used them in their games and sport much to their sorrow.

Other cultivated plants, also used ornamentally, have featured as culprits in cases of moderate to severe dermatitis in susceptible individuals. Several of them and their offending organs are as follows:

Gas-plant—*Dictamnus albus* L.—Rue family—leaves and seed pods
Primrose—*Primula obconica* Hance—Primrose family—leaves
Wafer ash—*Ptelea angustifolia* Benth.—Rue family—leaves*
Common rue—*Ruta graveolens* L.—Rue family—leaves
Snow-on-the-mountain—*Euphorbia marginata* Pursh—Spurge family—milky juice
Oleander—*Nerium oleander* L.—Dogbane family—leaves

In this category the fleshy ripe seeds of the maidenhair tree (*Ginkgo biloba* L.), belong. This tree, a gymnosperm rather than a flowering plant, produces its staminate or pollen-producing flowers on one individual, a "male" tree, and its ovules which mature into seeds on a different individual, the "female" plant. Male plants alone cause no trouble, and the same obtains for female plants. Where the two types occur in the same area, female plants do produce seeds in abundance, the outer coats of which become thick and fleshy. Occasionally persons picking up the crushed fleshy seeds, or attempting to remove the fleshy portion from the hard portion of the seed coat, have been known to suffer very severe skin poisoning.

Deadly nightshade is the name often mentioned in connection with poisonous plants. The nightshades are not plants poisonous to touch but do produce toxic effects in persons who eat their berries. The true deadly nightshade (*Atropa belladonna* L.) is uncommon except in the occasional medicinal garden or in cultivation as a drug plant. Its black berries when eaten have caused cases of poisoning. Erroneously called deadly nightshade, a common widespread and abundant weedy vine, the European bittersweet (*Solanum dulcamara* L.) produces bright red, attractive juicy berries in the summer. Children should be discouraged from sampling these luscious-looking fruits as they may cause poisoning if eaten in large quantities.

Solanum dulcamara L. European bittersweet (Nightshade family)
Drawing by Erik Hans Krause

Among the native plants of our area, there is a peculiar correlation between beauty and toxic properties. Inflammation and blisters on hands and arms have often been the lot of individuals coming in contact with the wet leaves and stems of some of the lady's-slippers, especially, the showy lady's-slipper (*Cypripedium reginae* Walt.), the yellow lady's-slipper (*Cypripedium calceolus* L.) and the mocassin flower or pink lady's-slipper (*Cypripedium acaule* Ait.). As Professor Muenscher, of Cornell University, once wrote, "If it were generally known that they may cause a severe dermatitis, they might be left undisturbed and in less danger of extermination."†

*It was a letter from Mr. Richard E. Horsey, then superintendent of Highland Park, to Professor Walter C. Muenscher, of the department of botany, Cornell University, relating that some of his gardeners working near the *Ptelea angustifolia* Benth. in Highland Park had acquired a severe dermatitis which first aroused my interest as a student in dermatitis-producing plants.

†I well remember the Cornell botany assistant who needed some orchid roots for an investigation which he was conducting and decided to collect these from some wild plants. He spent more than a week in the hospital after the encounter with his hands, arms and face beyond human recognition.

Anthropologists' Activities

Dr. Alfred K. Guthe, curator of anthropology, was elected president of Lewis Henry Morgan Chapter of New York State Archeological Association and Mr. Charles F. Hayes, III, junior anthropologist, was elected secretary. Other officers include Mr. George B. Selden, of Pittsford, N. Y., vice-president and Mr. Thomas W. Hewett, Jr., of Byron, N. Y., treasurer. Officers will serve for a term of two years and were elected on March 11.

Dr. Guthe and Mr. Hayes attended the annual meeting of the New York State Archeological Association in Rhinebeck, N. Y., on April 2 and the 25th annual meeting of the Society for American Archaeology at Yale University, May 5-7. At the latter meeting Dr. Guthe served as chairman of the session on northeastern archeology. Dr. Guthe and Mr. Hayes were elected vice-president and secretary, respectively, of the New York State Archeological Association.

At the April meeting of Lewis Henry Morgan Chapter, Mr. Hayes presented an illustrated account of the 1957 Archeological Survey of the Glen Canyon region, Southeastern Utah.

Dr. Alfred K. Guthe will serve as a member of the faculty for the course on "Archaeology for Amateurs." This will be presented in the first week, July 3-9, of the 13th annual Seminars on American Culture of the New York State Historical Association at Cooperstown, N. Y. Dr. Guthe will explore three areas—Archeological History, Field Techniques and Laboratory.

Operation Palette

An exhibit of 120 documentary combat paintings will be displayed by the United States Navy at the Museum from June 7 through June 12. Hours of the show during this period will be Tuesday, June 7, from 9 a.m. to 9 p.m.; Wednesday and Thursday, June 8 and 9, from 9 a.m. to 5 p.m.; Friday, June 10, 9 a.m. to 9 p.m.; Saturday, June 11, 9 a.m. to 5 p.m. and Sunday, June 12, 2 p.m. to 5 p.m.

"Operation Palette" is a traveling exhibit of combat art works in oil, water colors and other techniques. It is on national tour and this is the first time it has been made available in this area.

These paintings represent the works of specially commissioned combat artists on all World War II war fronts, during the Korean action, in the Mediterranean and off the China coast. Most are famous paintings by prominent American artists and many have been reproduced in book form and in national magazines. They were selected from the Navy Department collection of more than 3,000 action paintings and on-the-scene drawings.

The illustration pictured here is a watercolor by Hugh Cabot of the Capitol Building, in Seoul, Korea. The pagoda-like building with snow-covered tiles is the old palace of a queen, who has given way to democracy. Behind it looms the shadowy outline of the capitol building of the new republic. In the foreground a stone figure sculptured in the queen's era and precarious survivor of the modern war, observes both structures.

For the Rochester area showing, "Operation Palette" is jointly sponsored by the local Naval Reserve Training Center and the Rochester Museum of Arts and Sciences.

News and Events . . .

THE WOMEN'S COUNCIL of the Rochester Museum Association held its annual meeting on May 23 at the Museum. Officers for 1960-1962 and sixteen new members will be named in the September issue of *Museum Service*. There will also be a report of the Doll House project by Mrs. George O. Everett, chairman.

RECOGNITION DAY for all Museum Volunteers was held at the Museum on May 24. The occasion marked a get-together and an expression of appreciation. Citations of Merit were presented to four volunteers who had contributed of their time and talent in the service of the Museum. Five students, who fulfilled the requirements and served the training period, were awarded Counselor Certificates. A full report and the names of the recipients will be included in the September issue of this bulletin.

1960 JUNE • JULY • AUGUST • CALENDAR

JUNE

1 Wednes. Rochester Aquarium Society — 8 p.m.

2 Thursday Rochester Dahlia Society — 8 p.m.

3 Friday Rochester Academy of Science—Astronomy — 8 p.m.

4 Saturday **Registration for Summer Progam — Junior Museum Activities — 9 to 11:30 a.m.**

7 Tuesday Rochester Numismatic Ass'n — 8 p.m. Rochester Rose Society — 8 p.m.
OPERATION PALETTE by the United States Navy — 9 a.m. to 9 p.m.

8 Wednes. Rochester Academy of Science - Ornithology — 8 p.m.
OPERATION PALETTE by the United States Navy — 9 a.m. to 5 p.m.

9 Thursday Junior Philatelic Club — 7 to 9 p.m. Rochester Philatelic Ass'n — 8 p.m.
OPERATION PALETTE by the United States Navy — 9 a.m. to 5 p.m.

10 Friday **OPERATION PALETTE by the United States Navy — 9 a.m. to 9 p.m.**

11 Saturday **OPERATION PALETTE by the United States Navy — 9 a.m. to 5 p.m.**

12 Sunday **OPERATION PALETTE by the United States Navy — 2 p.m. to 5 p.m.**

16 Thursday Genesee Valley Gladiolus Society — 8 p.m.

17 Friday Junior Numismatic Club — 7:30 p.m.

20 Monday **MUSEUM CLOSED — Building Repairs**

21 Tuesday Rochester Numismatic Ass'n — 8 p.m.

23 Thursday Junior Philatelic Club — 7 to 9 p.m. Men's Garden Club — 8 p.m
Rochester Philatelic Ass'n — 8 p.m.

JULy

4 Monday **INDEPENDENCE DAY — MUSEUM CLOSED**

AUGUST

13 Saturday **13th Annual Gladiolus Show — 2 p.m. — 9 p.m.**
Presented by Genesee Valley Gladiolus Society

SUMMER HOURS

Daily — Monday through Saturday — 9 a.m. to 5 p.m.
Closed Sundays (June, July and August) and
Holidays (July 4 and September 5)

GARDEN OF FRAGRANCE

Colonial Herb and Rose Garden
Open Daily, including Sunday — 9 a.m. to 9 p.m.
(Walk-in Garden entrance at 687 East Avenue. Follow the white fence.)

——— *All bookings subject to change and substitution without notice.*

Operation Palette - - -

An exhibit of Documentary Combat Paintings

Presented by the United States Navy

Tuesday and Friday
June 7 and 10 — 9 a.m. to 9 p.m.

Wednesday, Thursday and Saturday
June 8, 9 and 11 — 9 a.m. to 5 p.m.

Sunday, June 12, 2 p.m. to 5 p.m.

Open for the Season - - -

GARDEN OF FRAGRANCE

Colonial Herb and Rose Garden

Walk-in Garden Entrance
687 East Avenue — follow
the white fence

GARDEN HOURS
Daily, including Sunday
9 a.m. — 9 p.m.

Flower Show - - -

13th ANNUAL GLADIOLUS SHOW

Saturday, August 13 — 2 p.m. to 9 p.m.
Sponsored by the Genesee Valley Gladiolus Society

SPECIAL EXHIBITIONS

1st floor — **OPERATION PALETTE** — ***documentary combat paintings presented by the United States Navy.*** *On Display June 6 — June 12*

2nd Floor — **COLLECTORS' DELIGHT** — Selections from our Culture History Collections. *On display June 6 — September*

THE BIRDS AND THE BEASTS — an exhibition of animal and bird portraits. Silk Screen prints by Charles Harper and watercolors by Charles Culver from the Ford Times Collection of American Art. *On display to June 30*

Library — **ALL ON A SUMMER'S DAY** — recreation of not so long ago in pictures, posters, tickets, programs and cards. *On display June - September*

3rd Floor — **TWO CENTURIES OF DOLL HOUSES** — A selection of doll houses from the collection of Mrs. Homer Strong.

MADE OF HORN — objects include buttons, shepherd's crook, bow, spoons, powder horns, jewelry.

Tide Pool near Anemone Cave Cliffs

Mt. Desert Island, Maine

Diorama in the Hall of Natural Science

A dipper of ocean life in a modern tide pool. Actual specimens and casts and models of sea creatures and plants. Many are 20th century models of forms that were common in the seas covering Rochester in the Silurian and Devonian periods 330 and 290 million years ago, portrayed in the alcove of fossil seas.