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New York State Museum Bulletin

Published by The University of the State of New York

No. 293

ALBANY, N. Y.

June, 1932

NEW YORK STATE MUSEUM
CHARLES C. ADAMS, *Director*

TWENTY-FIFTH REPORT OF THE DIRECTOR OF THE DIVISION OF SCIENCE AND THE STATE MUSEUM

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THE UNIVERSITY OF THE STATE OF NEW YORK
1932

THE UNIVERSITY OF THE STATE OF NEW YORK

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Visual Instruction, ALFRED W. ABRAMS Ph.B.

New York State Education Department
The New York State Museum, March 16, 1931

The Honorable Frank P. Graves
President of the University and
Commissioner of Education

Sir: I beg to submit herewith the report of the Director of the New York State Museum for the period from July 1, 1929, to June 30, 1930.

Very respectfully

CHARLES C. ADAMS
Director



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THE LEGAL STATUS OF THE NEW YORK STATE MUSEUM

All scientific specimens and collections, works of art, objects of historic interest and similar property appropriate to a general museum, if owned by the State and not placed in other custody by a specific law, shall constitute the State Museum. [*Education Law*, § 54.]

The Librarian of any library owned by the State, or the officer in charge of any state department, bureau, board, commission or other office may, with the approval of the Regents, transfer to the permanent custody of the State Library or Museum any books, papers, maps, manuscripts, specimens or other articles which, because of being duplicates or for other reasons, will in his judgment be more useful to the state in the State Library or Museum than if retained in his keeping. [*Education Law*, § 1115.]

THE FUNCTIONS OF THE STATE MUSEUM

"The Museum is the natural scientific center of the State government; it is the natural depository of all the material brought together by the state surveys; it is the natural custodian of all purely scientific state records; it is the natural center of the study of the resources of the State as a political unit; it must maintain its capacity for productiveness in pure scientific research—pure science has been the justification of the State Museum from the beginning of its history. * * * In brief, the distinctive sphere and scope of the State Museum corresponds with the scientific interests and welfare of the people within the geographic boundaries of the State.

"The truest measure of civilization and of intelligence in the government of a state is the support of its institutions of science, for the science of our time in its truest sense is not the opinions or prejudices, the strength or weakness of its votaries, it is the sum of our knowledge of nature with its infinite applications to State welfare, to State progress and to the distribution of human happiness."—*Henry Fairfield Osborn, an address delivered at the dedication of the New York State Education Building, October 15, 1912.*

THE FUNCTIONS OF A MUSEUM

"A museum is an institution for the preservation of those objects which best illustrate the phenomena of nature and the works of man, and the utilization of these for the increase of knowledge and for the culture and enlightenment of the people.

"In addition to local accessories, the opportunity for exploration and field work are equally essential, not only because of considerations connected with the efficiency of the staff * * * but in behalf of the general welfare of the institution. Other things being equal, exploration can be carried on more advantageously by the museum than by any other institution of learning, and there is no other field of research which it can pursue to better advantage.

"To aid the occasional inquirer, be he a laboring man, schoolboy, journalist, public speaker, or savant, to obtain, without cost, exact information upon any subject related to the specialties of the institution; serving thus as a 'bureau of information.'

"A museum to be useful and reputable must be constantly engaged in aggressive work either in education or investigation, or in both.

"A museum which is not aggressive in policy and constantly improving can not retain in its service a competent staff and will surely fall into decay.

"A finished museum is a dead museum, and a dead museum is a useless museum."—*G. Brown Goode, formerly assistant secretary, Smithsonian Institution.*

Museum Committee of the Board of Regents

WM LELAND THOMPSON, *Chairman*
WILLIAM BONDY
JOHN LORD O'BRIAN

State Museum Council

OWEN D. YOUNG
PIERREPONT B. NOYES
ORANGE L. VAN HORNE
BENJAMIN WALWORTH ARNOLD
THOMAS D. THACHER

State Museum Staff

Charles C. Adams Ph.D., D.Sc. *Director of the Museum*
Alvin G. Whitney A.B. *Assistant Director and Secretary*
Rudolf Ruedemann Ph.D. *State Paleontologist*
David H. Newland B.A.¹ *State Geologist*
Robert D. Glasgow Ph.D. *State Entomologist*
Homer D. House Ph.D. *State Botanist*
Chris A. Hartnagel M.A. *Assistant State Geologist*
Winifred Goldring M.A. *Associate Paleontologist*
_____ *Zoologist*
Kenyon F. Chamberlain *Assistant State Entomologist*
Elsie G. Whitney M.A. *Assistant State Botanist*
Noah T. Clarke *Archeologist*
Edwin J. Stein *Technical Assistant*
Walter J. Schoonmaker *Technical Assistant*
Arthur Paladin *Technical Assistant*
Clinton F. Kilfoyle *Technical Assistant*

Honorary Curators

William L. Bryant *Honorary Curator of Fossil Fishes*
Benjamin W. Arnold *Honorary Curator of Ornithology*
Harry S. Peck *Honorary Curator of Minerals*

State Museum Collaborators

Albert P. Brigham
George H. Hudson
Ephraim P. Felt

¹ On special leave, May 15 to November 1, 1929.

JUL 23 1932

Temporary Scientific Appointments

Robert W. Jones ¹	<i>State Geologist</i>
R. J. Colony M.A.....	<i>Assistant Geologist</i>
Nelson C. Dale Ph.D.....	<i>Assistant Geologist</i>
A. F. Buddington Ph.D.....	<i>Assistant Geologist</i>
Aretas A. Saunders Ph.B.....	<i>Assistant Zoologist</i>
Robert B. Gordon M.S.....	<i>Assistant Botanist</i>
C. L. Metcalf D. Sc.....	<i>Field Entomologist</i>
W. E. Sanderson B. S.....	<i>Field Naturalist</i>
Florence M. Washburn.....	<i>Entomological Assistant</i>
Donald W. Hamilton A.B.....	<i>Fellow in Entomology</i>
William L. Lassiter M.A.....	<i>Assistant Curator of History</i>

¹ Appointment May 15 to November 1, 1929.

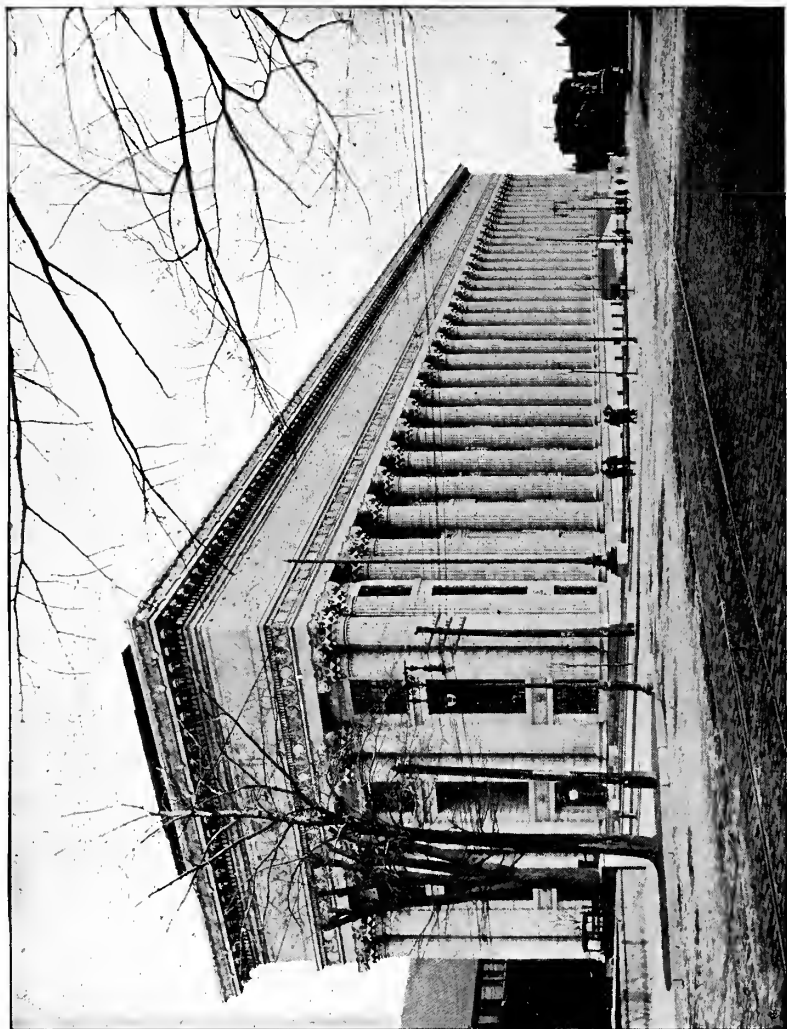


Figure 1 New York State Education Building
On the upper floors is located the New York State Museum

TWENTY-FIFTH REPORT OF THE DIRECTOR OF THE DIVISION OF SCIENCE AND THE STATE MUSEUM

BY CHARLES C. ADAMS Ph.D., *Director*
New York State Museum

FOREWORD

Although the Division of Science and the State Museum has been constantly engaged in a scientific and economic study of the natural resources of the State through the geological and natural history (or biological surveys) for 95 years, there are many citizens who have an indefinite idea of what this state fact-finding bureau does, or has been doing for all this period. As the years have passed there has been a natural growth and expansion of its duties so that its scientific and economic and industrial studies, surveys and collections illustrating the mineral, plant and animal resources, as well as the history and industries of the State, have become of the greatest value and importance. The State Museum is today the central official scientific, historical and industrial research and museum agency of the State viewed in its most comprehensive sense. The Museum exhibits are in reality a permanent exposition of the State's natural resources—mineral, plant, animal and human, although of course, all aspects have not been equally developed for lack of space and funds. Interesting and important as these exhibits are to the general public, they do not represent the most important part of the work of the Division of Science and the State Museum, because its major activities consist of statewide scientific and economic studies by its staff of the mineral, plant, animal and human resources of the State, in relation to their economic and social aspects. These fact-finding studies are of the utmost importance and were so recognized 95 years ago, even long before the State had become so thoroughly urbanized and industrialized as it has become since the Civil War. At the time of its establishment the older survey methods were satisfactory, and although certain of these methods must be continued indefinitely, they are in themselves inadequate for the present intensive industrial use which characterizes modern times. The next important step of advance is to provide more adequately for intensive scientific, technical, economic and social studies, both in the field and in the laboratories, in order to adapt current studies more thoroughly to modern times.

At present the Museum laboratories and storerooms in the Education Building are so crowded that a new museum building is the only satisfactory solution of the problem. Realizing this, and seeking to provide an adequate World War Memorial and to commemorate the 200th anniversary of the birth of George Washington, Governor Roosevelt on April 9, 1930, sent a message to the Legislature making, among others, the following recommendations:

In spite of the expectation only a few years ago that the new State Office building now in process of occupation would for many years to come prove adequate for the housing of all state agencies heretofore scattered about Albany, it is already apparent that the very great expansion of the functions of State Government already presents a new problem. This expansion relates chiefly to the Department of Education. As you are aware, it is only a dozen years since the Department of Education cost the State only ten million dollars a year, whereas now we are spending over one hundred million dollars a year for this single branch of the Government.

The result is a serious and growing congestion in the State Education Building. With the consolidation of various departments of the State Government, this congestion has been accentuated.

For instance, the State Museum located on the top floor of the State Education Building is poorly lighted, seriously handicapped for exhibit and storage space, inadequately equipped with workrooms and difficult of access to the public. In its present quarters, further expansion is impossible and its scientific and educational opportunities are restricted. Furthermore, its historical and art collections as provided by law, and for which much valuable material has already been collected, can not be properly developed. In addition, other state-owned collections now widely distributed among other departments could and should be placed under the unified direction of the State Museum. This State Museum is an important educational agency and at the present time is, in my judgment, not performing half as usefully as it might if it had adequate quarters.

The office of the State Historian also needs more space and better facilities for work in taking proper care of and publishing the valuable public records of the State, and supervising the activities of local town, city and county historians and historical associations. The historical records are worth preserving for the use of the present and future generations, as many who will remember the fire in the Capitol in 1911 can well testify.

Finally, there is a definite need as a part of the government buildings on Capitol Hill of an Assembly Hall large enough to accommodate the public gatherings and conventions now held with increasing frequency in Albany. Chancellors Hall in the State Education Building is too small to accommodate many of these assemblies.

It is therefore my thought that serious attention should be given to the erection of a new state building, preferably on State street, in order to take care of these needs of government. The site is sug-

gested because it forms the fourth side of a quadrangle now composed of the Capitol, the State Education Building and the new Office Building.

It is my thought that a new building could be planned to house the State Museum, the historical collections of the State, the public records, archives and maps of the State, and a great Assembly Hall adequate and dignified in every way.

I think that no appropriation is necessary, but that an informal commission could well be appointed to study all of the phases not only of the suggested memorials, but also of the State's need of a new building. Such a building could be so designed that all of it would not be built at once, but rather that its erection could be carried out over a period of years.

In other words, I am seeking to plan for the future before conditions get worse and also in order that we may coordinate the needs instead of meeting them in piecemeal manner.

This present report covers the fiscal year ending June 30, 1930, and its field is restricted to administrative matters and to allied museum and scientific policies.

A SUMMARY OF THE YEAR'S WORK

Among the outstanding results of the year have been the continuation of the statewide scientific and economic surveys of the geology and natural history of the State, and the expansion of the historical collections. Scientific surveys of the geologic and mineral resources have been continued on the following 11 quadrangles: Antwerp, Lowville, Oswegatchie, Potsdam, Schunemunk, Morrisville, Skaneateles, Randolph, Cattaraugus, Berne and Catskill. The regular annual compilation of the production statistics of the mines and quarries has been continued in cooperation with the United States Bureau of Census and the United States Bureau of Mines.

The biological survey of the plants of the State in the vicinity of Oneida lake and in the Allegany State Park has been continued and a special report has been started on the ferns and their allies. The popular handbook on the mushrooms and allied fungi is now in galley proof.

Cooperative studies with the State Department of Agriculture and Markets, and with growers have been continued with the cockroach greenhouse pest, and the narcissus bulb pests. Residents of the Adirondacks raised funds to make a study of black flies and allied biting pests which do so much to retard the development of the Adirondacks. Later, when legislative support was lacking, they again raised funds to continue the work during the summer of 1930. As a result

of the field work during 1929 two reports have been prepared—one a popular account (Circular 5) of the investigation of these fly pests and methods of alleviating the discomfort they cause, and a technical report (Bulletin 289) summarizing the results of our field studies as well as present knowledge on methods of controlling these insects.

The zoological work has continued the study of the local mammal fauna, giving special attention to the woodchuck. The handbook on birds' nests has been completed. The handbook on bird song has been published and has received many favorable criticisms.

In the field of history and archeology the most important results have been the completion and publication of the report on the wampum belt collection of the Museum, and the great increase in the Shaker collection.

In spite of the fact that the State Museum is on the top floor of the Education Building it attracts about 200,000 visitors annually, which at a moderate estimate is worth at least \$200,000 to the public.

Continued interest in plans for the new Museum Building on State street, facing the Education Building, is encouraging and is elaborated elsewhere in this report.

COOPERATION WITH STATE AND OTHER ORGANIZATIONS

The location of the State Museum at Albany facilitates cooperation with other public agencies, state and federal. During the past year, the museum has cooperated with other agencies as follows:

1 United States Bureau of Mines and United States Bureau of Census, Washington, D.C. The museum continued the long standing policy of collecting the statistics of mineral production from the mines and quarries of the State.

2 New York State Department of Agriculture and Markets. Co-operative experiments on the control of narcissus bulb pests with F. Rynveld and Sons, A. Frylink and Sons, and the Stumpp and Walter Company; also on greenhouse pests with F. H. Pierson.

3 New York State Department of Conservation. The Director is a member of the State Council of Parks. The geologists of the Museum staff advise the Department of Conservation on the purchase of lands when mineral resources are involved.

4 State Department of Law, Office of the Attorney General. Cooperation with the Office of Land Titles on the purchase of mineral lands in the Adirondacks, and on other legal problems, including some before the State Court of Claims.

5 Buffalo Society of Natural Sciences, Buffalo, N. Y. Cooperation in conducting the Allegany School of Natural History in the Allegany State Park. The Director is responsible for its educational policy, and the school cooperates in local scientific surveys.

6 University of Buffalo, Buffalo, N. Y. Affiliated with the Allegany School of Natural History.

7 Colgate University, Department of Geology and Geography, Hamilton, N. Y. Cooperation on a geological survey of the Morrisville quadrangle.

8 Cooperation within the Education Department: State Library, exchanges of Museum publications; Archives and History Division; Department Editor, on the publication of Bird and Arbor Day Numbers of the Bulletin to the Schools.

9 Doctor Ruedemann has cooperated with more than 30 geologists in the preparation of a two-volume Geology of North America.

10 Dana Natural History Society, Albany. Cooperation on a lecture on birds to Albany school children on Bird Day by Dr Clyde Fisher.

11 Princeton University. Cooperation on a geological survey of the Potsdam and Rosendale quadrangles.

12 Newton Armstrong of Poughkeepsie. Cooperation on a study of the insect pests of ornamental shrubs and trees.

13 Several Long Island narcissus bulb growers have actively cooperated financially with the State Entomologist of the Museum staff on methods of controlling the insect pests of these plants. (See also no. 2).

14 The University of Michigan Herbarium, Dr Howard A. Kelly of Johns Hopkins University, and Charles M. Winchester Sr, of Albany. Continuing the work on the preparation and printing of Handbook 11, by L. C. C. Krieger on a Popular Guide to the Fungi (Mushrooms) of New York State.

15 New York State Fox Breeders Association and American Fox Breeders Association. Conducted a summer school and convention at the Museum September 17-19, 1929.

This section on cooperation with other agencies is concluded with a statement of the relation of the Museum to the Department of Law. At the request of the Director, D. H. Newland, State Geologist of the Museum staff, has prepared the following statement of what has been the regular practice for many years:

State departments and corporate communities of the State frequently call upon the geological staff of the State Museum for guidance in such matters as the valuation of mineral lands and mineral

rights, classification of engineering materials, foundation work for dams and buildings, and in a multiplicity of problems related to our geological formations and structures. No record is kept of these inquiries apart from the correspondence in the regular files. It is difficult to say in retrospect how much time and labor are represented in their consideration. Some of them can be answered directly out of personal acquaintance of the members of the staff with the problems involved, or after search of the office records which cover a wide range of data not as yet published. But, not uncommonly, special field studies are necessary to secure the desired information, and these have been undertaken at different times when the importance of the matters at issue justified the effort. In such cases the department or office making the inquiry has usually assumed the responsibility for the expenses incurred by the geologists.

The valuation of mineral rights is a problem that arises quite often in connection with the State's purchase of lands for parks and public improvements. In the Adirondacks especially, the minerals have been reserved since early times in the conveyance of land titles, and the State has either to accept deeds with such reservations or to undertake expensive search, and possible litigation, to gain full titles that may not be warranted by the actual values at stake. It has been the practice for the various departments to refer proposals for land purchases wherein mineral rights are involved to the State Geologist for an opinion as to the course of action to be pursued. Within the past year a dozen such requests probably have been received and given attention.

Another form of valuation arises in connection with claims filed against the State or a municipality for special remuneration on the basis of the minerals contained on lands purchased or condemned for public use. These claims at times run into large sums. In one instance a claim for several million dollars was instituted for quarry lands. Quite often the sums involved exceed \$100,000.

The participation of the geological staff in these contested claims, invariably on behalf of the public, requires as a rule a great deal of preparation in the way of field studies and consultations beyond that incident to the usual duties. Individual cases have taken from one to two weeks of undivided attention of the geologist.

Diversion of waters by the construction of canals, municipal water systems etc. offers a variety of problems for which advice is sought from the staff. The Barge Canal improvements and the extension of New York City's water supply have given frequent occasions for enlisting our services.

Foundation problems arise in connection with large buildings where there is a thick overburden of earth on the rock surfaces or some unstable condition present due to the kind or structure of material on which the building is to be placed. Dams for water storage or power purposes involve at times very comprehensive investigations.

To give some specific examples of the cooperation carried on by the geological office, the following instances are cited from the records of the past year or so:

Appropriation by the State of lands near Peekskill for Camp Smith, in which additional reimbursement was claimed for deposits of sand and gravel. Several days were spent in the field and in the giving of testimony before the court.

Appropriation by the State of lands near Nyack, in connection with the Palisades Park, on which quarries were about to be opened for production of crushed stone. Two visits were made to the property and additional time was given to the preparation of the State's case.

Claim for additional compensation in the construction of a highway near Valatie; the validity of such claim involving the right of the contractor to utilize sand from a particular bank. Field trips were necessary.

Diversion of waters in Schoharie creek and consequent impairment of power privileges. Required thorough study of the rock contours of the valley and of the glacial fill with reference to power sites.

Investigation of the Attica prison site with regard to stability of the geological materials. Personal visit to the site and written recommendations were required.

Claim for additional compensation by reason of deposits of shale on land appropriated for the John Boyd Thacher Park. Inspection of the property was required.

Investigation of the geological conditions relating to the Albany water supply project at Alcove and vicinity. Required special study of the dam site and of the storage facilities.

Selection of the most practicable site for the erection of the Interstate Bridge across Lake Champlain. Matter involved special trips to different sites, study of drill cores and the writing of a report on the geological conditions, which report was published with that of the Bridge Commission.

A letter dated February 8, 1929 from Attorney General Hamilton Ward confirms this statement of cooperation. It follows:

I am informed by the Assistant Attorney General in charge of the Land and Title Bureau that during the past year, as in previous years, the State Geologist and Assistant State Geologist have rendered valuable assistance to the State, in relation to claims for mineral rights outstanding in lands being acquired by the State for the Conservation Department. The reports furnished by your Department have always been supplied with great promptness and have been approved by the Commissioners of the Land Office who have charge of the purchase of these lands.

I desire to express the appreciation of this Department for the assistance which you have rendered to it.

ALLEGANY SCHOOL OF NATURAL HISTORY

The fourth season of the Allegany School of Natural History began July 5 and closed August 23, 1930. The school is under the direction of Dr R. E. Coker. This is an outdoor school of natural history of college grade and is supplementary to the customary, largely indoor, college courses. The State Museum is responsible for the general educational policy of the school, and the members of the Museum staff use the school as a field base for local scientific studies. The past session was the most successful one.

The facilities of the school have improved each year so that now it is well prepared to conduct its novel type of outdoor instruction. The new outdoor museum building is a welcome addition. This school does not duplicate the work of any college in the State.

The school is conducted by the Buffalo Society of Natural Sciences in cooperation with the State Museum, and in affiliation with the University of Buffalo. The Allegany State Park Commissioners have cooperated very heartily with the school.

As a result of this cooperative project the Allegany State Park region, which is a large and relatively new state park, is better known scientifically than many long established parks. The State Museum handbooks on the park have had a large part in this. These scientific studies are proving to be of much value not only to the school but, also, to the Park Commission and to the general public. The facts of physiography and geology made available by these studies have been utilized in connection with the location of dams for reservoirs and have had a direct bearing on the problem of road materials and water supplies. The information regarding forests and other vegetation has a practical as well as an educational value. The same is true of the animals. One of the earliest studies in the park resulted in Handbook 3, by Dr S. C. Bishop on the Reptiles and Amphibians of the Park; a study made without anticipating that such a study would, within less than five years, have a practical bearing on the administration of the park and of public health. In 1930 the State Department of Health made a survey of the water supply of the park and made recommendations in harmony with standard procedure in such cases. The Cattaraugus County Board of Health in 1929 learned that "salamanders present in springs and other ground water supplies give off organisms into the water which are indistinguishable by ordinary means from colon bacilli of human origin" (7th Ann. Rep't, Cattaraugus County Board of Health, 1929, p. 79, 83). This means that the presence of salamanders infected with "bacilli indetermina-

ble" from the colon bacilli, in drinking water reservoirs would tend to confuse diagnosis due to possible human contamination of such waters. Thus salamanders, which the average person would consider of slight consequence, come to have an importance that demands attention and further study. At the present time the only important study of the salamanders of this part of the State is in the previously mentioned Museum Handbook.

Other scientific studies conducted at the School include those of geology, plants and animals, to which detailed reference will be made later.

Another outstanding product of the cooperation with the School is Handbook 7 by Aretas A. Saunders on Bird Song. Mr Saunders has devoted many years to the study of bird song, and while working in the park summarized his extensive experience in an attractive booklet that has been received with the keenest appreciation by the leading ornithologists and as well by the general public.

Dr A. L. Kenoyer extended the survey of the forests of the park, and Dr A. C. Tester completed the field work for his report on the geology and mineral resources of the Cattaraugus quadrangle. Mr Saunders continued his field studies of the butterflies of the Park.

RELATION OF THE MUSEUM TO SCHOOLS AND COLLEGES

The State Museum is related to the schools and colleges of the State in many informal ways as well as in those of an official character. Teachers and children of the public and private schools frequently visit the Museum. There were 235 classes and 6308 pupils that made such visits during the past year. Classes of school children came from the following 25 counties: Albany, Broome, Columbia, Dutchess, Essex, Fulton, Greene, Herkimer, Montgomery, Madison, New York, Oneida, Onondaga, Orange, Otsego, Queens, Rensselaer, Rockland, Schenectady, Schoharie, St Lawrence, Saratoga, Ulster, Warren, Washington.

It will be observed that most of the counties of the eastern half of the State are included. The largest attendance was in the months of May and June, there being 1679 in May and 2006 in June. In the fall the largest attendance was in November with 416. The classes that visit the Museum usually spend two hours in the Museum, but some spend most of the entire day there. Prolonged experience shows that the children who get the most from the visit are those accompanied by older persons, teachers, parents or who

tour the Museum with the custodian or guide. Pupils who come in automobile buses find it convenient to eat their lunches in the buses. The rural pupils naturally seem to show the greatest interest in the Museum. A ride in the elevators is even a novel experience to some of these children.

In addition to the pupils' visits to the Museum thousands of them are reached each year by the Museum publications. The bird and wild flower monographs and portfolios are in constant use in a great number of schools and colleges. Members of the Museum staff assist the Department Editor in the preparation of the Bird and Arbor Day numbers of the Bulletin to the Schools. Through cooperation with the Dana Natural History Society of Albany, a lecture is given to the school children of the city of Albany.

Both public school children and college students from Connecticut, Massachusetts and Vermont visit the Museum, and some of these visits are regular annual events.

In 1926 the Director recommended to the Regents that an appropriation of \$10,000 be requested to begin Museum extension work with the public schools. It was proposed that capable curators be secured to prepare and supervise loan exhibits to schools. Considerable experience has been acquired along this line by several leading museums. The Museum already has considerable material that could be used to advantage in such exhibits. Just as loan libraries are recognized as helpful, so would properly selected objects be useful not only in teaching children but also in arousing public interest in school activities.

Furthermore, with a staff engaged in such work it would be possible to give much additional help to schools which have small teaching museums but do not know how to utilize or care for them to the best advantage. Rather frequent requests come to the Museum for assistance of this kind but at present little can be done. Without question this condition will tend to become more urgent and insistent until some method of cooperation is arranged.

MUSEUM ATTENDANCE

It is impossible to make an accurate count of the number of visitors other than pupils and students who come as classes.

The Sunday attendance from October to May is also counted, for the 30 openings of the Museum. The total was 41,296, giving an average of about 1400. The monthly Sunday attendance in October and November was about 5600 each month; in December, 5900; in

January, 4300; in February, 5400; in March, 8800, and in April, 5400. Thus the average monthly attendance is about 5500. Actual counts have been made of the Sunday attendance for the past three years. For 1927-28 the total was 39,734; for 1928-29 it was 43,560, and for this past year 41,296. Previous records were incomplete. These figures indicate that we may expect on the 30 Sunday openings about 40,000 visitors for the season. The Sunday group is largely local. A very large number are children, and the attendance of children in such large numbers unattended by adults is of questionable value, because with a shortage of attendants the children are likely to wander about aimlessly and make confusion. It may become necessary to restrict the attendance of children on Sunday to those accompanied by older persons.

The largest attendance comes during the period from June to Labor Day. These visitors come largely from a distance. The attendance is estimated for June at about 15,000; for July at 40,000, and for August 50,000, with a total of all visitors for the year to between 200,000 and 210,000.

Conservatively estimating the visitors at 200,000 a year, these alone certainly receive a total of \$200,000 worth of education and recreation from such visits to the Museum, or nearly three times the annual budget of the Museum. These exhibits furnish the most comprehensive survey or exposition of the natural resources of the State that is permanently open to the public.

INFORMATION AND PUBLICITY

There has been the usual amount of correspondence covering every aspect of the work of the Museum. In spite of the limited funds for traveling, members of the staff gave 24 lectures and talks and reached about 1500 persons in seven counties, as follows: Albany, Columbia, New York, Oneida, Ontario, Rensselaer and Tompkins. This is clearly a small amount of such work. This kind of work can not well be expanded without an increased staff and funds.

Assistance is given to the press whenever possible. The publications of the Museum give information about Museum activities. The announcement and the advertisements in the magazines of the Allegany School of Natural History have helped to call attention to the work of the Museum.

CONDITION OF THE EXHIBITION HALLS, EXHIBITS AND STUDY COLLECTIONS

The exhibition halls have been greatly improved by the general refinishing of the walls and ceilings, which has been under way for some time. The general renovation of Zoology Hall was completed in August. It is now in the best condition that it has been in for several years. The walls of the former lecture hall, now used for temporary historic exhibits, and the adjacent hall of Indian exhibits, have been refinished.

In Zoology Hall the interiors of the insect cases have been cleaned for the first time since their installation. This was a difficult undertaking because of the unusual design of the cases. The remainder of the cases in this hall have been cleaned inside, and work has been continued on the repairs on the exhibit of fishes on exhibition. The platform under the skeleton of the Temple Hill mastodon gave way and the skeleton leaned forward. Plans were started for its repair.

The most notable additions to the study collections, in addition to those made during the regular work of the staff, have been from the South family of the Niskayuna Shakers, secured through Sister Jennie Wells, and materials from the Mount Lebanon Shakers presented by William F. Winter of Schenectady. At Mr Winter's suggestion and with the hearty cooperation of Dr and Mrs Edward D. Andrews of Pittsfield, Mass., a temporary exhibit, largely of Mount Lebanon Shaker materials, was opened June 17, 1930. This exhibit covered the period of 1800-25. Reference to it will be made later.

The lack of space for new exhibits, a condition becoming more acute each year, and the need of storage space present acute problems. The only solution is adequate provision for a new Museum building.

PRINTING AND PUBLICATIONS

"After all it is the written word that lives."—*Dr W. M. Beauchamp*

Since April 15, 1836, when the scientific work now conducted by the State Museum was begun, the publication of scientific reports has been one of its main functions. The need for such publications is even more insistent than it was in 1836, because economic and social conditions are more complex now than they were at that time. A single set of the publications of the State Museum now covers about 40 lineal feet of shelving, and valuable reports yet await publication.

Printing funds have been inadequate for many years. To meet this need the Director declared in the preceding Annual Report

(page 19): "A revolving fund, large enough to function for at least ten years, would aid this situation. Sales would replenish it and allow a certain amount of flexibility that would hasten publication. Annual provision could be made to care for the free copies, such as exchange to other states, libraries, educational institutions etc., which should not be allowed to drain the revolving fund. Permission could also be given for the use of such materials for legitimate educational purposes meeting with the approval of the Regents."

The inventory of the stock of older publications is still in progress. This has advanced slowly because of the limited help available to be devoted to it. A very large number of the older publications are now out of print and can not be supplied. Even many recent publications, on account of the small editions printed, are rapidly becoming out of print. The Available List of Publications represents the progress made on this inventory, as it is evidently unwise to permit the distribution of publications without a knowledge of the stock. An inventory has been started of the maps published by the Museum, but this is not yet completed. Most of them are out of print.

The manuscript of Dr H. A. Pilsbry's monograph of the land and fresh water shells of New York yet awaits publication. This is a companion volume of the bird and wild flower books and is beautifully illustrated with colored plates, and it should be printed at an early date.

PHOTOGRAPHY AND DRAFTING

Photographs and drawings have come to supplement field notes in scientific studies to such a degree that this kind of work is constantly on the increase. Such illustrative material is necessary not only in most publications but as well for records and for other educational purposes.

Mr Stein reports that field workers made 1039 negatives out of a total of about 1300; about 2000 photographic prints, 13 enlargements, 44 lantern slides and 277 drawings were made.

By degrees the photographic equipment has been improved and increased in amount. The dark room now has excellent quarters and equipment for work.

The cataloging of the past accumulation of negatives progresses slowly on account of the pressure of other work. More help is needed to complete this and to keep it up to date. The storeroom, including the care of scientific instruments and supplies, should be separated from the photographic work as soon as practicable. At present, it, like all other administrative work, suffers on account of a shortage of help.

HISTORICAL COLLECTIONS AND ALLIED MATTERS

"I warmly sympathize with the ambition expressed in your annual report to have this Museum more than a mere zoologic or scientific museum. It should be a museum of arts and letters as well as a museum of natural history.

. . . There should be here a representation of all our Colonial and Revolutionary life. There should be in this Museum for the instruction and inspiration of our people, a full representation of American history since the time when New York cast off its provincial character and became an integral portion of the American Republic."—*Theodore Roosevelt's address at the opening of the New York State Museum, December 29, 1916.*

The historical collections of the State Museum have been growing now for almost a century. The lack of exhibition and storage space for these and other collections causes the Museum to give a very incomplete picture. Many an admiring visitor of the Indian groups and exhibits goes away without realizing that he has just been looking at the first chapter of the history of man in New York State. While the collections of the Colonial and Revolutionary periods are of considerable interest and value they are very limited indeed and are not at all adequate. Additions to the collections for these periods will be greatly welcomed. The household and agricultural collections of the post-Revolutionary period to about 1870, are the most fully represented in the collection. It was largely during this period that the Shakers had their main development, and the Museum collection for this period is unusually extensive and important.

The collections of the Civil War period are also limited and should be greatly expanded.

The exhibit of Spanish War period material is developing about the Admiral Charles Sigsbee Collection presented to the Museum by Mrs Nellie G. Milligan, and the Admiral William P. Potter Collection presented by Catharine E. B. Potter.

The World War Collection is in its inception and should be adequately developed in keeping with the proposed State Memorial Museum Building, as indicated elsewhere in this report.

In the history of science and of the professions the Museum collections are small but important, including Joseph Henry's scientific apparatus, and a nucleus of materials bearing on the history of medicine in this State. This last item is being sponsored by Dr James N. Vander Veer of Albany.

Because of the appropriateness of a temporary exhibit of Shaker materials, based in part on Museum collections supplemented by valuable loans, a special exhibit was opened June 17, 1930. This was made possible by the loan of a series of photographs of both the Niskayuna and Mount Lebanon Shakers, made by William F. Winter of Schenectady, and the loan of objects by Dr and Mrs Edward D.

Andrews of Pittsfield, Mass., who are actively engaged in a study of the history of Shaker industries. This temporary exhibit illustrates (figs. 2-5), the household occupations of spinning and weaving, and the medicinal herb industry, the latter being one of the most active of the various industries conducted by this sect during the past century. Doctor Andrews describes this exhibit as follows:

It calls attention to one of the most significant experiments in communistic living ever attempted on this continent, an experiment which has special interest to citizens of New York State since the first and in many respects the most important settlements were founded within its boundaries, at Niskayuna and at Mount Lebanon.

Of the basic human needs of food, clothing and shelter for which the Shakers asked nothing of the world, the authors of the exhibit have chosen the subject of clothing to illustrate the variety and merit of the work done by the Shaker sisters in this field, and the implements employed in its production. A loom room is reproduced furnished with the following items: a double case of pine drawers, stained Shaker-red; a cast and wrought iron, wood-burning stove, built "double-decked" for the purpose of increasing the area of radiation; a cherry drop-leaf table with characteristically turned legs; three rare tilting chairs; a curly maple rocking chair; a three-step stool; double and single towel racks; a lift-top chest; and a wood box. Weaving and spinning implements include a loom for weaving poplar straw, a loom stool with drawer, a clock reel, a two-wheeled spinner, a T-base swift, a spinning wheel, a flax wheel, a hanging skarn and a bonnet mold on stand.

On the peg racks are hung Shaker clothes made in the earliest days of the century for both the brethren and the sisters of the order. Woolen and cotton bedspreads are suspended along the back wall of the room, and Shaker woven rugs are on the floor. Various accessories including a Shaker-made broom and mop complete the unit, and give it that appearance of neat industry which characterized such rooms in the years when the loom and wheels were busy from early morning till late in the day.

Samples of cloth and other weaves are displayed in cases. Here the visitor will note the wide variety of products which were necessary to the large communities in which standards of comfort were harmonized with ideals of simplicity. In this display are cloth and leather shoes, various braids for use in seating chairs and binding cloth, spool kits, a straw-working outfit, several Shaker bonnets, several bolts of home-dyed cloth, hand-woven mitts and gloves, hand-woven socks, Shaker collars and ties, and many other articles for everyday and Sunday wear.

A second part of the exhibit consists of State Museum materials, and is a reproduction of the herb room at the Watervliet Shakers, on what is now the property of the County Ann Lee Home. The growing, pressing and preparing of medicinal herbs, roots and barks for the pharmaceutical market constituted an important industry at

Mount Lebanon and Niskayuna as well as at other Shaker communities. The Shakers are credited with being the first in this country to engage in this business, and for over a century their extracts and preparations were considered to be unsurpassed in quality.

Among the numerous industries carried on by the Shakers were that of growing and collecting more than 100 kinds of medicinal herbs. The preparation of the herbs for the market involved curing, cutting and placing them in labeled packages. The magnitude of the herb business was such that a special building, shown in one of the photographs in the exhibit was needed. In this building were drying and curing rooms, a room with cutting machines, and one where several types of presses were located which shaped the herbs into package form. A press for printing the labels was also in the herb house. A special room with shelf-like compartments against the four walls served as a storage place for the herbs when ready for the market. Some of the compartments containing herbs from the herb room are shown in this exhibit. In addition to the photographs, a herb press and a machine for cutting herbs are shown.

SCIENTIFIC STAFF AND ITS ACTIVITIES

It is essential that this Museum should command the services of many different men for work in many different fields, and that its work should be so closely related to work of the same kind elsewhere that it shall all represent a coordinated whole. This is true of all departments of the work, but especially so of those departments which have a direct utilitarian bearing.

This Museum, like every other institution of the type, should do everything to develop large classes of workers of this kind. And yet, friends, we must never forget that the greatest need, the need most difficult to meet, is the need to develop great leaders and to give full play to their activities. In the entirely proper effort to develop numbers of individual workers there must be no forgetfulness of this prime need of individual leadership if American achievement in the scientific field is to be really noteworthy. Yet in scientific as well as in historical associations and academies, this fact is often forgotten.

The really great works must be produced by some individual great man who is able to use to the utmost advantage the indispensable preliminary work of a multitude of other observers and investigators. He will be the first to recognize his debt to these other observers and investigators. If he does not do so he will show himself a poor creature. On the other hand, if they are worth their salt they will be proud to have the great architect use all the results of their praiseworthy and laborious and necessary labor in constructing the building which is to crown it.—*Theodore Roosevelt's address at the opening of the New York State Museum, December 29, 1916.*

The scientific and scholarly work of the State Museum is the product of its staff. This staff corresponds to the faculty of a university, and the quality and quantity of its work is directly dependent upon their ability and the facilities for their work. In addition to the usual routine office duties, administrative and curatorial, the main results accomplished during the past year include:

Geology. Doctor Ruedemann's bulletin on the Geology of the Capital District has been passing through the press as Bulletin 285. He has continued the mapping of the Ordovician of the Catskill

quadrangle, so that about one-half of this is completed. Some progress has been made in his monograph of the Graptolites of North America. His cooperative Geology of North America is about half completed.

Miss Goldring has more than half completed the mapping of the Berne quadrangle. Work has been continued on the correlation of the Devonian stratigraphy. Handbook 10, Part 2, of Paleontology for Beginners and Amateurs, prepared by her, was approved for publication in April 1930. Her popular guide to the Indian Ladder Region of John Boyd Thacher Park is well under way and is ready for writing. The response of qualified persons to Part I of her handbook has been most gratifying. The great demand for this has already shown that some practical policy should be authorized permitting the printing of larger editions of such publications so that the interested public may take advantage of such publications.

Mr Kilfoyle has installed a special temporary loan exhibition of Jamaica fossil echinoderms collected by Benjamin Walworth Arnold, honorary curator of birds.

Dr A. C. Tester continued his field studies on the Randolph quadrangle in the Allegany State Park and completed the field work for his report.

Dr Burnett Smith has continued his field work on the Skaneateles quadrangle.

Professor L. W. Ploger continued his field work on the Cattaraugus quadrangle report. Further field work is needed to complete the study.

Dr R. J. Colony has about completed his field work on the Schunemunk quadrangle.

Dr Robert Balk's report on the Newcomb Quadrangle went to the printer in June 1930, as Bulletin 290.

Dr Roy Moodie's Handbook on the fossil vertebrates of the State went to the printer in June 1930, as Handbook 12.

Bulletin 286, containing several geological papers, went to the printer in June 1930.

Mr Newland was absent on a special leave from May 15 to November 1, 1929, and Robert W. Jones, formerly of the Museum staff, substituted and made a special study of the limestone resources of the middle Hudson valley. Mr Newland has in preparation a general report on the limestone of the State, and Mr Jones's report will be included in this. With the revival of interest in the zinc deposits in the Edwards district, Mr Newland has revisited the region and

finds that the later detailed studies in general confirm the earlier results published in Museum Bulletin 259, by Cushing and Newland.

Mr Newland and Mr Hartnagel have continued collecting the mineral statistics of the State. Mr Hartnagel published with W. L. Russell a short paper entitled "New York Oil Fields," (1929). He is also assembling all available data on the underground water resources of the State.

Professor Nelson C. Dale has continued his field work on the Oswegatchie quadrangle and has nearly completed the mapping of the area. He has also revised the mapping of the Russell quadrangle.

Mr Newland's report on the gypsum resources and industry of the State was published in November 1929, as Bulletin 283.

Dr A. F. Buddington has completed his field work on the Antwerp quadrangle, thus completing his field work on the Lowville, Hammond and Antwerp quadrangles.

John C. Reed, representing Princeton University, has conducted a cooperative survey with the State Museum on the Potsdam quadrangle. His work was done under the supervision of Dr A. F. Buddington.

The preceding projects show the variety of field work conducted on 11 quadrangles, special studies of mineral resources, including gypsum, limestone, zinc, oil and gas, as well as mining and quarry statistics, in addition to educational publications and special scientific reports. The western, northern, central and southern parts of the State are thus represented.

Plants. Doctor House has continued his field studies of the plants of the Oneida lake region and on the east shore of Lake Ontario. Mrs Elsie G. Whitney has begun a Handbook on the ferns and fern-allies of the State. A total of 2952 specimens have been added to the herbarium.

The popular handbook on the fleshy fungi of the State, by L. C. Krieger, has been sent to the printer and is in galley proof. The pressure of work has delayed its more rapid progress.

Dr L. A. Kenoyer, working in the Allegany State Park, has continued the mapping of the vegetation of the park started by Dr F. W. Emerson. By this method it is intended to map the entire park area.

Neil Hotchkiss's report on the vegetation of the Tug Hill region went to the printer in April 1930, as Bulletin 287. This region is one of the least known parts of the State from the standpoint of most phases of natural history, and this is particularly true of the plants.

Insects. Doctor Glasgow has continued his cooperative studies with the Department of Agriculture and Markets on several projects, such as the greenhouse cockroach, which has caused so much damage to high priced roses; the insect pests and eelworms infesting the narcissus bulbs on Long Island (*cf.* Ann. Rep't Dep't Agric. and Markets for 1929, Legis. Doc. No. 37, p. 72-76). These experiments have been supplemented by the financial support of several of the bulb growers. F. Rynveld and Sons supported a special fellowship in entomology, held by Donald W. Hamilton, who resigned March 31, 1930, to accept a position with the Bureau of Entomology, United States Department of Agriculture. The hearty cooperation of all interested parties was very gratifying. This type of cooperation, a Museum fellowship financed by those interested in special research problems, is one deserving special attention and should be extended to many kinds of problems.

The work begun last season in the Adirondacks for the discovery of practical control measures for the black flies, punkies and mosquitoes has been continued and expanded. Failing to secure legislative financial support, the residents of the Adirondacks provided funds to continue the studies. These biting flies cause annually the loss of possibly millions of dollars to the people of the State by repelling large numbers of summer visitors from the Adirondacks. On this account much valuable property involving millions of dollars is relatively idle during the fly season in June. The problem is a very large undertaking and its solution can be reached only by scientific studies. The first practical problem is to learn how to reduce the number of flies about habitations. Dr C. L. Metcalf and W. E. Sanderson spent July and August of 1929 in the field making a careful survey of the Adirondack region and have prepared reports on their results. These studies have involved heavy responsibilities on the part of Doctor Glasgow, under whose supervision the work was done. The progress made has been substantial and the work will be continued.

Mr Chamberlain has been able to give only a limited amount of time to his study of lupine insects but additional data have been secured.

Aretas A. Saunders, working at the Allegany School of Natural History, has conducted a study of the local butterflies of the park region and has prepared a popular handbook on that subject, which will be of general use.

Animals. The wholly inadequate salary available for the Zoologist has made it impossible to secure a satisfactory successor to

Dr S. C. Bishop, who resigned. Doctor Bishop is completing two reports on the reptiles and amphibians of the State, and an elaborate study of the life histories of the salamanders, which were well advanced when he left the Museum.

Mr Schoonmaker has continued his studies of the local mammals, giving special attention to the woodchuck, its life history, habits and economic relations. He has now in preparation a handbook on the woodchuck, based on this work.

Handbook No. 7 on Bird Song, by Aretas A. Saunders, has been published and has been eagerly welcomed. Ornithologists approve very heartily this excellent original contribution and popular summary of our knowledge on this subject. This and Miss Goldring's Handbook 9, have raised a serious question as to how to reach a large public when our editions of publications are so limited and there is no provision for printing extra editions for sale purposes.

Edmund J. Sawyer has completed his Handbook on birds' nests, and it awaits publication.

Archeology. Mr Clarke has continued his general survey of the reference collections on archeology and is classifying and recording all available data. Progress has been made but much remains to be done. He has completed a special report on the wampum belts in the collection of the Museum.

History. The historical collections continue to grow, and special attention is given to the documentation of this material. Mr Hartnagel has general charge of this collection. William L. Lassiter was secured as a temporary assistant for six weeks to hasten the cataloging, labeling and storing of the Shaker collection, which has become so large that with our limited space, special effort is necessary to prevent confusion. The Director has found it necessary to give considerable time to these collections. Elsewhere attention has been called to the temporary Shaker exhibit prepared with the cooperation of William F. Winter and Dr and Mrs Edward D. Andrews.

MUSEUM COLLABORATORS

On April 18, 1929, the Regents, as stated in the previous Annual Report (p. 28), authorized the Director to appoint collaborators, who are willing to cooperate with the Museum. The first appointee was Professor George H. Hudson in June 1929, and his term expires in June 1932. The second member is Dr Albert Perry Brigham, who was appointed in September 1929, and whose term expires in September 1932. The third is Dr Ephraim Porter Felt, for 30 years the

State Entomologist of the State Museum staff, who was appointed in October 1930, and whose term expires in October 1933. The Museum is greatly honored by the willingness of these scientists to cooperate with it, and we trust that the results will be mutually helpful.

STATE MUSEUM COUNCIL

The Museum Council is an advisory body intended by the Regents to advance the interests of the Museum. The first appointments were made from October 1, 1928. Since then Benjamin Walworth Arnold, Albany, was reelected October 1, 1929, for five years; Thomas D. Thacher, Washington, D. C., was reelected October 1, 1930, for five years. The other members are Owen D. Young, New York City (three years); Pierrepont B. Noyes, Oneida (four years), and Orange L. Van Horne, Cooperstown (five years).

The Council had its first meeting December 2, 1929, in the Regents Room of the State Education Building, with the Regents Museum committee and representatives present from other state departments with which the Museum cooperates. Those present were: Chancellor Chester S. Lord, Dr Frank P. Graves, President of the University of the State of New York and State Commissioner of Education; Regents Wm Leland Thompson, chairman of the Museum committee; and William Bondy, member of the Museum committee; Dr Owen D. Young, Benjamin Walworth Arnold, Lieutenant Governor Herbert H. Lehman, Berne A. Pyrke, Commissioner of Agriculture and Markets; Herbert F. Prescott, Secretary of the Conservation Department; Dr Alexander C. Flick, State Historian; Thomas Penny jr, Deputy Attorney General; Dr Charles C. Adams, Director, State Museum.

The session was opened by Regent Thompson, who introduced Commissioner Graves. Doctor Graves welcomed the members to the Department and outlined the functions of the State Museum. Lieutenant Governor Lehman expressed his interest and the interest of Governor Roosevelt in the activities of the Museum. Informal remarks were made by the representatives of the other State departments present at the meeting. This was followed by an address by Director Adams on the functions and needs of the State Museum (published in the preceding Report, pages 61-70). Following the meeting a tour was made of the Museum exhibits in the State Education Building.

A survey of all the scientific and museum facilities of the State of New York with the aim of developing a definite program of action

between these resources was suggested by Dr Owen D. Young, a member of the State Museum Council, and was adopted.

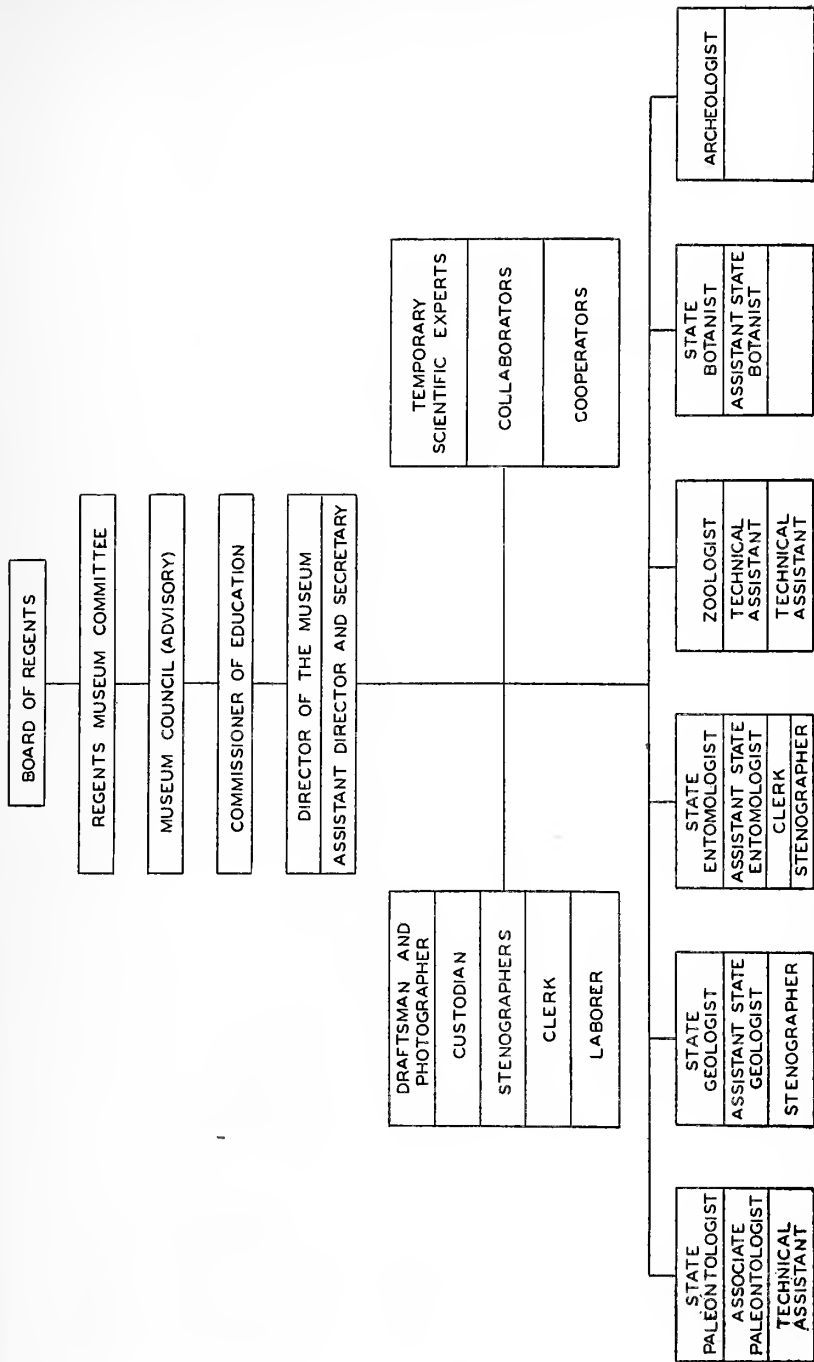
GENERAL ADMINISTRATIVE PROBLEMS

I **Organization of the Museum as a whole.** The growth of modern institutions, including museums, is likely to be similar to that of communities, and is unfortunately very largely opportunistic rather than the result of careful study and organization. Consequently more or less reorganization is periodically necessary to restore reasonable adjustment to the times and to reestablish functional relations. In the course of its history the State Museum has undergone several of these reorganizations. The geological and natural history survey formed the original nucleus to which later were added the functions of a natural history exhibit museum. Later the positions of State Entomologist and State Botanist were added, and finally history, art and industry were made definitely recognized functions of the Museum. There has thus been a constant tendency to broaden the field of the Museum, giving it a comprehensive organization for conducting research and other functions of an exhibition museum as well. This unification and broadening have not, however, been fully practised and are not yet complete, but considerable progress has been made. The present general organization of the Museum is shown in the accompanying diagram:

Administrative duties are performed by the Director, the Assistant Director and Secretary, with their assistants, as well as by those concerned with the general functions of the Museum. The Assistant Director and Secretary has charge of editing and care of the publications, in addition to conducting general correspondence and administrative work. The draftsman-photographer, custodian (guide) and laborer perform duties for the entire Museum. The janitorial, elevator and mechanical employes are under the direct supervision of the Administration Division of the Department, and are not members of the Museum staff. All business relations are conducted through the Director's office, in cooperation with the Administration and Finance Divisions. The State Library conducts the exchange of the Museum publications with libraries and organizations.

The general policies of the Museum are determined by law and are interpreted and supervised by the Board of Regents, through the Commissioner of Education and the Museum committee of the Board of Regents, with the advice of the State Museum Council appointed by the Regents,

ORGANIZATION OF THE DIVISION OF SCIENCE AND THE STATE MUSEUM



The major divisions of the field are:

- 1 Geology
- 2 Paleontology
- 3 Botany
- 4 Zoology
- 5 Entomology
- 6 Archeology (Indian)
- 7 History, art and industry

These sections are not uniformly organized or staffed. The present list of staff members shows its incompleteness. To function each section should have at least a stenographer and assistants, depending on the amount of work which it is capable of conducting successfully. Such help should be supplementary to that of a general nature furnished all sections from the offices of the Director and Assistant Director and Secretary, and that furnished by the Administration Division of the Education Department.

2 **Organization of the Museum files.** In an organization as old as the State Museum, the records and files worthy of permanent preservation tend to become extensive, and with a shortage of clerical help also tend to be neglected. In order to resist this tendency a special effort has been made to organize these materials, not merely to preserve them and make them available but to economize time and effort in using them. Even at the risk of neglecting other matters an effort has been made to arrange these materials in order. As opportunity has offered an effort has been made to arrange the various records, files, documents, field notebooks and unpublished manuscripts and maps in order and to list them. There having been no comprehensive organization for all these materials there was naturally much confusion. The files of correspondence of the Director's office have been concentrated. The correspondence of the James Hall administration has been arranged and indexed in connection with the preparation of Dr John M. Clarke's *Life of James Hall, 1837 to 1898*. The correspondence of Dr F. J. H. Merrill, 1899 to 1903, has been arranged. That of Doctor Clarke's administration, 1904 to 1925, is also arranged and is indexed between the dates of 1913 to May 1925.

Just as an effort has been made to concentrate, organize and catalogue the negatives, photographs, drawings, and maps of the Museum, so an effort has been made to systematically file all records of original field studies. In the past a large number of such field notebooks have been made, but only a relatively small number of them have

been preserved. It is the present policy to require those conducting special studies for the Museum to preserve a written record, and then notebooks are filed with the Museum on the completion or publication of the report. It is considered an essential part of any scientific study to submit such a record with the negatives, specimens and manuscript as a result of the study.

ANNUAL FINANCIAL AND STATISTICAL SUMMARY

The following annual and statistical summary is for the fiscal year July 1, 1929, to June 30, 1930:

THE MUSEUM BUDGET

The following budget does not include the cost of heat, light, janitor service, orderlies (watchmen), carpenters, painters and elevator men. Certain other items also are furnished by the Education Department, such as postage, stationery, express, drayage in part, telegraph and telephone, and are therefore not included in the budget.

The traveling expenses have been budgeted, so that each member of the scientific staff is able to plan his work to the best advantage. As rapidly as possible it is hoped to extend this system to all expenditures.

Gifts of funds and those derived from cooperative projects, in addition to those from the state appropriation, are indicated. The amount of these funds it is impossible to estimate, as they include the Federal franking privilege, cooperation with many individuals, organizations and other state departments. Labor, supplies, expert services, use of automobiles etc. have been provided. Such financial assistance is of the greatest value, but the funds do not pass through our hands at all. Thus the funds of the black fly project have been handled by the "Adirondack Black Fly Committee," Gilbert D. Kelley, executive secretary, a public accountant.

APPROPRIATIONS AND FUNDS FOR FISCAL YEAR (July 1, 1929 — June 30, 1930)

APPROPRIATIONS

Salaries:

Administrative staff	\$9 000
Permanent scientific staff.....	30 020
Temporary expert services.....	3 000
Scientific assistants.....	6 680
Clerical, labor etc.....	9 180
Total salaries	\$57 880

Equipment and supplies.....	\$5 000
Traveling (of which not to exceed \$200 is available for out-of-State travel)	3 000
Printing	10 000
Special fund for Sunday opening.....	1 020
	<hr/>
	\$19 020
	<hr/>
Total budget	<u>\$76 900</u>

GIFT FUNDS AND COOPERATION

July and August 1929 (received and spent from the cooperative "Black Fly Fund")	\$1 720
June and July 1930 (received and spent from the cooperative "Black Fly Fund")	2 445
Funds supplied by other cooperators, can not be estimated accurately	
	<hr/>
Total expenditures, but not including other cooperative funds.....	<u>\$81 065</u>

DIRECTORY DATA

Name of Museum: New York State Museum.

Location: Albany, New York, U. S. A.

Name of Director: Charles C. Adams.

Name of Assistant Director and Secretary: Alvin G. Whitney.

Date of founding: The Museum is the outgrowth of state surveys begun in 1836; formal organization of the Museum was in 1843.

Open to the public: Open week days from 9 a. m. to 5 p. m., and Sundays 2 to 5 p. m. (October 6, 1929, to April 27, 1930) 30 days.

Total number of hours open to the public for the year: about 2500.

Administrative officers	2
Number of members on scientific staff.....	10
Number of clerical employes and others.....	12
Number of part-time employes.....	11

Total staff

35

Salary schedules, 1929-30:

Director	\$6 000
Assistant Director and Secretary.....	3 000
Scientific professional staff.....	\$1620 to 4 250
Technical assistants (nonprofessional grade).....	\$1500 to 2 000

Hours and vacation:

Hours of work a week: 36¾

Vacation allowance comprises 24 working days of 6¾ hours each, and all legal holidays.

NEEDS OF THE STATE MUSEUM

The preceding financial statement of the Museum and the plans for a new Museum building show that its paramount needs are an adequate budget and a new Museum building. To make these needs specific the following items may be mentioned:

1 **Adequate salaries for the staff.** The salaries are considerably below the average for corresponding ability elsewhere in the Education Department, and particularly in the state colleges. The increases in recent years have not kept pace with the increased cost of living

and the declining value of the dollar. When vacancies occur under this system there is great risk of lowering the standard of the staff. The condition is acute and should be promptly remedied.

2 Increased staff. The staff is too small to perform the work demanding attention. Skilled men at present are compelled to devote too much time to routine and clerical work because of the lack of adequate and competent help. Important fields of work long authorized by law, as for example, the very valuable historic collections, have had no full-time curator provided for their care. In certain large fields there is only one person on the staff, and it is manifestly impossible for one to be expert in such a vast field. The biological and social sciences particularly suffer in this respect. Additional printing, also, is dependent upon more stenographic, clerical and editorial assistance.

At present even a moderate increase in the staff would greatly increase the accomplishments of the Museum, because there is already an excellent broad foundation for expansion, but the work has been stifled and starved just at the critical point where it should grow. The number of permanent members on the Museum staff in 1912 was 25, and now (1930) it is 24. At present the Director and Assistant Director are so submerged with routine duties that they do not have time for other even more important work bearing on the broader aspects of the work of the Museum.

3 Equipment and supplies. The allotment to the Museum for equipment and supplies has been \$5000 since 1912, a period of 19 years, during which the purchasing power of the dollar has materially declined. Twenty years ago most field surveys, both geological and biological, were conducted by horse and buggy or on foot; today it is by automobile and on foot, and yet the Museum has not been authorized to purchase an automobile or truck. Most state departments have a generous supply of such equipment, even though they do not conduct statewide field surveys. The lack of automobiles also causes a heavy drain on the small allotment of \$3000 for traveling expenses.

As applied to our offices, laboratories and storerooms, this lack of funds for equipment is shown by the shortage of filing cases or by the use of discarded furniture from more fortunate departments; the lack of adequate storage cases for the priceless collections; and in the laboratories by the lack of modern equipment which characterizes the best of modern scientific laboratories. It would cost many thousands of dollars to equip the Museum with modern storage cases, toward which only a beginning has now been made. Aside

from the question of space such a budget does not permit the expansion of important permanent exhibits and does not allow for minor changes of the older exhibits.

4 **Printing.** With the increased cost of printing in recent years, there has been a tendency for the unpublished manuscripts to accumulate. Since 1924 the Museum allotment for printing has been \$8000, until 1930, when it was increased to \$10,000. Of course such a fund permits the publication only of small editions of smaller reports and bulletins and is wholly inadequate for publishing such monographs as those on the birds and the wild flowers. Dr H. A. Pilsbry's monograph on the land and freshwater shells of the State belongs in the class with these large works illustrated with colored plates, and it still awaits publication. In addition to the publication of such special reports the Museum needs at least \$15,000 a year for its regular printing. The schools and the general public are calling for publications which can not be produced by our limited staff and on the present limited printing fund. The list of available publications is shrinking rapidly on account of the small editions and the large demand.

Frequently valuable manuscripts are offered to the Museum, which would cost thousands of dollars to produce, but which it is impossible to accept and print, because of the limited printing fund. This is a distinct loss to the State, which could be remedied at a relatively moderate expense.

5 **Temporary expert services.** The fund for hiring temporary expert services has amounted to \$3000 a year since 1917. This is one of the best forms of investment that the State can make, because very capable scientists are often available for special studies at moderate expense. This is particularly true of the professors in colleges and universities who have a summer period available for field work of various kinds.

The work on a number of scientific and economic problems, particularly those whose solution requires special experience and training, can best be done by these temporary experts. Special studies should be made of the Museum collections, and field work is justified that calls for a more varied experience than is possessed by the regular members of the staff. The amount of money for such temporary service should be increased.

6 **Scientific and historic reservations.** With the reorganization of the State Government and the transfer of the scientific and historic reservations from the State Museum to the Department of Conservation, the nucleus of a system of scientific and historic reservations

was suddenly practically destroyed. The reservations transferred (Clark Reservation, Chittenango Falls Park, Stark's Knob, Lester Park or Cryptozoon Ledge, and Squaw Island) are now utilized as public parks and picnic grounds, rather than reservations set aside for preservation and limited public use for scientific and educational purposes. At present there is no state agency primarily interested and adequately financed to care for these scientific and historic reservations, as modern outdoor museums. There should be definite provision for such reservations, as was pointed out in the Director's preceding report (Bulletin 284).

7 Research fellowships. During the past 25 years great progress has been made in utilizing research fellowships or scholarships as a method of solving important scientific and urgent economic problems. Some of these fellowships have been financed by various industries which have problems demanding attention and calling for careful scientific study. Others have been supported by special endowments and even by special state grants. Thus the New York State Department of Taxation and Finance had adopted this method, which has been so successful in the natural history sciences and in industry, and which is now being extended rather rapidly into the social sciences. One of these fellowships was successfully inaugurated for the entomological work of the State Museum during the past year in connection with a study of the insect pests of the bulb plants on Long Island by a bulb grower.

In this connection it is of interest to note that recently \$50,000 was bequeathed to the Smithsonian Institution to establish a traveling scholarship for the study of the fauna of foreign countries (Science, n.s., 72:296-97. 1930). Several such funds devoted to scientific and economic studies within this State would prove of great educational and scientific value.

8 Financial summary. The present budget of the State Museum is about \$75,000. In the near future this should be increased to \$250,000. The Museum is even now furnishing annually about \$200,000 worth of educational recreation to an extensive public. This covers only a small part of the work of the Museum.

9 Endowment and trust funds. Recognizing the slowness with which public support is given to the scientific work of the State Museum, attention is called to the need of a special endowment and trust funds to be supervised by the Board of Regents and to be devoted exclusively to the scientific and educational work of the State Museum. The Regents already have a few of these funds but none for the Museum. Such funds, particularly since budget limita-

tions are exacting, are needed to allow a certain amount of freedom, which is particularly helpful in scientific work. Such funds would allow the State to advance even before there was a general public recognition of the value of such work.

In this connection attention should be called to the fact that gifts up to 15 per cent of net income and all *bequests* to the Board of Regents of The University of the State of New York, *in trust* for the State Museum, are exempt from federal taxation, under the Federal Revenue Act of 1918.

10 **New State Museum Building.** Regularly in the annual reports the crowded condition of the State Museum has been stressed. In order to state the needs more definitely and to orient the problem as a whole, a special chapter has been prepared for this report.

MUSEUM ACCESSIONS FOR THE YEAR

Accessions are new additions to the Museum. These are classified into the following groups:

- 1 By donation: objects presented to the Museum
- 2 By exchange: for other Museum materials etc.
- 3 By purchase: payment from the Museum budget
- 4 By the staff: collected by the staff during official duties of any kind
- 5 By transfer, from other state departments or other divisions of the State Government, as provided by law

BY DONATION

- Adams, H. J., Albany, N. Y.
Specimens of cat fleas, *Ctenocephalus canis* Curtis, Albany, N. Y.
- Armstrong, Norman, White Plains, N. Y.
Cocoons of European pine sawfly, *Diprion simile* Hartig, White Plains, N. Y.
- Armstrong Tree Service, Ltd., Poughkeepsie, N. Y.
Specimens of the work of *Evetria comstockiana* Fernald, Poughkeepsie, N. Y.
- Arnold, Benjamin Walworth, Albany, N. Y.
3 fossils, Manitoulin Isle, Canada
- Barker, William H., Waterford, N. Y.
5 plant specimens, Waterford, N. Y.
- Bates, George E., Albany, N. Y.
Medal, Stourbridge Lion
- Bigelow, N. K., Albany, N. Y.
4300 specimens of miscellaneous insects collected in the vicinity of Albany, N. Y.
- Bigelow, P., Bellport, L. I., N. Y.
Specimens of oyster shell scale on birch, *Lepidosaphes ulmi* L., Bellport, N. Y.
- Brooks, Jonas H., Albany, N. Y.
180 specimens of native copper, Michigan
78 specimens of chrysocola, Globe, Ariz.
60 specimens of azurite, Bisbee, Ariz.

- 12 specimens of malachite from Copper Queen mine, Bisbee, Ariz.
 Specimen of cinnebar, Mexico
- 9 specimens of datolite, Keweenaw Peninsula, Mich.
- 4 specimens of turquoise, near Silver City, N. M.
 Bell metal, from Methodist Episcopal Church, Princeton, Mass.
- 2 specimens of wulfenite, New Mexico
- 3 specimens of native silver and copper, Keweenaw Peninsula, Mich.
- 4 specimens of covellite, Butte, Mont.
- 10 specimens of cuprite, Clifton, Ariz.
- 2 specimens of olivenite, Tintic, Utah
- 5 specimens of bornite and chalcopyrite, Western states
- 3 specimens of cerussite, Leadville, Colo.
- 2 specimens of sylvanite, Cripple Creek, Colo.
- Brows, H. Edmond, Freehold, N. Y.
 4 photographs of Indian sites near Freehold, N. Y.
- Buckland, George, Schenectady, N. Y.
 Specimen of plant, Schenectady, N. Y.
- Campbell, F. B., Denver, Colo.
 Several groups of calcite crystals from a locality 30 miles south of Interior, S. D.
- Case, Professor L. V., Tarrytown, N. Y.
 2 photographs of material from rock shelter, Ossining, N. Y.
- Casey, George W., Elsmere, N. Y.
 Specimen of Cecropia moth, *Samia cecropia* L., Elsmere, N. Y.
- Chadwick, George H., Catskill, N. Y.
 Cedar waxwing, Catskill, N. Y.
- Chamberlain, K. F., Albany, N. Y.
 25 specimens of plants, Mount McIntyre, N. Y.
- Clement, R. L., West Hempstead, L. I., N. Y.
 Specimen of Tenebrionid beetle, *Platydemus excavatum* Say, West Hempstead, L. I., N. Y.
- Cogswell, Mrs Ledyard, Albany, N. Y.
 6 stone implements, Greencastle, Ind.
 32 stone implements, California and Oregon
- Cornell University, through Dr A. E. Perkins, Ithaca, N. Y.
 3 specimens of plants from Maine
- Davis, Edward E., Norwich, N. Y.
 460 specimens of plants, Chenango county, N. Y.
- Dearstyne, Sidney J., Berne, N. Y.
 3 corals, Berne, N. Y.
- Dobbin, Frank, Shushan, N. Y.
 89 specimens of plants, Washington county, N. Y.
- Donkin, Thomas, Cleveland, Ohio
 2 photostats of aboriginal stone pipes, Cayahoga county, Ohio, and Pekin, N. Y.
- Eames, E. H., Bridgeport, Conn.
 22 specimens of plants, Connecticut and New York
- Fairbanks, Mrs L. B., Bainbridge, N. Y.
 71 specimens of plants, Chenango county, N. Y.
- Ferguson, W. C., Hempstead, N. Y.
 64 plants, Long Island, N. Y.
- Follett, Louis E., Saratoga Springs, N. Y.
 Pitted stone from Milligan hill, Saratoga, N. Y.
- Gaffers, W. R., Lathams, N. Y.
 Holboell grebe, Lathams, N. Y.
- Goold, A. B., Brookview, N. Y.
 Specimen of bark beetles and work on white pine, Brookview, N. Y.
- Graves, Arthur H., Brooklyn, N. Y.
 Specimens of lady-beetle pupae on catalpa leaves, Brooklyn, N. Y.
- Graves, George S., Newport, N. Y.
 Specimens of sawfly larvae, *Monophadnus caryae* Nort., Newport, N. Y.
- 2 specimens of plants, Herkimer county, N. Y.

- Gregory, Mrs Clifford D., Albany, N. Y. .
 2 Shaker placards
 2 Shaker handwoven linen kerchiefs
 Shaker flax
 Old Shaker 12-inch rule
- Gunther, Mrs Nellie G., New York, N. Y.
 Cape from Admiral C. D. Sigsbee's collection
- Hall, P. W., Clinton Corners, N. Y.
 Specimens of dogbane leaf beetle, *Chrysochus auratus* Fab., Clinton Corners, N. Y.
- Hallock, Harold C., Westbury, L. I., N. Y.
 Specimens of Fall Canker worms, *Alsophila pometaria* Harr., and Clover mites, *Bryobia praetiosa* Koch., Westbury, L. I., N. Y.
- House, Homer D., Albany, N. Y.
 Red-throated loon, Albany, N. Y.
- Hubbard, Mrs Murray, Albany, N. Y.
 Books, 3 old
- Jordan, Charles, Rensselaer, N. Y.
 Ringed-neck pheasant, male, Rensselaer, N. Y.
- Jordan, H. W., Syracuse, N. Y.
 Specimens of digger bees, *Agapostemon virescens* Fab., Syracuse, N. Y.
- Jordan, John, Rensselaer, N. Y.
 Ringed-neck pheasant, Rensselaer, N. Y.
- Kennedy, M. M., Coxsackie, N. Y.
 Specimens of bark beetles, *Pityogenes hopkinsi* Sw., and work in white pine, Accord, N. Y.
- Kenoyer, L. A., Kalamazoo, Mich.
 63 specimens of plants, Allegany State Park, N. Y.
- Kohler, H., Rosedale, N. Y.
 Specimens of cockscomb gall on elm, *Colopha ulmicola* Fitch, Rosedale, N. Y.
- Latham, Roy, Orient, N. Y.
 200 specimens of plants from eastern Long Island, N. Y.
- Lewis, C. W., East Greenbush, N. Y.
 Specimens of *Lepisma sacchrina* L. and *Thermobia domestica* Pck., East Greenbush, N. Y.
- Littlefield, E. W., Albany, N. Y.
 Specimens of bark beetles, *Ips pini* Say, Albany, N. Y.
- Loomis, W. H., Gouverneur, N. Y.
 Agalmatolite and Celestite from Arnold Talc Mine, Fowler, St Lawrence county, N. Y.
- Lord, Edward, Albany, N. Y.
 Holboell grebe, Albany, N. Y.
- Mager, C. E., New York, N. Y.
 Specimens of Japanese garden beetle, *Aserica castanea* Arrow, Bronxville, N. Y.
- Malloy, Thomas P., Rochester, N. Y.
 Specimens of bark beetles, *Pityogenes hopkinsi* Sw., and *Ips pini* Say, and work in white pine, Rochester, N. Y.
- Marshall, Dr David T., Hollis, N. Y.
 Specimens of Japanese beetle, *Popillia japonica* Newn., Hollis, N. Y.
- Martin, Ray W., Green Island, N. Y.
 Specimen of Cerambycid beetle, *Monochamus notatus* Dru., Green Island, N. Y.
- Martin, Mrs W., Port Crane, N. Y.
 Specimen of spotted Grapevine beetle, *Pelidnota punctata* L., Port Crane, N. Y.
- McElroy, Mrs James F., Albany, N. Y.
 Klikitat cooking basket from British Columbia
- McIntyre, H. L., Albany, N. Y.
 Specimens, larvae, pupae and work of white pine weevil, *Pissodes strobi* Peck, Middlefield, N. Y.
 Specimens of banded scale on maple, *Eulecanium nigrofasciatum* Perg., and a moth, *Tolyte velleda* Stoll, Albany, N. Y.

- Meeker, Mrs L. R., Albany, N. Y.
Specimens of *Anomala lucicola* Fab., Albany, N. Y.
- Mendenhall, E. W., Columbus, Ohio
Specimens and work of juniper webworm, *Dichomeris marginella* Fab., Columbus, Ohio
- Meyers, L. H., Selkirk, N. Y.
Specimens of common stalk borer, *Papaipema nitela* Guen., Selkirk, N. Y.
- Miller, B. Company, Williamsville, N. Y.
Specimens of pine bark aphid, *Chermes pinicorticis* Fitch, Williamsville, N. Y.
- Molloy, G., Watervliet, N. Y.
Holboell grebe, Cohoes, N. Y.
- Montgomery, Matthew, Burke, N. Y.
Specimen of Cecropia moth, *Samia cecropia* L., Burke, N. Y.
- Muenschner, W. C., Ithaca, N. Y.
44 specimens of plants from Lake Champlain region
- Murray, Thomas, Tuxedo, N. Y.
Specimens of clover root curculio, *Sitona hispidulus* Fab., Tuxedo, N. Y.
- Myers, Charles, Watervliet, N. Y.
Pheasant, female, Watervliet, N. Y.
Holboell grebe, Cohoes, N. Y.
Gray squirrel, Watervliet, N. Y.
- Natural Resources Intelligence Service, Department of the Interior, Ottawa, Canada
6 photographs of Indians of Northwest Canada
- Newland, D. H., Albany, N. Y.
Black sand (zircon, rutile, cassiterite, ilmenite), Jerusalem Creek, New South Wales
3 pieces Kauri gum, New Zealand
7 pieces lava, Kilauea, Hawaiian Islands
Opal on ironstone, Queensland, Australia
Opal, replacing shells, Stuart Range, South Australia
Smaltite, Queensland, Australia
Stannite, Tonwong, New South Wales
Stream tin, Queensland, Australia
2 specimens of sulphur, Kilauea, Hawaiian Islands
Topaz, white, Queensland, Australia
- O'Neill, H. J., Syracuse, N. Y.
Specimen of Pseudoscorpion, *Chelifer cancroides*, Syracuse, N. Y.
- Paladin, Arthur, Albany, N. Y.
Collection of mammal skulls. 2 red foxes; 6 gray foxes; 2 black bears; 2 raccoons; 1 muskrat; 1 Virginia deer
- Patton, G. M., Bronxville, N. Y.
Specimens of oyster shell scale on Lilac, *Lepidosaphes ulmi* L., Bronxville, N. Y.
- Peck, Harry S., Menands, N. Y.
Boulangerite from Cleveland Mine, Stevens county, Washington
Eudialyte, Hot Springs, Ark.
Eudialyte in nepheline syenite, Magnet Cove, Ark.
Hematite (pseudomorphic after siderite), Bilbao, Spain
Kernite, near Kramer, Kerr county, Calif.
- Perkins, Dr Anne E., Helmuth, N. Y.
240 specimens of plants from western New York and St Lawrence county, N. Y.
- Perkins, George C., Newark, N. Y.
Specimens of pigeon horntail, *Tremex columba* Linn., and Ichneumon Fly, *Thalassa lunator* Fab., Newark, N. Y.
- Peters, Mary K., State Institute of Applied Agriculture, Farmingdale, L. I., N. Y.
Larvae and pupae of Mexican Bean beetle, *Epilachna corrupta* Muls., Farmingdale, N. Y.
Specimens of clover mites, *Bryobia practica* Koch., Farmingdale, N. Y.

- Pfenninger, Daniel, West Webster, N. Y.
 Five-foot braid of dried corn, West Webster, N. Y.
- Phelps, Ora Parker, Saratoga Springs, N. Y.
 Star-nosed mole, Saratoga Springs, N. Y.
- Phelps, Mrs O. P., Wilton, N. Y.
 4 specimens of plants from Saratoga county, N. Y.
- Piela, Veronica, Albany, N. Y.
 Specimen of cecropia moth, *Samia cecropia* L., Albany, N. Y.
- Powers, Fred, Rensselaer, N. Y.
 Holboell grebe, Rensselaer, N. Y.
- Rauer, Mrs C. J., Johnstown, N. Y.
 Larva of maple borer, *Glycobius speciosus* Say, Johnstown, N. Y.
- Reed, Mrs George P., Honeoye, N. Y.
 2 specimens of plants, Honeoye, N. Y.
- Reed, S. C., Schenectady, N. Y.
 Specimen of dragon fly, *Aeshna tuberculifera* Walker, Schenectady, N. Y.
- Reinholt, O. H., Oneonta, N. Y.
 Pelecypods, Oneonta, N. Y.
- Rickard, Chief Clinton, Sanborn, N. Y.
 4 photographs of Indians, Sanborn, N. Y.
- Rider, J. Magdalene, Central Valley, N. Y.
 Specimen of cerambycid beetle, *Phymatodes variabilis* L., Central Valley, N. Y.
- Roberts, F. O., Troy, N. Y.
 Work of flat-headed apple borer, *Chrysobothris femoratus* Olive, Troy, N. Y.
- Rockwell, Ella, Utica, N. Y.
 Specimens of elm leaf beetle, *Galerucella luteola* Muls., Utica, N. Y.
- Rood, Clifford A., Poughkeepsie, N. Y.
 Specimens of dogwood club gall, *Lasioptera clavícula* Beutm., Charlestown, S. C.
 Work of maple and oak twig pruner, *Hypermallus villosus* Fab., Charlestown, S. C.
- Ruedemann, Rudolf, Albany, N. Y.
 25 graptolites, Germany
- Ruppert, Joseph, Heidelberg, Germany
 155 specimens of plants from Europe
- Schafer, George F., Greencastle, Ind.
 2 chipped implements, Greencastle, Ind.
- Schmalz, Charles E., Rochester, N. Y.
 Specimens of oak bulle galls, *Disholcaspis globulus* Fitch, Rochester, N. Y.
- Schoonmaker, W. J., Rensselaer, N. Y.
 14 cottontails, Rensselaer county, N. Y.
 2 varying hares, Brant lake, N. Y.
 2 muskrats, DeFrestville, N. Y.
- Skunk, Schaghticoke, N. Y.
 2 ringed-neck pheasants, males, Rensselaer, N. Y.
- Woodchuck, adult, Malden Bridge, N. Y.
 New York weasel, Brainard, N. Y.
 Small brown weasel, Rensselaer, N. Y.
 Flying squirrel, Rensselaer, N. Y.
 Barn owl, Rensselaer, N. Y.
- Schuylerville High School, Schuylerville, N. Y.
 Pupa of tomato sphinx, *Phlegethontius quinque maculatus* Haw., Schuylerville, N. Y.
- Scott, R. S., Rochester, N. Y.
 Specimens of goldenrod galls, *Eurosta solidaginis* Fitch, Rochester, N. Y.
- Seymour, E. L. D., Hempstead, L. I., N. Y.
 Specimens of galls of Spruce gall aphid, *Chermes abietis* L., Hempstead, N. Y.
 Specimens of pine leaf scale, *Chionaspis pinifoliae* Fitch, Hempstead, N. Y.

- Simmons, G. D., Earlville, N. Y.
2 photographs of Indian site near Earlville, N. Y.
- Slocum, A. W., Chicago, Ill.
Lecthaylus gregarius Weller, Blue Island, Ill.
- Smith, Harold F., Fredonia, N. Y.
Larvae and nest of fall webworm, *Hyphantria cunea* Dru., Brant, N. Y.
Larvae of stable fly, *Stomoxys calcitrans* L., Fredonia, N. Y.
- South Family Niskayuna Shakers, through Sister Jennie M. Wells, West Albany, N. Y.
Collection of about 75 Shaker articles
- Sowersby, William, Mount Vernon, N. Y.
Specimens of carabid beetle, *Carabus memorialis* Mull., Mount Vernon, N. Y.
- Stein, E. J., Albany, N. Y.
Dalmanites pleuroptyx Green, Indian Ladder, Albany county, N. Y.
- Swift, Marjorie E., Bronx Park, N. Y.
Specimens of iris weevils, *Mononychus vulpeculus* Fab., Bronx Park, N. Y.
- Swiggett, Edward M., Utica, N. Y.
Specimens of tortoise beetles, *Chelymorpha cassidea* Fab., Utica, N. Y.
- Thompson, J. A., Rochester, N. Y.
Specimen of blackberry seed gall, *Diastrophus cuscutaeformis* O. S., Rochester, N. Y.
- Towner, Dr Albert N., Towners, N. Y.
Specimens of maple bladder gall, *Phyllocoptes quadripes* Shim., Towners, N. Y.
- Vander Veer, Estate of Dr Albert, through Dr Edgar A. Vander Veer, Albany, N. Y.
Japanese head decoration
Japanese steel dagger
Japanese carved case
- Van Woert, Dr R., Ravena, N. Y.
9 specimens of plants, Albany county, N. Y.
- Vickers, Robert, Cohoes, N. Y.
Pintail duck, female, Cohoes, N. Y.
- Wadhams, Mrs F. E., Albany, N. Y.
Loin cloth from Samoan Islands
- Wallbridge, W. S., Owens Bottle Works, Toledo, Ohio
Wicker covered bottle
- Waterman, Alfred, East Branch, N. Y.
Specimens of spittle bugs, *Cercopidae*, East Branch, N. Y.
- Winter, William F., Schenectady, N. Y.
Small Shaker loom
Samples of Shaker homespun tapes
Shaker brush, Lebanon, N. Y.
- Young, Ralph, Delmar, N. Y.
Ostracods, Helderberg mountains, N. Y.
- Zenkert, Charles A., Buffalo, N. Y.
18 specimens of plants from western New York
- Zimmer, C. H., New York, N. Y.
Specimens of weevils, *Otiorynchus sulcatus* Fab., Roslyn, N. Y.

BY EXCHANGE

- Mining Museum, Sydney, Australia, through D. H. Newland, Albany, N. Y.
Collection of 44 minerals from New South Wales, Queensland and Central Australia.
- Reinholt, Oscar H., Oneonta, N. Y.
Copper amygaloid from Phoenix mine, Keweenaw Peninsula, Mich.
Steel bit for use with diamond drill
Blue calcite, Riverside, Calif.
Petroleum coke from refinery, Marcus Hook, Pa.
Crude manjak, Trinidad, British West Indies
Serpentine, used in old buildings at the University of Pennsylvania, Pittsburgh, Pa.
2 specimens of native sulphur in limestone drill cores, Texas.

BY MUSEUM STAFF

- Adams, Charles C., Albany, N. Y.
 Dike and wall rock from foot of falls, St Huberts, N. Y.
- Chamberlain, K. F., Albany, N. Y.
 Specimens of butterfly, *Cercyonis* sp., South Bethlehem, N. Y.
 Specimens of beetles and ants, *Pselaphidae* and hosts, South Bethlehem, N. Y.
 225 specimens of miscellaneous insects, Clarksville, N. Y.
 42 specimens of miscellaneous insects, Karner, N. Y.
 4 specimens of Carabid beetles, Tupper Lake, N. Y.
 181 specimens of miscellaneous insects, Albany, N. Y.
- Glasgow, R. D., Albany, N. Y.
 2 pierid butterflies, North Elba, N. Y.
 7 flies, Diptera, Lake Placid, N. Y.
 33 miscellaneous insects, Lake Placid and Raquette Lake, N. Y.
 Collection of black fly larvae, John Boyd Thacher State Park, East Berne, N. Y.
 2 collections of black fly larvae, Brewster, N. Y.
 Collection of black fly larvae, pupae and adults, Sloatsburg, N. Y.
 19 Specimens of punkies, American Legion Tuberculosis Convalescents' Mountain Camp, Tupper Lake, N. Y.
 Collection of arbor vitae infested with Arbor Vitae Leaf Miner, *Argyresthia thuiella* Pack, Albany, N. Y.
 Collection of Austrian pine and mugho pine infested with the European pine shoot moth, *Rhyacionia buoliana* Hulbner, Westchester county, N. Y.
 Collection of Norway maple seed infested by the Norway maple leaf stem miner, *Nepticula sericopeza* Zeller, Albany, N. Y.
- Goldring, Winifred, Albany, N. Y.
 Fossil cephalopod, Keefer Corner, N. Y.
 3 cephalopods and brachiopods, Copeland Hill, N. Y.
 5 gastropods and pelecypods, Indian Fields, N. Y.
- Goldring, Winifred, and Ruedemann, Rudolf, Albany, N. Y.
 11 fossils, Indian Ladder, Albany county, N. Y.
 7 brachiopods and trilobites, Feura Bush, N. Y.
 48 brachiopods and pelecypods, Dormansville, N. Y.
 18 pelecypods and brachiopods from Lawson lake, Clarksville and Dormansville, N. Y.
 Seaweed, Altamont, N. Y.
 6 rock samples of Schenectady beds, Indian Ladder, Albany county, N. Y.
 7 graptolites, Voorheesville, N. Y.
 Rock sample of welded contact of Becraft and Oriskany, Indian Ladder, Albany county, N. Y.
 11 graptolites, Charlton, N. Y.
 9 fossils, Ballston Lake, N. Y.
- Fossil, Niskayuna, N. Y.
- House, Homer D., Albany, N. Y.
 Specimens of spirea pod gall, *Rhadophaga salicifolia* Felt, Oneida, N. Y.
 1487 plant specimens for the Herbarium
- Newland, D. H., Albany, N. Y.
 13 specimens zinc ores and concentrates, Balmat, N. Y.
 14 specimens talc, crude and ground, Gouverneur, N. Y.
 8 specimens magnetite ore and concentrates, Lyon Mountain and Mineville, N. Y.
 3 specimens slate, Truthville, N. Y.
 6 specimens calcite, quartz and asbestos, Lyon Mountain, N. Y.
 2 specimens specular hematite, Pitcairn, N. Y.
- Ruedemann, Rudolf, Albany, N. Y.
 Rock samples of Beekmantown quartzite, Snyders lake, N. Y.
 Coralline algae, Coxsackie, N. Y.
 Conodonts and styliolinas, Eighteen Mile creek, N. Y.
 12 graptolites, Mount Merino, N. Y.

- Ruedemann, Rudolph, and Goldring, Winifred, Albany, N. Y.
 3 rock samples of Manlius transition beds, New Salem, N. Y.
 29 graptolites, Schodack Landing, N. Y.
 54 graptolites, Stuyvesant, N. Y.
- Ruedemann, Rudolf, and Kilfoyle, C. F., Albany, N. Y.
 3 rock samples of Burden conglomerate, Hudson, N. Y.
 6 graptolites, Linlithgo, N. Y.
 16 graptolites, Greendale, N. Y.
- Ruedemann, Rudolph, and Powers, S.
 2 graptolites, Criner Hills, Okla.
- Schoonmaker, W. J., Albany, N. Y.
 5 sets of woodchuck embryos, Schaghticoke, N. Y.
- Schoonmaker, W. J., and Chamberlain, K. F., Albany, N. Y.
 Specimens of fleas from Gray Fox, *Cediopsylla simplex* Baker, and
Ozopsylla arctomys Baker, Duanesburg, N. Y.
- Washburn, Florence, Albany, N. Y.
 Specimens of elm leaf beetle, *Galerucella luteola* Muls., Albany, N. Y.
 Specimen of honey bee, *Apis mellifica* L., Albany, N. Y.
 Specimen of eight spotted forester, *Alypia octomaculata* Fab., Albany, N. Y.
 Specimens of adults, larvae, cocoons and work of Norway maple leaf-
 stem miner, *Nepticula sericopeza*, Albany, N. Y.
 Specimens of larvae, pupae and adults of arbor vitae leaf miner, *Argyresthia*
thuiella Pack, Albany, N. Y.
 Specimens of larvae, pupae and adults of European pine shoot moth,
Rhyacionia buoliana Huebner, Westchester county, N. Y.
- Whitney, Elsie G., Albany, N. Y.
 420 plant specimens for the Herbarium

BY TRANSFER

- Conservation Department, Albany, N. Y.
 Set of locked antlers of whitetail deer
 Mounted moose head
 Mounted whitetail deer head
 Snowy owl
 American bittern
 2 great-horned owls
 Loon
 Great blue heron

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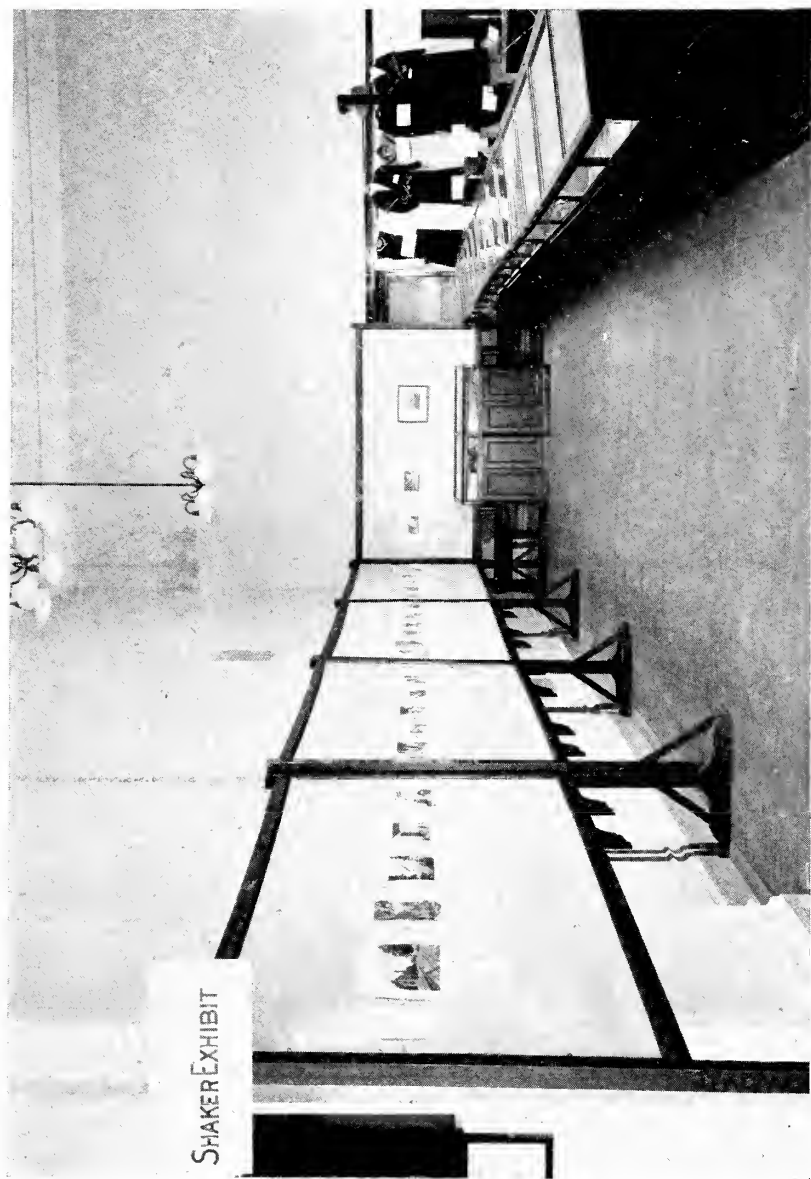


Figure 2 Photographs displayed by William F. Winter in connection with the State Museum temporary exhibit illustrating history and industries of the Shaker colonies in New York



Figure 3 Objects illustrating Shaker household industries, as displayed in a temporary exhibit of the State Museum

SHAKER INDUSTRIES
April 1911-1913



Figure 4 Another view of the room showing Shaker household arts, as displayed in the State Museum temporary exhibit.

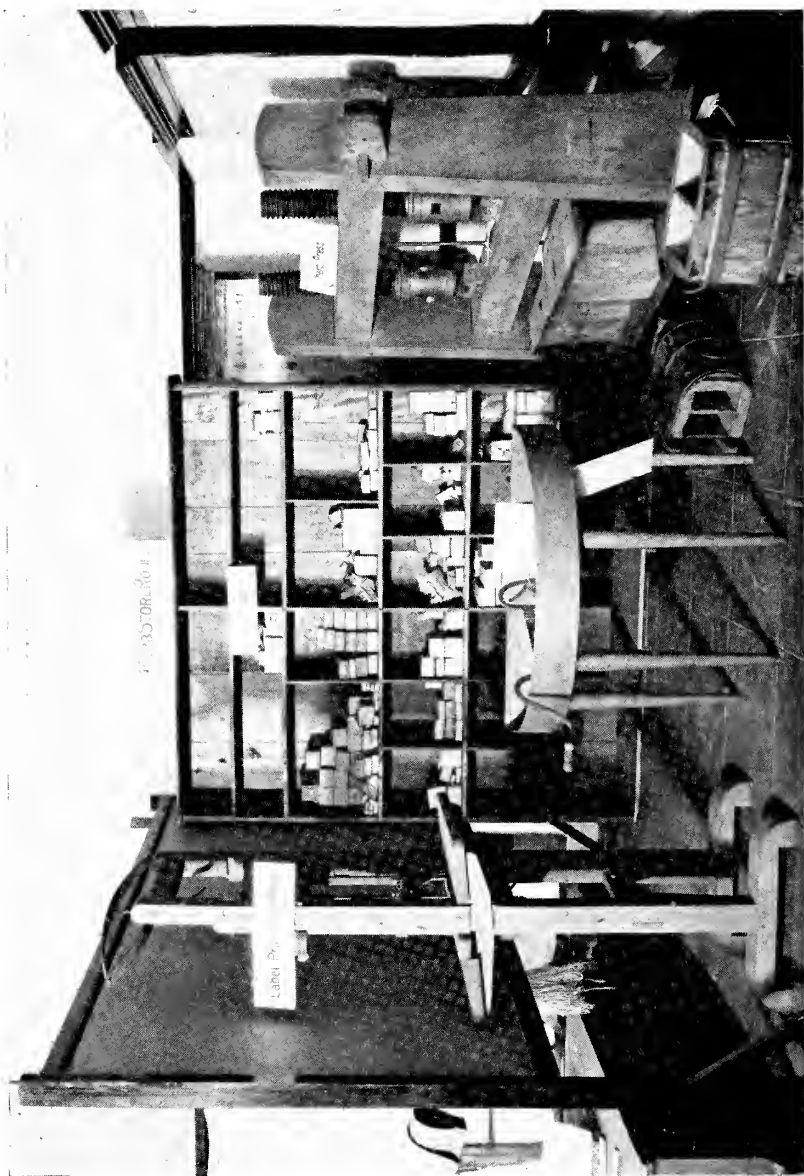


Figure 5 Objects illustrating the herb industry at the Shaker settlements in New York. Temporary exhibit of Shaker industries at the State Museum.



Figure 6 Experimental plats of narcissus on Long Island, used in control experiments for eelworms and bulb fly pests.



Figure 7 Current expensive method of eradicating narcissus plants infested with eelworms. Infested plants are recognized when in the shadow produced by the umbrella.

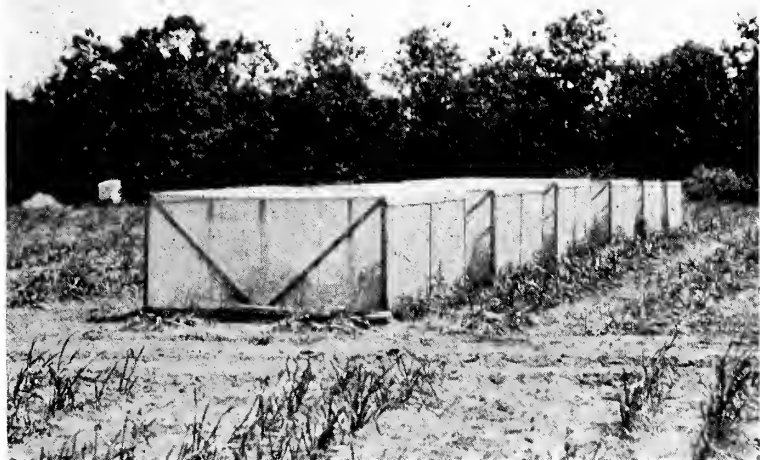


Figure 8 Cages used in bulb fly control experiments on Long Island



Figure 9 Hot water plant used for the treatment of narcissus bulbs infested with eelworms and bulb flies



Figure 10 A field of healthy daffodils on Long Island, to be compared with the figure below.



Figure 11 A field of daffodils destroyed by bulb flies and basal rot. Long Island.



Figure 12 Equipment used in experiments to control black flies and similar biting flies hiding among vegetation. A power blower scatters poison powders on the vegetation and the flies.

THE DEVELOPMENT OF THE NEW YORK STATE
MUSEUM AS PROVIDED BY THE LAWS OF
NEW YORK STATE, 1836 TO 1931

BY

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AND

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INTRODUCTORY NOTE

The legal history of the New York State Museum and its antecedents covers a period of nearly a century, and it has undergone many changes. In 1918 Dr John M. Clarke printed in his 14th Report of the Director of the State Museum and Science Department (N. Y. State Mus. Bul. Nos. 207-8, p. 10-18) a "Codification of the State Museum Law," which had been prepared with the assistance of Dr Frank B. Gilbert, Counsel for the Education Department. The *italicized* words in the text were those then in the *law*, and the bracketed words were those which were considered desirable additions. Attention is also called to the latest laws as given in McKinney's Consolidated Laws of New York, Annotated, Book 16, Education Law, and Supplements, 1930.

Laws now in effect are: Laws of 1899, Chapter 153 (which is now section 27 of the Indian Law); Education Law, sections 27, 53-56, 1115; Conservation Law, sections 665, 673 and 727; State Printing Law, section 7.

CONTENTS AND ABSTRACT

April 15, 1836. Chapter 142. Provides for a Geological and Natural History Survey; collections to be deposited in State Library.

May 7, 1840. Chapter 245. State Museum to be housed in old State Hall.

April 8, 1843. Chapter 85. Authorizes publication and sale of reports of Geological Survey.

May 10, 1845. Chapter 179. Directs Regents to provide for safe keeping of the State Cabinets of Natural History in old State Hall. New York State Agricultural Society given free use of said cabinets, subject to regulations of Regents.

May 7, 1847. Chapter 212. Authorizes Governor to have completed that portion of the natural history relating to agriculture and

paleontology, to continue in employment the geologists engaged in that work, and to make all contracts necessary for its completion.

April 10, 1850. Chapter 360. Secretary of State is given charge of completing and publishing the reports of the Geological Survey. He and the Secretary of the Regents are authorized to examine all claims for work and report to the Legislature, together with a plan for the completion of the survey.

May 11, 1865. Chapter 697. Directs the State Paleontologist, under the direction of the Regents, to make a collection from the duplicate fossils and minerals belonging to the State, and present said collection to the Cornell University Library.

April 11, 1868. Chapter 179. State Paleontologist, under direction of the Regents, is authorized to present a collection of duplicate fossils and minerals belonging to the State to Cornell University; Cornell Library is empowered to transfer to Cornell University any articles received by virtue of chapter 697 of the Laws of 1865.

May 19, 1868. Chapter 830. Appropriates \$1500 for compensation of a botanist for arranging herbarium in State Cabinet of Natural History.

May 8, 1869. Chapter 774. Curator of State Cabinet, under direction of Regents, is authorized to present a collection from duplicate specimens of natural history belonging to the State, to the American Museum of Natural History, New York City.

May 2, 1870. Chapter 557. State Cabinet of Natural History is established as a museum of scientific and practical geology and general natural history, under supervision of the Regents, to be known as "The New York State Museum of Natural History"; Curator shall act as Director, supervise all operations, and appoint assistants with concurrence of Chancellor or committee of Regents. Director and Chancellor shall arrange for an annual course of free scientific lectures in connection with Museum within two years. Annual appropriation of \$10,000 for salaries and expenses of the Museum, to be administered by the Director with approval of Chancellor. Botanical department shall continue as organized for three years.

April 25, 1871. Chapter 711. Amends chapter 557 of the Laws of 1870, by transferring to the Board of Regents the powers which that law conferred upon the Chancellor or the committee of the Regents.

June 7, 1880. Chapter 549. Appropriates \$2000 for annual salary of an Entomologist, to be appointed by the Governor in place of Asa Fitch, deceased.

May 26, 1881. Chapter 377. Governor shall appoint a State Entomologist, who shall study insects injurious to agriculture and methods for controlling them; he shall report annually to the Legislature, and arrange a collection of insects for the State Museum.

May 4, 1883. Chapter 355. Directs Regents to prepare rooms in the State Hall for use of the State Museum and to arrange the collections there for exhibition; specimens in charge of the State Geologist, shall become part of said collections. Regents shall appoint the staff, consisting of Director, State Geologist and State Entomologist and Botanist, with necessary assistants; collections made by staff shall belong to the State Museum. Scientific contributions of staff shall be published yearly. Regents shall distribute duplicate specimens to institutions of learning, and provide ways to make the Museum a means of instruction to the public. The publication of the paleontology of the state shall be completed in five years. Regents may sell or exchange volumes of natural history and use proceeds for the Museum library.

June 15, 1889. Chapter 529. Consolidates laws relating to The University of State of New York. State Museum to be a part of said University, under the control and administration of Regents, who shall appoint staff, make all regulations for the safety, increase and use of Museum, and furnish other institutions with duplicate articles. Museum to be kept open not less than eight hours every week day.

April 27, 1892. Chapter 378. Museum shall be a part of The University of State of New York, and under exclusive control of Regents. Specimens and articles from other state departments may be transferred to the State Museum. The staff shall consist of the State Geologist, Paleontologist, Botanist, Entomologist, and their assistants, and any other state scientific officer. All Museum property not kept in the State Museum rooms shall be inspected annually and included in the report. Collections made by staff members shall belong to the State Museum.

April 29, 1893. Chapter 488. The scientific staff of the State Museum shall consist of the State Geologist and Paleontologist, the State Botanist and the State Entomologist, appointed by the Governor and removable at his pleasure, and their assistants, appointed by them.

May 11, 1896. Chapter 493. The State Geologist and Paleontologist now in office is continued therein during good behavior, with power to appoint and remove his assistants, and to expend money appropriated, subject only to the approval of the Comptroller; during

the term of the present incumbent, the office shall be independent of the Regents, who shall not be responsible for his department. The State Museum shall include the work of the State Geologist and Paleontologist, the State Botanist and the State Entomologist, and their assistants.

May 12, 1896. Chapter 586. Regents shall appoint a Curator to arrange for the State Museum a collection of historical and ethnographic records and relics of the New York State Indians.

March 27, 1899. Chapter 153. Directs The University of the State of New York to collect and keep in a fireproof building, all wampums which the Onondagas or the Ho-de-no-san-nee, otherwise known as the Five Nations, or the Six Nations, or the Iroquois, are entitled to possess.

April 11, 1901. Chapter 315. Repeals section 1 of chapter 355 of the Laws of 1883, relating to occupying rooms in State Hall.

February 17, 1909. Chapter 21. Articles or specimens useful to the State Museum may be transferred from other state departments, with approval of Regents. State Museum is part of University, under exclusive control of Regents. State Museum shall comprise scientific specimens and collections owned by the State, and all such property not kept in State Museum rooms shall be inspected annually and included in the report. Collections made by staff members shall belong to the State Museum. A collection of historical and ethnographic records and relics of the Indians of New York shall be arranged by a curator appointed by the Regents.

April 22, 1910. Chapter 140; March 16, 1927. Chapter 153. Museum shall be housed in Education Building.

NOTE. For additional laws see p. 79, 80.

LAWS OF NEW YORK RELATING TO THE STATE MUSEUM, 1836 to 1931

1836, Chapter 142, laws of New York. An Act to provide for a geological survey of the State. Passed April 15, 1836.

The People of the State of New York represented in Senate and Assembly, do enact as follows:

Section 1. The governor is hereby authorized and directed to employ a suitable number of competent persons, whose duty it shall be, under his direction, to make an accurate and complete geological survey of this state, which shall be accompanied with proper maps and diagrams, and furnish a full and scientific description of its rocks, soils and minerals, and of its botanical and zoological productions, together with specimens of the same; which maps, diagrams and specimens shall be deposited in the state library; and similar speci-

mens shall be deposited in such of the literary institutions in this state as the secretary of state shall direct.

§ 2. The sum of twenty-six thousand dollars is hereby appropriated annually for four years, to defray the expenses that may be incurred under this act; which sum shall be paid by the treasurer on the warrant of the comptroller, in such manner and at such times as the governor may direct.

§ 3. The person or persons employed by the governor for the purposes mentioned in the first section of this act, shall make a report annually to the legislature, on or before the first day of February in each year, setting forth generally the progress made in the survey hereby authorized.

1840, Chapter 245, Laws of New York. An Act in relation to the old state hall. Passed May 7, 1840.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The commissioners of the land-office are authorized to receive such further grant or extension of the conveyance from the corporation of the city of Albany, of the old state hall, and lot on which it stands, with such modifications and on such terms and conditions as the said commissioners may deem beneficial to the interest of the state.

§ 2. When the above named grant shall be obtained, the trustees of the new state hall are authorized and required to fit up and prepare rooms in the old state hall, as soon as the same shall be vacated, in such manner as they may deem proper, for a state museum, in which to arrange and display the various specimens, maps, figures and illustrations, which may be collected, and prepared by the zoological corps in the survey of the state.

§ 3. A sum of money, not exceeding two thousand dollars, is hereby appropriated, for the purposes named in the second section of this act.

1843, Chapter 85, Laws of New York. An Act in relation to the Natural History of New York. Passed April 8, 1843.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The governor is hereby authorized to continue such of the various departments of labor connected with the geological survey of this state, as may be necessary to ensure its ultimate completion and publication according to the plan heretofore contemplated, and to contract with the printers to the assembly for the publication of the same, at prices advantageous to the state.

§ 2. The treasurer shall pay on the warrant of the comptroller the necessary costs and expenses already incurred, or hereafter to be incurred in the completion of the said work, to the person or persons entitled to the same out of any moneys in the treasury not otherwise appropriated.

§ 3. The governor is hereby authorized to continue the services of one or both of the geologists who are now residing in Albany, for the purpose of completing and arranging the said collection of specimens in the old state hall, and doing any works connected therewith he may deem necessary.

§ 4. Whenever two or more volumes of the said work shall be completed, the governor and secretary of state may cause such books to be sold at such prices as they shall deem proper, not less than two dollars per volume, and any moneys derived from such sales may be applied to the payment of the geologists for any debt due them from the state on account of services connected with said work.

§ 5. The volumes to be published shall be uniform with those already published, and of as good materials.

§ 6. This act shall take effect immediately.

1845, Chapter 179, Laws of New York. An Act to provide for the safe keeping of the Cabinets of Natural History, and for other purposes. Passed May 10, 1845.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The regents of the university are hereby authorized and directed to make suitable provision for the safe keeping of the cabinets of natural history now deposited in the old State Hall, and to employ a person to take charge of the same, at an expense not to exceed the sum of two hundred and fifty dollars per annum, to be paid out of the treasury on the warrant of the comptroller.

§ 2. The executive committee of the New York State Agricultural Society may have the free use of said cabinets of natural history, and all the specimens therein deposited, at any and all times, for such purposes as such committee shall desire, subject to the direction and regulations of the regents of the university: provided, that such committee shall not remove said cabinets, or any of the specimens therein deposited, from the rooms in which they shall be deposited by the regents of the university.

§ 3. So much of the act entitled "an act to amend the act entitled 'An act relative to the University,' passed April 17, 1815," as exempts the regents residing in the city of New York from attendance at the meetings of the regents to be held during the session of the legislature, is hereby repealed.

§ 4. This act may be at any time hereafter altered, modified, or repealed by the legislature.

§ 5. This act shall take effect immediately.

1847, Chapter 212, Laws of New York. An Act for completing the publication of the natural history of New York. Passed May 7, 1847, "three fifths being present."

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The governor is hereby authorized to cause to be completed, and for that purpose to continue in employment the geologists now engaged upon that portion of the natural history of this state relating to agriculture and to paleontology for the period of two years from the time when their salaries ceased under an arrangement with Governor Wright, and for no longer period or term than above mentioned and at the same salary as has been hitherto paid them.

§ 2. The governor is also authorized to contract for all the work connected with the completion of the above mentioned works, such as drawing, engraving, coloring and all other necessary work connected therewith, to be done in such manner as he shall direct.

§ 3. The treasurer shall pay on the warrant of the comptroller the costs and expenses already incurred or to be hereafter incurred in the completion of the said works to the person or persons entitled to the same out of any moneys not otherwise appropriated, but no such account shall be paid unless the same be certified as being correct by the governor of this state.

§ 4. The sum of twenty-five thousand dollars is hereby appropriated for the purposes of this act.

§ 5. Should either of the present geologists decline acting, the governor is authorized to employ some other person for the same purpose.

§ 6. This act shall take effect immediately.

1850, Chapter 360, Laws of New York. An Act to provide for the completion of the Geological Survey of the state. Passed April 10, 1850.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The secretary of state is hereby authorized and directed to take charge of all the matters appertaining to the prosecution and publication of the geological survey of the state.

§ 2. It shall be the duty of the secretary of state, and the secretary of the regents of the university, to examine into and report to the next legislature, upon all claims that may be made upon the state, for work done on account of the geological survey, and upon all contracts that may exist between the state and individuals for work yet to be done on account of the survey.

§ 3. It shall be the duty of the secretary of state and of the secretary of the regents of the university, to report to the next legislature a plan for the final completion of the said survey, and to submit the estimates of the cost of such completion.

§ 4. This act shall take effect immediately.

1865, Chapter 697, Laws of New York. An Act to donate to the Cornell Library a collection from the duplicates of fossils and minerals belonging to the state. Passed May 11, 1865, by a two-thirds vote.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The state paleontologist, under the direction of the regents of the university, is hereby authorized to select from the duplicate fossils and minerals belonging to the state, as full and complete a collection of specimens as can be made for the purpose, and label and mark the same with their proper scientific names, so that they shall be properly distinguished, and present them in the name of the state to the Cornell library; the labeling being done at the expense of said library.

§ 2. This act shall take effect immediately.

1868, Chapter 179, Laws of New York, Vol. 1. An Act to donate to the Cornell University a collection from the duplicates of fossils and minerals belonging to the state, and to empower the Cornell Library to transfer certain things and rights to the Cornell University. Passed April 11, 1868; by a two-thirds vote.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The State Paleontologist, under direction of the Regents of the University, is hereby authorized to select from the duplicate fossils and minerals belonging to the state, as full and complete a collection of specimens as can be made for the purpose, and label and mark the same with their proper scientific names, so that they shall be properly distinguished, and present them, in the name of the state, to the Cornell University at Ithaca, New York.

§ 2. The Cornell Library is hereby empowered to transfer to the Cornell University any articles or things whatsoever, or right to receive any articles or things whatsoever, which said Cornell Library has already received, or has been or will be entitled to receive, under and by virtue of an act entitled to receive, under and by virtue of an act entitled "An act to donate to the Cornell Library a collection from the duplicates of fossils and minerals belonging to the State," passed May eleven, eighteen hundred and sixty-five, by resolution of the trustees of said Cornell Library at any regular meeting thereof.

§ 3. This act shall take effect immediately.

1868, Chapter 830, Laws of New York. An Act making appropriations for the support of Government. Passed May 19, 1868; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

For the Regents of the University, for salary of the secretary, two thousand dollars; for salary of the assistant secretary, one thousand dollars; for compensation of a botanist for arranging the herbarium in the State Cabinet of Natural History, one thousand five hundred dollars; for the special increase and preservation of the zoological collection, one thousand dollars; for postage, printing, stationery, compensation of messengers, expenses of Regents in attending meetings of the board and other necessary purposes, two thousand five hundred dollars.

1869, Chapter 774, Laws of New York, Vol. 2. An Act to donate to the American Museum of Natural History a collection from the duplicate specimens of natural history belonging to the State. Passed May 8, 1869, by a two-thirds vote.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The Curator of the State Cabinet, under the direction of the Regents of the University, is hereby authorized to select from the duplicate specimens of natural history belonging to the state and those which the state may acquire, and from all other specimens of natural history which may be disposed of by the Regents of the state, the first and best series of specimens, subject, however, to the rights of other institutions under existing laws, and label the same with their proper scientific names, and present them, in the name of the state, to the American Museum of Natural History in the city of New York; all of which is to be done at the expense of said Museum.

§ 2. This act shall take effect immediately.

1870, Chapter 557, Laws of New York, Vol. 2. An Act in relation to the State Cabinet of Natural History. Passed May 2, 1870; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The State Cabinet of Natural History is hereby established as a museum of scientific and practical geology and general natural history, at the capital of the state, under the care and custody of the Regents of the University, to be known hereafter as "The New York State Museum of Natural History."

§ 2. The museum shall be organized in accordance with the plan recommended to the Legislature, by the Board of Regents in their

report of eighteen hundred and sixty-six, and the present curator shall act as director of the museum, and shall supervise and direct all its scientific and practical operations, and he shall appoint such assistants or curators of departments as may be required for the accomplishment of said plan, with the concurrence of the chancellor of the Board of Regents, or the committee of the same having charge of the museum.

§ 3. It shall be the duty of the director of the museum and the chancellor of the Board of Regents to organize a plan and make the necessary arrangements to establish an annual course of free scientific lectures in connection with the museum, as soon as practicable, and within two years from the passage of this act.

§ 4. For the salary of the director, as established in the appropriation bill of eighteen hundred and seventy, for three assistants as now employed by him, and for the increase and preservation of the collection, the sum of ten thousand dollars annually shall be and is hereby appropriated, and all expenditures for compensation of assistants, or for the increase and preservation of the collections, shall be made by the director, with the approval of the chancellor of the board of Regents.

§ 5. The botanical department as now organized shall be continued as originally contemplated, for three years from the end of the present year.

§ 6. This act shall take effect upon its final passage.

1871, Chapter 711, Laws of New York, Vol. 2. An Act to amend an act entitled "An act in relation to the State Cabinet of Natural History," passed May second, eighteen hundred and seventy. Passed April 25, 1871; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The assistants and curators of departments provided for by the second section of the act entitled "An act in relation to the State Cabinet of Natural History," passed May second, eighteen hundred and seventy, shall be appointed by the director of the State Museum of Natural History, with the concurrence of the board of Regents of the University.

§ 2. The annual course of free scientific lectures authorized by the third section of said act shall be organized under the direction of the board of Regents and the director of the State Museum.

§ 3. The moneys appropriated by the fourth section of the act above named shall be expended by the director of the State Museum of Natural History, with the approval of the board of Regents of the University.

§ 4. This act shall take effect immediately.

1880, Chapter 549, Laws of New York. An Act making appropriations for certain expenses of government and supplying deficiencies in former appropriations. Passed June 7, 1880; by a two-thirds vote.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

* * * *

For the annual salary of an entomologist, to be appointed by the governor, in place of Asa Fitch, deceased, two thousand dollars.

1881, Chapter 377, Laws of New York. An Act to provide for the appointment of a state entomologist and fixing his compensation. Passed May 26, 1881; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. There shall be appointed by the Governor a state entomologist, who shall be charged with the study of insects injurious to agriculture and of methods for controlling and preventing their depredations.

§ 2. The salary of the entomologist shall be two thousand dollars, and he shall render an annual report of his labors and investigations to the legislature and shall arrange for the state museum of natural history a collection of insects taken in the course of his investigations.

§ 3. This act shall take effect immediately.

1883, Chapter 355, Laws of New York. An act to regulate the state museum of natural history and the publication of the paleontology of the state. Passed May 4, 1883; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. For the purpose of providing sufficient and fireproof accommodations for the collections of natural history belonging to the state, the regents of the University, as trustees of the state museum of natural history, are hereby directed, in pursuance of the concurrent resolution of the legislature, passed on the twenty-fourth day of March, eighteen hundred and eighty-one, to occupy for the purposes of said museum the several rooms of the state hall as they may be vacated by their present occupants, and said trustees are hereby directed to fit up and prepare said rooms in a suitable manner, and to remove thither and arrange in order for exhibition, as soon as may be, the collections of said museum. Said trustees shall also make provision for and remove to said state hall, to be a part of said museum, all of the fossils, minerals and other property of the state now in charge of the state geologist, in pursuance of the provisions of chapter two hundred and seventy of the laws of eighteen hundred and eighty-two; and the sum of twenty-thousand

dollars, or so much thereof as may be necessary, is hereby appropriated for the expenses of fitting up and removal as provided in this section, to be paid on vouchers approved by said trustees.

§ 2. The scientific staff of the museum, to be appointed by said trustees, shall consist of a director, who may also be state geologist, and whose compensation shall be the same as now fixed by law, and of three assistants, together with such special assistants as may be necessary, whose compensation shall be fixed from time to time by said trustees, together with the state geologist and state entomologist and botanist as these officers are now defined and provided for by law; and all the collections made by the members of said staff during the terms of service shall belong to, and form a part of the collections of the museum; and the trustees of said museum shall be authorized to publish each year the scientific contributions of said staff and such other original scientific contributions as they may deem expedient, which publication shall be in lieu of the reports now required by law from the state geologist and state entomologist, and of the scientific papers communicated each year to the legislature, along with the annexed report of said trustees; and it shall be the duty of said trustees to distribute from the duplicate specimens of the museum to institutions of learning such collections as may be available and suitable for that purpose, as directed by a concurrent resolution of the legislature, passed on the fourteenth day of March, eighteen hundred and eighty-one, and to provide facilities in the museum for the study of its collections, and by means of printed hand-books describing said collections, and in such other ways as may be practicable, to make said museum a means of instruction to the citizens of the state. In order to provide for the expense of printing the aforesaid scientific publications, and in order to increase the usefulness and efficiency of said museum, as aforesaid, the annual appropriation to be made for its maintenance shall be fifteen thousand dollars, to be paid on vouchers approved by said trustees.

§ 3. The trustees of the state museum of natural history are hereby appointed to supervise the completion of the publication of the palaeontology of the state, to contract for the preparation and printing thereof, and to audit and certify to the expenditures therefor; and it is hereby provided that one volume of said palaeontology shall be published within one year from the execution of the contract for its preparation, that a second volume shall be published within two years, and that the entire work shall not extend beyond five bound volumes in addition to those already issued, all of which shall be published within five years from the passage of this act, and shall comprise the following subjects, that is to say the Lamelli-branchiata (bi-valve shells) to be bound in two volumes, the Bryozoans (fossil corals) to be bound in one volume, the Brachiopodia (lamp shells) to be bound in one volume, and the Crustacea, et cetera (crabs, etc.,) to be bound in one volume; and the sum of fifteen thousand dollars shall be appropriated annually for five years for the purposes of this section, payable on vouchers certified by

said trustees; which sum of fifteen thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any money in the treasury not otherwise appropriated, for the purpose of said publication for the current year.

§ 4. The volumes of the natural history hereafter to be published and the copies still remaining of the volumes already published shall be in charge of the trustees of said museum, who shall distribute and sell the same in accordance with the provisions of law now in force for such distribution and sale, and the proceeds of such sale said trustees shall use for the purpose of forming a suitable library for said museum, and they shall have authority to make exchanges with such portion of the volumes of said work as are not required for distribution or sale and to receive donations and deposits of books and specimens on such terms as they shall deem advantageous for said museum.

1889, Chapter 529, Laws of New York. An Act to revise and consolidate the laws relating to the University of the State of New York. Approved by the Governor June 15, 1889. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The following titles and sections are hereby established for the government of the University of the State of New York, in lieu of existing acts and parts of acts which are repealed in the second section of this act.

* * * *

§ 3. The University shall consist of all the institutions of academic and higher education which are now or may hereafter be incorporated in this State, together with the State Library and State Museum and such other libraries, museums or other institutions for higher education as may, in conformity with the ordinances of the Regents, after official inspection, be admitted to the University.

§ 16. The University, including the State Library and State Museum shall be under the control of the Regents, who shall have all the powers of trustees, including full authority to appoint all needed officers and employees; to fix their titles, duties, salaries and terms of service; to make all needed regulations for the safety, increase and use of said library and museum; to buy, sell, exchange or receive by will, gift or on the deposit articles or collections properly pertaining to the library or museum; to maintain lectures connected with higher education in this State, and to lend to or deposit permanently with other institutions books, specimens or other articles in their custody which, because of being duplicates or for other reasons, will, in the judgment of the Regents, be more useful in the said institutions than if retained in the original collections at Albany.

§ 17. The State Library and Museum shall be kept open not less than eight hours every week day in the year, and Members of

the Legislatures, judges of the Court of Appeals, justices of the Supreme Court and heads of the several State departments may borrow from the library books for use in Albany, but shall be subject to such restrictions and penalties as may be prescribed by the Regents for the safety or greater usefulness of the library.

1892, Chapter 378, Laws of New York, Vol. 1. An Act to revise and consolidate the laws relating to the University of the State of New York. Approved by the Governor April 27, 1892. Passed, three-fifths being present.

*The People of the State of New York, represented in Senate and Assembly, do enact as follows: * * **

Section 1. This chapter shall be known as the University law. * * *

§ 10. The state library and state museum shall be departments of the University, and the regents may establish such other departments as they deem necessary to discharge the duties imposed on them by law. All University departments shall be under exclusive control of the regents who shall have all powers of trustees thereof, including authority to appoint all needed officers and employes; to fix their titles, duties, salaries and terms of service; to make all needed regulations; and to buy, sell, exchange or receive by will, gift or on deposit, articles or collections properly pertaining thereto; to maintain lectures connected with higher education in this state, and to lend to or deposit permanently with other institutions books, specimens or other articles in their custody which, because of being duplicates or for other reasons, will in the judgment of the regents be more useful in said institutions than if retained in the original collections at Albany. * * *

§ 20. The librarian of any library owned by the state, or the officer in charge of any state department, bureau, board, commission or other office may, with the approval of the regents, transfer to the permanent custody of the state library or museum any books, papers, maps, manuscripts, specimens or other articles which, because of being duplicates or for other reasons, will in his judgment be more useful to the state in the state library or museum than if retained in his keeping. * * *

§ 22. Unless otherwise specifically provided by law, the state museum shall include the work of the state geologist, paleontologist, botanist, entomologist and any other state scientific officers; and these officers with their respective assistants shall constitute the scientific staff of the state museum. All scientific specimens and collections, works of art, objects of historic interest and similar property appropriate to a general museum, if owned by the state and not placed in other custody by a specific law, shall constitute the state museum, and one of its officers shall annually inspect all such property not kept in the state museum rooms, and the annual report of the museum to the legislature shall include summaries of such property, with its location, and any needed recommendations as to its safety or usefulness.

§ 23. Any scientific collection made by a member of the museum staff during his term of office shall, unless otherwise authorized by resolution of the regents, belong to the state and form part of the state museum.

1893, Chapter 488, Laws of New York, Vol. 1. An Act to amend the university law in relation to the scientific staff of the state museum. Approved by the Governor April 29, 1893. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section twenty-two of chapter three hundred and seventy-eight of the laws of eighteen hundred and ninety-two, entitled "An act to revise and consolidate the laws relating to the university of the state of New York," is hereby amended to read as follows, to take effect immediately:

§ 2. Unless otherwise provided by law, the state museum shall include the work of the state geologist and paleontologist, the state botanist and the state entomologist, who shall be appointed by the governor and removable at his pleasure. The salary of the state geologist and paleontologist shall be three thousand six hundred dollars, of the state botanist, two thousand dollars and of the state entomologist, two thousand dollars. They and their assistants who shall be appointed by them shall constitute the scientific staff of the state museum. All scientific specimens and collections, works of art, objects of historic interest and similar property appropriate to a general museum, if owned by the state and not placed in other custody by a specific law, shall constitute the state museum, and one of its officers shall annually inspect all such property not kept in the state museum rooms, and the annual report of the museum to the legislature shall include summaries of such property, with its location, and any needed recommendations as to its safety or usefulness.

1896, Chapter 493, Laws of New York, Vol. 1. An Act to amend chapter three hundred and seventy-eight of the laws of eighteen hundred and ninety-two, relating to New York State Museum, also continuing the office of state geologist and palaeontologist. Became a law May 11, 1896, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section twenty-two of chapter three hundred and seventy-eight of the laws of eighteen hundred and ninety-two, entitled "An act to revise and consolidate the laws relating to the

university of the state of New York," is hereby further amended to read as follows:

§ 22. State museum; how constituted.—All scientific specimens and collections, works of art, objects of historic interest and similar property appropriate to a general museum, if owned by the state and not placed in other custody by a specific law, shall constitute the state museum, and one of its officers shall annually inspect all such property not kept in the state museum rooms, and the annual report of the museum to the legislature shall include summaries of such property, with its location, and any needed recommendations as to its safety or usefulness. Unless otherwise provided by law, the state museum shall include the work of the state geologist and palaeontologist, the state botanist and the state entomologist, who with their assistants, shall be included in the scientific staff of the state museum.

§ 2. The state geologist and paleontologist now in office continued therein at his present salary of three thousand six hundred dollars a year during good behavior, with power to appoint and remove his assistants, and to expend, subject only to the approval and audit of the state comptroller, all money appropriated for his use by the legislature. His annual report shall be printed as heretofore as a part of the state museum report; but during the incumbency of the present state geologist and palaeontologist the office shall be independent of the trustees of the state museum, who are relieved of all responsibility for his department, notwithstanding the provisions of section one of this act and sections ten and twenty-two of chapter three hundred and seventy-eight of the laws of eighteen hundred and ninety-two as amended.

§ 3. This act shall take effect immediately.

1896, Chapter 586, Laws of New York, Vol. 1. An Act to provide for the collection of historical and ethnologic records and relics, of the American Indians of the state of New York, and making an appropriation therefor. Became a law May 12, 1896, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. There shall be made, as the Indian section of the state museum, as complete a collection as practicable of the historical, ethnographic and other records and relics of the Indians of the state of New York including implements or other articles pertaining to their domestic life, agriculture, the chase, war, religion, burial and other rites or customs, or otherwise connected with the Indians of New York.

§ 2. The trustees of the state museum shall appoint on its staff a competent curator, without salary, to make and arrange this Indian collection, and for his necessary expenses, and for collecting or buying specimens for the Indian collection, there shall be paid

by the treasurer, on the warrant of the comptroller, from any money not otherwise appropriated, not to exceed five thousand dollars.

§ 3. This act shall take effect immediately.

1899, Chapter 153, Laws of New York, Vol. 1. An Act to collect and preserve from loss or injury, any and all wampums which the Onondaga nation of Indians, or its wampum-keeper, or any of the Ho-de-no-sau-nee, otherwise known as the Five Nations, or the Six Nations, or the Iroquois, is entitled to possess. Became a law March 27, 1899, with the approval of the Governor. Passed, a majority being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The university of the state of New York, which was duly elected to the office of wampum-keeper by the Onondaga nation on February twenty-sixth, eighteen hundred and ninety-eight, and which by unanimous action of its regents on March twenty-second, eighteen hundred and ninety-eight, accepted such election as authorized to do by law, and which accepted the custody of the wampums as formally transferred to the chancellor as part of the exercises and with the unanimous approval, both of the election and transfer, by the council of the Five Nations held in the senate chamber of the capitol at Albany on June twenty-second, eighteen hundred and ninety-eight, by duly chosen representatives of all the original nations of the Ho-de-no-sau-nee, shall hereafter be recognized in all courts and places, as having every power which has ever, at any time, been exercised by any wampum-keeper of the Onondaga nation, or of any of the Ho-de-no-sau-nee, otherwise known as the five nations, or the Six Nations, or the Iroquois, and shall keep such wampums in a fireproof building, as public records, forever, and is hereby authorized to secure by purchase, suit, or otherwise, any wampums which have ever been in the possession of any of the Ho-de-no-sau-nee, or any preceding wampum-keeper, and which are now owned by any of them or to which any of them is entitled, or to which it is entitled, in law or in equity; and to maintain and carry on suit to recover any of such wampums in its own name or in the name of the Onondaga nation at any time notwithstanding that the cause of action may have accrued more than six years, or any time, before the commencement of any such suit.

§ 2. The provisions of this act shall not apply to the subject matter of any litigation now pending in any court of this state.

§ 3. This act shall take effect immediately.

1901, Chapter 315, Laws of New York, Vol. 1. An Act to repeal section one of chapter three hundred and fifty-five of the laws of eighteen hundred and eighty-three, entitled "An act to regulate the state museum of natural history, and the publication of the paleontology of the state." Became a law April 11, 1901, with the approval of the Governor. Passed, by a two-thirds vote.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section one of chapter three hundred and fifty-five of the laws of eighteen hundred and eighty-three, entitled "An act to regulate the state museum of natural history, and the publication of the paleontology of the state," is hereby repealed.

§ 2. This act shall take effect immediately.

1904, Chapter 40, Laws of New York. In 1901 the State Museum was made a department in The University of the State of New York; this law of 1904 consolidated The University of the State of New York and the State Department of Education.

1909, Chapter 21, New York Education Law, and Chapter 16, Consolidated Laws. An Act relating to education, constituting chapter sixteen of the Consolidated Laws.

Section 1. This chapter shall be known as the "Education Law."

§ 1025. The librarian of any library owned by the state, or the officer in charge of any state department, bureau, board, commission or other office may, with the approval of the regents, transfer to the permanent custody of the state library or museum any books, papers, maps, manuscripts, specimens or other articles which, because of being duplicates or for other reasons, will in his judgment be more useful to the state in the state library or museum than if retained in his keeping. * * *

§ 1091. The state library and state museum shall be departments of the university, and the regents may establish such other departments as they deem necessary to discharge the duties imposed on them by law. All university departments shall be under the exclusive control of the regents, who shall have all powers of trustees thereof, including authority to appoint all needed officers and employees; to fix their titles, duties, salaries and terms of service; to make all needed regulations; and to buy, sell, exchange or receive by will, gift or on deposit, articles or collections properly pertaining thereto; to maintain lectures connected with higher education in this state, and to lend to or deposit permanently with other institutions, books, specimens or other articles in their custody, which, because of being duplicates, or for other reasons, will in the judgment of the regents, be more useful in said institutions than if retained in the original collection at Albany.

§ 1092. All scientific specimens and collections, works of art, objects of historic interest and similar property appropriate to a general museum, if owned by the state and not placed in other custody by a specific law, shall constitute the state museum, and one of its officers shall annually inspect all such property not kept in the state museum rooms, and the annual report of the museum to the legislature shall include summaries of such property, with its location, and any needed recommendations as to its safety or usefulness. The state museum shall include the work of the state geologist and paleontologist, the state botanist and the state entomologist, who, with their assistants, shall be included in the scientific staff of the state museum.

§ 1093. Any scientific collection made by a member of the museum staff during his term of office shall, unless otherwise authorized by resolution of the regents, belong to the state and form part of the state museum.

§ 1094. There shall be made, as the Indian section of the state museum, as complete a collection as practicable of the historical, ethnographic and other records and relics of the Indians of the state of New York, including implements or other articles pertaining to their domestic life, agriculture, the chase, war, religion, burial and other rites or customs, or otherwise connected with the Indians of New York. The trustees of the state museum shall appoint on its staff a competent curator, without salary, to make and arrange this Indian collection.

1910, Chapter 140, New York Education Law. An Act to amend the education law, generally.

Section 1. This chapter shall be known as the "Education Law."

§ 27. After the completion of the state education building, it shall be occupied exclusively by the education department, including the university, with the state library, the state museum, and its other departments, together with such other work with which the commissioner of education and the regents have official relations, as they may, in their discretion, provide for therein; and such building and the offices of such department shall be maintained at state expense. * * *

§ 53. The state library and state museum shall be departments of the university, and the regents may establish such other departments and divisions therein as they shall deem useful in the discharge of their duties.

§ 54. All scientific specimens and collections, works of art, objects of historic interest and similar property appropriate to a general museum, if owned by the state and not placed in other custody by a specific law, shall constitute the state museum, and one of its officers shall annually inspect all such property not kept in the state museum rooms, and the annual report of the museum to the legislature shall include summaries of such property, with its location, and any needed recommendations as to its safety or usefulness. The state museum shall include the work of the state geologist and paleontologist, the state botanist and the state entomologist, who,

with their assistants, shall be included in the scientific staff of the state museum.

§ 55. Any scientific collection made by a member of the museum staff during his term of office shall, unless otherwise authorized by resolution of the regents, belong to the state and form part of the state museum.

§ 56. There shall be made, as the Indian section of the state museum, as complete a collection as practicable of the historical, ethnographic and other records and relics of the Indians of the state of New York, including implements or other articles pertaining to their domestic life, agriculture, the chase, war, religion, burial, and other rites or customs, or otherwise connected with the Indians of New York. * * *

§ 1115. The librarian of any library owned by the state, or the officer in charge of any state department, bureau, board, commission or other office may, with the approval of the regents, transfer to the permanent custody of the state library or museum any books, papers, maps, manuscripts, specimens or other articles which, because of being duplicates or for other reasons, will in his judgment be more useful to the state in the state library or museum than if retained in his keeping.

1927, Chapter 153, Laws of New York. An Act to amend the education law to conform to the state departments law, in relation to the organization, functions, powers and duties of the education department, and repealing certain sections thereof. Became a law March 16, 1927, with the approval of the Governor. Passed, three-fifths being present.

*The People of the State of New York, represented in Senate and Assembly, do enact as follows: * * **

Section 27. The state education building shall be occupied exclusively by the education department, including the university, with the state library, the state museum, and its other divisions and bureaus, together with such other work with which the commissioner of education and the regents have official relations, as the regents may, in their discretion, provide for therein, and such building and the offices of such department shall be maintained at state expense under the charge and care of such department.

Education Law as of 1929.

Section 27. The state education building shall be occupied exclusively by the education department, including the university, with the state library, the state museum, and its other divisions and bureaus, together with such other work with which the commissioner of education and the regents have official relations, as the regents may, in their discretion, provide for therein, and such building and the offices of such department shall be maintained at state expense under the charge and care of such department. * * *

§ 53. The state library and state museum shall be departments of the university, and the regents may establish such other departments and divisions therein as they shall deem useful in the discharge of their duties.

§ 54. All scientific specimens and collections, works of art, objects of historic interest and similar property appropriate to a general museum, if owned by the state and not placed in other custody by a specific law, shall constitute the state museum, and one of its officers shall annually inspect all such property not kept in the state museum rooms, and the annual report of the museum to the legislature shall include summaries of such property, with its location, and any needed recommendations as to its safety or usefulness. The state museum shall include the work of the state geologist and paleontologist, the state botanist and the state entomologist, who, with their assistants, shall be included in the scientific staff of the state museum.

§ 55. Any scientific collection made by a member of the museum staff during his term of office shall, unless otherwise authorized by resolution of the regents, belong to the state and form part of the state museum.

§ 56. There shall be made, as the Indian section of the state museum, as complete a collection as practicable of the historical, ethnographic and other records and relics of the Indians of the state of New York, including implements or other articles pertaining to their domestic life, agriculture, the chase, war, religion, burial and other rites or customs, or otherwise connected with the Indians of New York. * * *

§ 1115. The librarian of any library owned by the state, or the officer in charge of any state department, bureau, board, commission or other office may, with the approval of the regents, transfer to the permanent custody of the state library or museum any books, papers, maps, manuscripts, specimens or other articles which, because of being duplicates or for other reasons, will in his judgment be more useful to the state in the state library or museum than if retained in his keeping. (New York. Education Law, McKinney's Edition, 1930.)

1931, New York State Printing Law.

Section 7. * * * As many copies of reports of state officers, departments, commissions, institutions and boards as are deemed necessary shall be printed for the use of the legislature, the respective state officers, departments, commissions, institutions and boards, but such number shall not exceed the following: * * * of the museum and natural history report, one thousand copies; of the geologist's report, one thousand five hundred copies. * * *

1931, New York Conservation Law.

Section 665. There shall continue to be in the division of parks a state council of parks which shall consist of the state historian, the president of the commissioners of the Palisades interstate park, the chairman of the Allegany state park, the president of the state

reservation at Niagara, the president of the Westchester county park commission, the director of the state museum, * * *

1926, New York State Departments Law.

Section 245. The conservation department, * * * shall have the power of visitation and inspection, and, notwithstanding the provisions of any other law, the conservation commissioner may adopt general or special rules for supervision and regulating the management, maintenance, improvement and development, * * * of the parks and parkways, of the sites, grounds, reservations, structures and buildings of scenic, historic or scientific interest, and of memorials, which are now or hereafter shall be owned by the state, including, among others, the following: * * * 4. * * * Stark's Knob, Lester park, Clark reservation, Squaw island and Chittenango Falls park, together with all grounds, structures and buildings appurtenant to each. (This section was repealed by L. 1928, ch. 242, sec. 47. The same subject matter is now covered by sec. 673 and 727 of the Conservation Law, 1931.)

ONONDAGA NATIONAL COUNCIL HOUSE

Onondaga Castle, New York

TO ALL TO WHOM THESE PRESENTS MAY COME, GREETING:

In recognition of the fact that on the 29th day of June, 1898 the ONONDAGA NATION did elect the University of the State of New York

THE KEEPER OF THE WAMPUM AND THE WAMPUM RECORDS

of the ONONDAGA NATION and of the FIVE NATIONS and the SIX NATIONS, and did at that time sell and convey with the duty and right to keep, hold and recover all the national wampums of said nations;

AND FURTHER, in recognition of the fact that the State Museum, a department of the University of the State of New York, was designated by said University as the custodian of said wampums and that payment for said wampums was made from the funds of said State Museum, and also of the fact that, by virtue of chapter 493 of the laws of 1896, the New York State Museum is the custodian of all historical records and relics in the possession of the State whose custody is not otherwise specifically provided for by law: in view of which facts THE NEW YORK STATE MUSEUM IS THE CUSTODIAN OF THE NATIONAL WAMPUMS

I, BAPTIST THOMAS, CHIEF OF THE ONONDAGA NATION, by virtue of the authority in me vested, do hereby give and bestow upon THE DIRECTOR OF THE NEW YORK STATE MUSEUM and upon his successors in office or authority during their term of service forever, the name

Ho-sën-Na-Geh'-Teh

HO-SAN-NA-GA-DA

Name Bearer

which name shall be recognized by all IROQUOIS NATIONS and by all people as the official ONONDAGA title for the CUSTODIAN OF THE WAMPUMS OF THE IROQUOIS OF THE STATE OF NEW YORK.

Done at Onondaga Castle, N. Y.
in the presence of

IN TESTIMONY WHEREOF, I have
set my hand and seal this 22d day of
January in the year of our Lord 1908

[SEAL]

DAVID R. HILL
ARTHUR C. PARKER
(*Ga-wa-so-wa-neh*)

Sa-ha-whe. BAPTIST THOMAS
Mark
President of the Onondagaas

THE PROPOSALS FOR A NEW STATE MUSEUM BUILDING

BY CHARLES C. ADAMS, PH.D.,
Director, New York State Museum

STATUS OF PLANS FOR THE STATE MEMORIALS

Ever since the State Museum outgrew its present quarters in the State Education Building there has been discussion of a suitable site and the appropriate kind of building needed for a wholly modern new Museum. As soon as Governor Franklin D. Roosevelt began his duties in 1930, his attention was called to the situation and he was immediately favorable to an intelligent solution of the problem, taking a broad view of the situation as a whole. Later, when the proposal was made for a World War Memorial and the plans matured for the celebration of the 200th anniversary of the birth of George Washington, it was suggested that these three proposals be harmonized into one comprehensive State Memorial that would be a worthy memorial to the epoch-making work of Washington, that would honor the sacrifices and achievements of New York State's citizens in the World War, and would provide a State Museum building that would adequately represent the State, thus culminating in a structure that would be of permanent and constantly growing importance and never fail to enlist active public interest and hearty support.

The Legislature had already made studies of the sites for state buildings (Legis. Doc. (1925) No. 71), and had developed the plan of the Capitol Park civic center (fig. 13). This general plan seems to have met with very general approval, and part of it is now a reality. This Legislative Commission also made certain recommendations which have not been followed, and yet it remains a notable contribution of great merit. The present State Office Building has now been placed upon the site then recommended for the new State Museum building, thus leaving the site then proposed for the State Office Building (on State street, facing the Education Building), as the only remaining site on the quadrangle for the proposed new State Memorial and Museum. This commission also recommended that this structure, which should be made to face the Education Building, should be a low, rather than an excessively high building. A sketch was presented of the general type of building (fig. 14) that would be suitable on that site. This is

certainly a sound recommendation, and has met with general approval. Of this State street site the commission said, (p. 10-11) :

The Commission, therefore, recommends that the State of New York purchase the block bounded by South Hawk street, State street, Swan street and Chestnut street, comprising approximately 120,000 square feet, and proceed to erect thereon a State Office Building in which there shall be provided a minimum gross floor area of 525,000 square feet.

The Commission presents herewith a plan of Capitol Hill showing in block form the ground plan of such a building located on the recommended site. [figs. 13, 15-19.]

The Commission also presents with this report a perspective of a suggested design, prepared by the State Architect, for a State Office Building on the recommended site. [fig. 14.]

The Commission further discussed the needs of the State Museum (p. 11), as follows :

The State Museum, now occupying space in the Education Building, is pressing increasingly for room to expand. The Museum exhibits now in the Education Building can not be displayed to best advantage because of inadequate floor space. This institution is of vast and growing importance as an educational agency in the State. The State Museum can not be satisfactorily and economically accommodated in an administration or business building. Adequate provision must be made for its certain continued growth and expansion.

The space now occupied by the State Museum in the Education Building is urgently needed by the Education Department to relieve its own overcrowding. In the Education Building, as in the Capitol, corridor space has been pressed into service as offices, and the temporary inflammable partitioning for that purpose constitutes a fire hazard which threatens the safety of specimens and collections, records, books and manuscripts of the great intrinsic historic value. Their loss or damage would be irreparable.

The Commission recommends that a new building be provided for the exclusive use of the State Museum, and that for this purpose the State of New York purchase as a site the entire frontage on Swan street between State street and Washington avenue to a depth of approximately 200 feet.

In 1928 the Legislature (Laws of 1928, chapter 615), created the George Washington Bicentennial Celebration Commission. The present commission consists of the following members: Charles J. Tobin, Albany, chairman; Arthur H. Wicks, Kingston, vice chairman; Millard Davis, Kerhonkson, secretary; Barron Collier, New York City; Louis A. Cuvillier, New York City; A. Spencer Feld, New York City; Mrs William M. Leffingwell, Watkins Glen; Abbot Low Moffat, New York City; Adelbert M. Scriber, Monti-

cello; and Leon F. Wheatley, Hornell. In its Second Report (dated December 14, 1929) this commission (Legis. Doc. (1930) No. 48, p. 42), recommended for a permanent memorial three items, one of which is "a memorial and museum, at Albany, within the group of present state buildings."

On April 9, 1930, Governor Roosevelt in a message to the Legislature (Legis. Doc. (1930) No. 88), said:

In spite of the expectation only a few years ago that the new State Office Building now in process of occupation would for many years to come provide adequately for the housing of all state agencies heretofore scattered about Albany, it is already apparent that the very great expansion of the functions of State government already present a new problem. This expansion relates chiefly to the Department of Education. As you are aware, it is only a dozen years since the Department of Education cost the State only ten million dollars a year, whereas now we are spending over one hundred million dollars a year for this single branch of the Government.

The result is a serious and growing congestion in the State Education Building. With the consolidation of various departments of the State Government, this congestion has been accentuated.

For instance, the State Museum located on the top floor of the State Education Building is poorly lighted, seriously handicapped for exhibit and storage space, inadequately equipped with workrooms and difficult of access to the public. In its present quarters, further expansion is impossible and its scientific and educational opportunities are restricted. Furthermore, its historical and art collections as provided by law, and for which much valuable material has already been collected, can not be properly developed. In addition, other State-owned collections now widely distributed among other departments could and should be placed under the unified direction of the State Museum. This State Museum is an important educational agency and at the present time is, in my judgment, not performing half as usefully as it might if it had adequate quarters.

The office of the State Historian also needs more space and better facilities for work in taking proper care of and publishing the valuable public records of the State, and supervising the activities of local town, city and county historians and historical associations. The historical records are worth preserving for the use of the present and future generations, as many who will remember the fire in the Capitol in 1911 can well testify.

Finally, there is a definite need as a part of the government buildings on Capitol Hill of an Assembly Hall large enough to accommodate the public gatherings and conventions now held with increasing frequency in Albany. Chancellors Hall in the State Education Building is too small to accommodate many of these assemblies,

It is therefore my thought that serious attention should be given to the erection of a new state building, preferably on State street,

in order to take care of these needs of government. The site is suggested because it forms the fourth side of a quadrangle now composed of the Capitol, the State Education Building and the new Office Building.

It is my thought that a new building could be planned to house the State Museum, the historical collections of the State, the public records, archives and maps of the State, and a great Assembly hall adequate and dignified in every way. . . .

I think that no appropriation is necessary, but that an informal commission could well be appointed to study all of the phases not only of the suggested memorials, but also of the State's need of a new building. Such a building could be so designed that all of it would not be built at once, but rather that its erection could be carried out over a period of years.

In other words, I am seeking to plan for the future before conditions get worse and also in order that we may coordinate the needs instead of meeting them in piecemeal manner.

The Legislature of 1930 (Laws of 1930, chapter 826, section 1) authorized the Governor to appoint a temporary New York State World War Memorial Commission. This commission consisted of Major General John F. O'Ryan, New York City, chairman; John J. Bennett jr, New York City, vice chairman; Francis S. Hueber, Syracuse, 78th Division; Richard S. Byrns, Babylon, U. S. Navy; William M. Leffingwell, Watkins Glen; Major Benjamin H. Naum, Brooklyn; and Adjutant General Franklin W. Ward, Albany.

The report of the commission (Legis. Doc. (1931) No. 75, p. 3), states:

The Commission unanimously agreed that the logical location for a World War Memorial as contemplated by the act is the city of Albany. This conclusion was based fundamentally upon the fact that Albany is the Capital of the State and as well is relatively more or less centrally located. The Commission was also influenced by the circumstances that its members were unanimously of the opinion that in principle the Memorial should take the form of a public building, appropriate in architecture and design to serve the historical, patriotic and sentimental purposes believed by the Commission to be contemplated by the act. This conclusion fortified the decision of the Commission that the location of the Memorial should be in the city of Albany, for the reason that such a building could be more effectively coordinated with other public buildings of the State in the city of Albany than it would be possible to arrange for elsewhere in the State.

With the character of the Memorial to be recommended to the Legislature in mind the Commission took up the consideration of the selection of an appropriate site. It was at first believed that several sites should be considered and reported upon as alternatives, even though the members of the Commission might be of one mind as

to the preferential advantage of a particular site, in order that the acquisition of the site desired might later be secured under possibly more favorable terms, than if it were generally known that the Commission had but one location in view. However, the Commission after careful investigation on its own part, concurred in by the Commission's Counsel, concluded that it would be impractical to acquire any location in the city of Albany suitable for the purposes in hand without resort to appropriation proceedings, and in view of the fact that the awards to be made under appropriation proceedings would not be affected in any way by the existence of alternative sites, it became the view of the Commission that it would recommend in this report the specific site which it believes to be most suitable for the erection of the Memorial.

Pursuant to section 2 of the said chapter 826 of the Laws of 1930, the Commission having studied and investigated the selection, purchase or acquisition of a suitable site within the city of Albany, State of New York for the proposed Memorial, recommends the tract of land situated, lying and being in the city and county of Albany and State of New York, bounded on the north by the southerly line of State street, on the east by the westerly line of South Hawk street, on the south by the northerly line of Lancaster street and on the west by the easterly line of South Swan street, comprising two city blocks.

In connection with this selection, it is to be noted that Chestnut street separates the two blocks constituting the parcel recommended but that the said Chestnut street, which is an east and west highway, terminates in a dead end at South Hawk street, which is the easterly boundary of the tract recommended. If this recommendation is approved by the Legislature the State will become vested with the title to land on both sides of Chestnut street, between South Swan street and the terminus of said Chestnut street at South Hawk street. Consequently there should be no public or other objection to the closing of this street between South Swan and South Hawk streets, and the merger of the underlying fee and all existing easements therein with that of the remainder of the tract recommended.

A moving consideration which actuated the Commission in the selection of the location recommended is its relation and proximity to other public property and buildings of the State adjoining the Capitol and Capitol Hill. The erection of the Memorial upon the site recommended will be in conformity with a logical plan for the future concentration of State public buildings upon Capitol Hill.

Having considered the subject of the type of the Memorial most suitable to express the feelings and appreciation of the people of the State of New York for the patriotic services and sacrifices rendered in the World War by its citizens who served in the armed forces of the United States and as well those demands for housing facilities of State Departments and other public activities which would not be inconsistent with the sentimental purpose and aspect of such a Memorial building, the Commission concluded

that the character of the proposed Memorial should be such as to permit of logical architectural expansion in order that future public movements and appropriations in connection therewith which would enlarge or otherwise expand the scope or size of the proposed Memorial might be possible.

There was a further reason which appealed to the commission in support of the soundness of this policy, that is the fact that under the provisions of section 2 of the act, creating the Commission, the recommendation to be made by the Commission in relation to the proposed Memorial is limited in cost to not more than \$1,000,000 exclusive of the cost of the site and property damages, if any.

Accordingly the Commission having determined upon the general character of the Memorial building to be recommended employed Eric Gugler, Esq., an architect of outstanding reputation in memorial design to prepare sketches, drawings and models indicating the general character of the Memorial to be recommended by the Commission and as well the manner in which such Memorial building might be logically expanded from time to time in the future as the Legislature might determine.

Mr Gugler prepared sketches, drawings and models in accordance with the general plan of the Commission above outlined. Attached to this report are copies of diagrams or sketches showing the successive stages proposed for the erection of such New York State World War Memorial Building as has been indicated above. Models based upon such sketches have been placed in the office of the Governor, where they may be examined. (Figs. 20 and 21.)

The Commission does not intend by the submission of these drawings, sketches and models to do more than indicate in a general way the manner in which such building may be planned and constructed, in the progressive manner outlined. The submission of these sketches, drawings and models does not mean that the Commission recommends at this time the particular building or type of architecture indicated by the sketches, drawings and models, but only that within the limits of the appropriation specified in the act as a guide to the Commission in its recommendation, such building may be constructed as a complete unit leaving open the question and the opportunity for its subsequent expansion and future development.

This general scheme would effect the purpose for the creation of this Commission by the erection of a World War Memorial in keeping with the prestige of the State of New York and the sentimental and historical object in view, which World War Memorial would embrace in the whole, (1) an effective shrine to the memory of its citizens who served in the World War, (2) a large and dignified auditorium as a Memorial to George Washington (to which the State is already committed), (3) an appropriate building as a State Museum for the housing of the State's exhibits, priceless historical and other records and other related activities, (4) while unseen and from the rear, access could be provided for thousands

of square feet of floor space, available for official records etc. of state departments.

The Commission will in the near future submit a draft or drafts of such legislation believed by the Commission to be requisite to carry the purposes of the act and the recommendations of the Commission if adopted and approved by the legislature.

The Commission therefore recommends (a) that the tract of land above specified be acquired for the purpose of erecting a New York State World War Memorial Building and that the sum of \$200,000 be appropriated by the Legislature for the purpose of acquiring the first component of such tract of land which may, in the discretion of this Commission or its successors, be required for the erection of the first element of the Memorial building recommended, (b) that the Legislature approve the recommendation of the Commission that the New York State World War Memorial shall be a public building of the character indicated, (c) that this Commission be continued and that the sum of \$15,000 be appropriated for the expenses of the Commission within or without the State.

The Third Report of the George Washington Bicentennial Commission recommended a "State Memorial Building" (Legis. Doc. (1931) No. 48, p. 14), as follows:

That there be established in Albany a State Memorial building within the present quadrangle of the State Capitol, State Education Building and State Office Building, or on North Hawk and Elk streets. This building to house the State Museum, and contain a large auditorium to be used as a State Memorial building to emphasize the activities of the State of New York both in time of peace and in the time of war.

The Commission also stated under the heading of "Proposed Subjects for Legislative Action," the following (p. 28):

4 State Memorial Building.

(1) That there be established in Albany, within the present quadrangle of the State Capitol, State Education and State Office buildings, or on North Hawk and Elk streets, a new building to be known as the New York State Memorial Building. This is to include a large Museum auditorium to be known as the George Washington Auditorium. This Memorial building would house the exhibits, offices, laboratories, storerooms and workshops of the New York State Museum; its collections of the natural resources, science, history, industry and art; to be a permanent exposition of the past and present conditions of the State; and including all articles of the State relating to flags, trophies, relics, representing all past wars recorded in the history of the State; to include also offices of the State Historian and thus to memorialize New York both in peace and in war.

The opinion of Regent William J. Wallin, chairman of the committee on finance and administration of the Board of Regents, is expressed as follows (p. 42):

The Board of Regents is particularly interested in the State Museum. The present situation is, that the work in our Department has grown so, that we must keep crowding back the Museum into less and less space, although its exhibits are increasing. At the present time, the Museum has not the space to exhibit the valuable articles which it owns, many of which are stored in the cellars in our buildings. The term "museum" itself has come to have a wider meaning by far than that which we attributed to it when we were boys, and considered a museum to be a collection of exhibits. Today it functions as a valuable branch of education work, as well as a place to keep safely articles of scientific and historical value.

In this broader meaning, it has seemed to our Board particularly appropriate that your joint commission should consider the pressing need for an adequate museum building, and, by all means, it should be located in Albany. If this were done three purposes could be accomplished:

First, an appropriate memorial structure could be had wherein to collect and preserve not only the present Museum collection, but the mementos of the various wars, particularly the World War.

Secondly, our own State Museum could find an adequate space for its activities.

Thirdly, additional needed space for educational work, including the State Library, would be afforded within our present structure.

General Amasa J. Parker, Albany, N. Y., expresses his opinion as follows (p. 44-45):

In my opinion the most practical appropriate and lasting appreciation of our great George Washington would be to erect in Albany, the capital of the Empire State, a lasting memorial building. Albany has an ideal site for such a structure. It is the so-called "Myers Block," bounded by State, Hawk, Chestnut and South Swan streets. The site is 660 feet in length on State and Chestnut streets, and 190 feet in depth on Hawk and South Swan streets. This site, on the north, is directly opposite the present State Education Building. On this site the "Washington Memorial" should be erected. In this memorial building, when completed, there should be placed the contents of our present "State Museum" now in the State Education Building; and also, all articles of this State, of every character, relating to flags, trophies, history and properties representing all the past wars recorded in the history of our State.

When the Board of Regents urged that the Theodore Roosevelt Memorial be devoted to a new State Museum building they stated (Legis. Doc. (1922) No. 48, p. 25), their views as follows:

The Education Law of the New York Statutes outlines a definite and very broad scope for the State Museum. It provides for a

general Museum of Science, History, Industry, Agriculture and Art. Thus far the purpose of the people as expressed in this law has been made effective only for the science division of the Museum; that is, for geology, paleontology, mineralogy, zoology, entomology, botany and archeology, the sciences which especially come with its scope of research. This Museum is housed in quarters in the Education Building at Albany which have proved to be wholly inadequate for the exhibition of the natural resources of so imperial a State as New York.

The necessity for larger room free from the embarrassments and entanglements with the other administrative functions of The University of the State of New York, made itself apparent very soon after the present quarters were occupied, eight years ago. Designs were then drawn for an independent building competent to meet the statutory plan for the Museum; approach was made to the city of Albany with reference to a site therefor and a provisional promise was made of land already under the control of the city park system. A building such as is proposed would help to bring the intention of the people to effective realization.

The citizens of the State are obviously waiting for the execution of this plan, as clearly shown by the interest therein broadcast over the State and expressed by incessant inquiry. The State has no official depository for the relics of its various and successive historical cultures, or of its agricultural and industrial development, and its Museum of its own natural history and natural resources is now bounded by narrow and inelastic walls.

The late Regent William P. Baker, former member of the State Museum committee of the Regents, on January 28, 1929, in an editorial in the Syracuse Post-Standard, said:

Among the projects for new state buildings to be erected out of a \$100,000,000 bond issue there was included a State Museum building which would take the Museum out of the Education Building and give it a domicile of its own. It was not as a substitute for a State Museum building at Albany that the State Legislature approved the scheme of a Roosevelt museum in New York occupying wings to be erected at the Museum of Natural History. The State is to build a new State Museum building in Albany; it may be across the park from the Education Building. But no plans have been drawn. The State will appropriate \$10,000,000 this year to carry on its policy, already approved, of continued state building. There will be proposals that the new State Museum should wait no longer, but that we should undertake at once to erect a handsome building in which the State Museum shall be adequately housed. The Museum needs better and larger quarters.

There is a demand for new normal schools, for new armories; but it now appears for no more Hudson river bridges to be paid for out of the \$10,000,000 bond issues which the State has already approved. But none of these projects stand ahead, in the roster of expectation,

of the proposed State Museum. That Museum was to be one of the first enterprises begun under the pledges originally given. But there has not been any appropriation made to begin work. There has been no beginning at securing a site. We do learn, however, that Owen D. Young, chairman of the board of the Radio Corporation of America, will take an active part in the project. Mr Young is a close friend of Alfred E. Smith and of Governor Roosevelt and he has the confidence of the public. That he is to represent the United States in the reparations conference with no protest from anywhere tells how completely he has the public confidence.

It is important that Owen Young is concerned that the State Museum should be soon and properly housed. The Museum to care as it should for the collections it possesses and to provide suitable quarters for the scientists on its staff requires a new building. The State has not provided for one in its plans for future construction. The usefulness of the Museum to industry, especially to the mining industry, has been shown, as well as its service to science and to Indianology; but the money for a new Museum has not been appropriated. It may be appropriated out of the \$10,000,000 available this year. The State Museum should be included as a project to begin at once. It has been delayed long enough.

At various times in recent years suggestions have been made for storage facilities for the overcrowded files in the various state offices at Albany. At one time it was proposed to secure an inexpensive site upon which to build a warehouse to store such materials. That such reports should become widespread is surprising in view of the fact the State Library has ample room for an indefinite period to care for all such materials.

The suggestion has also been made that the new State Memorial provide room also for the State Library. At the request of the Director, Dr James I. Wyer, Director of the State Library, prepared a statement regarding the storage of files and archive materials, as well as the proposal of moving the State Library to the proposed new State Memorial building. He says:

The State Library is now satisfactorily housed in the State Education Building, in extensive quarters planned, specially constructed and specially equipped for it. This special construction and equipment have cost the State several hundred thousand dollars. It is suitable only for library use and could be made serviceable for other uses only by heavy additional alterations and outlay. These quarters embrace the entire second floor of the Education Building, the entire north wing, of eight floors, and also some areas on the first and third floors.

Present quarters are adequate for another generation. They permit storage for two million books. They provide further storage space, safety vault and stack service for rare books and manuscripts.

Section 1115 of the Education Law reads :

“Transfers from state offices. The librarian of any library owned by the State or the officer in charge of any state department, bureau, board, commission or other office, may transfer to the permanent custody of the State Library, any books, papers, maps, manuscripts or other articles which will in his judgment be more useful to the State in the State Library than if retained in his keeping.”

This provision is frequently availed of, and during its 20 years' occupancy of the Education Building the State Library has never refused to take over any material from other state offices, which seemed worth keeping, for lack of room. It does not expect to have to decline such material for such a reason for the next 20 years, perhaps more.

The Library does not wish to move, it has no need to move. When more room becomes imperative, by far the best and most economical plan will be to add to the Education Building, on Swan and Elk streets. It might easily cost the State from one-half to three-quarters of a million dollars to provide suitable quarters for a great library in a new building, to move the library with its collections of more than a million pieces, and to remodel its present quarters to make them satisfactory for any other use. It is hard indeed to see how the present north end, wholly a solid steel and concrete stack, can be used for anything else.

It is thus seen that there is no occasion for moving the State Library to the proposed new Memorial, or in making provision there for the storage of archives and files, as the State Library is adequate to provide these facilities for an indefinite period. Because of the close relation between the extensive historic collections now in the State Museum, and the work of the office of the State Historian, however, it was proposed by me that this office have space in that part of the proposed State Museum where its own historic collections and offices should be located. This has had the hearty approval of the State Historian, and such a plan should be mutually advantageous for all concerned. When the State Museum moves into a new building, however, there would be ample room for the office of State Historian in the Education Building.

The preceding discussion has shown how suggestions have been made for developing plans for a State Memorial Museum which is to commemorate the 200th anniversary of the birth of George Washington and to be a World War Memorial. The proposals which are pertinent to our present problem of combining these suggestions with the plans for a new State Museum building may be *summarized* as follows :

1 That these Memorials be located in Albany on Capitol Park, on State street and facing the State Education Building. This is the most favorable site also for a new State Museum building.

2 That on this site a low building, harmonizing with the Education Building is the *general type of structure suitable for such a location.*

3 That such a Memorial Museum building will need an adequate auditorium; that this would make an admirable memorial to George Washington, and would serve for a large number of important public meetings, conventions, inaugurations and similar public occasions calling for a large auditorium. Possibly it should have a seating capacity for 5000 people. Chancellors Hall, in the Education Building, has a capacity of 880. Smaller rooms also could provide for other meetings and conventions.

4 That the *building as a whole be considered the World War Memorial*, and that the Rotunda, through which entrance to the Washington Auditorium is made, be devoted to a special World War Exhibit, pending the construction of the special unit to be devoted exclusively to the "History of New York State," including the World War.

5 That a Museum facing on Capitol Park can expand only to the rear, where there should be provision for *indefinite expansion*—for storage, offices, laboratories and workrooms.

6 That the New York State Museum is a general museum, including science, industry, art and history. It is thus a permanent year-round exhibit of the natural resources of the State, their utilization by industry, and the achievements and history of the State.

The exhibits and studies conducted by the Museum should center about *four* major subjects as follows:

First comes the mineral or inorganic world, including the minerals, rocks, soils, waters, atmosphere, and those industries whose activities are based primarily upon these resources. Thus the utilization of iron ore, zinc ore, oil, gas, gypsum, limestone, sand, gravel and salt, is the basis for a vast number of local industries and these should be fully represented.

Secondly, attention should be focused upon the plant world, the wild and cultivated plants that form the basis for agriculture and forestry, horticulture, floriculture, and all allied industries that are dependent upon plant products for their raw materials, and the industries using such materials in any important way.

Thirdly, emphasis should center upon the animal world in a broad sense, including the native wild animals of all kinds and the domestic kinds as well, particularly those that are a basis for the industries. Thus, since dairying is the leading rural industry it should be fully represented. The poultry business is important and the domestic pets as well, and also the great variety of harmful and beneficial

animals. Innumerable insect pests, as well as the fish of our ponds, lakes, streams and salt waters, and the game of the fields and forests, fall within this field.

Fourthly, and finally, the rôle which man himself, both Indian and white, has played and is playing in the history of the State. The story of the Indian has been told again and again and must be to each generation which enjoys the glamour of a life so different from our own, and one to which we have only grudgingly given due credit for its achievements. The Colonial period, the Revolution, the Civil War, Spanish War, and the World War should be spread before our citizens, each in its proper perspective so as to be fully appreciated.

The Education Department already has valuable Washington relics (Cheney, 1912, p. 31, 48, 69, 71), that should be appropriately exhibited in such a Memorial. These objects include his surveying instruments, drawing instruments, a gold watch chain, and a pistol presented to him by General Lafayette. There are also other Revolutionary relics, Civil War, and a particularly valuable Spanish War collection associated with Admiral Sigsbee of the "Maine," and Admiral Potter. The World War is so recent that historic material of this kind has not yet come to the Museum in quantity or of much importance. With an appropriate building there will be no difficulty in securing such material.

Such a pageant of the resources, history and achievements of the State of New York would interest every citizen and would be the source of permanent and sustained interest. A permanent exposition of the State would be the leading attraction in Albany and one that would show to its hundreds of thousands of visitors the kind of State New York has been and is today.

Suggestive sketches of the ground floor and upper floor for the proposed Memorial are herewith presented for careful consideration (figs. 22 and 23). This plan could be built in units or as a whole. The George Washington Auditorium and the World War Rotunda, leading to the Auditorium, would be the logical units to build first, and the lateral units as proved practical. I wish to call attention to the following suggestions that embody certain fundamentals that are of great practical value:

- 1 Few entrance steps to climb.
- 2 Direct access to the Washington Auditorium.
- 3 Direct access to each of the four major exhibit halls.
- 4 Equality among the four major Museum units, so that each has its share of first floor space, and each its share of upper floor space.

5 Close communication between all sections of the major units, and since this is best accomplished by elevator, the unit sections should be superimposed and not placed end to end on the same level.

6 A Radial Plan—with the auditorium, exhibits, entrance halls, stairs and elevator at the hub—so that each unit of the Museum may be directly entered from the central hall of its particular floor. This is the reverse of a concentric plan, with the unit halls end to end around the circumference, and consequently with the majority of the sections remote from the central distribution point.

7 No architectural restrictions that would prevent an efficient development of laboratories, offices, workrooms and storage collections behind the lateral wings.

The exhibition halls should be large and well lighted. The offices, laboratories and storerooms should be in the rear. It should be recalled that storerooms in museums are not places where material may be out of the way and out of sight. Valuable objects, worthy of preservation, deserve appropriate care to prevent deterioration, and they should be readily accessible for consultation. It is not enough to box material and pile it up; this makes a "dead," rather than a living Museum. Materials that are properly stored can be consulted readily by the staff, by special students coming from a distance and by interested visitors. A collection of books nailed up in boxes would not make a library; a collection of museum objects similarly boxed is not a working or workable museum. After storage space, storage cases are the next essential. Most public museums have inadequate storage space and storage cases. A good example of the *general type* of rooms for storage, laboratories and offices is shown in figure 24, of the rear view of the Interior Department Building at Washington. Such wings furnish excellent light and can be extended as needed, because it is seldom that allowance is made in public buildings for ten years of growth. The State Museum has been 20 years in its present quarters in the Education Building.

Finally it should be stated that adequate plans can not be made without a careful study of the outstanding needs of the State Museum as an active statewide agency, and not merely as an exhibition Museum.

METHODS OF PROCEDURE

In 1925, during the campaign for the "Permanent Public Works Constitutional Amendment" for the bond issue for public improvements, it was proposed that the new State Museum building be

built with such money. The "Citizens' Committee to Support the Amendment" expressed its opinion (p. 22), as follows:

The State Museum is now housed in the Education Building. The Education Department is badly overcrowded. Corridors are being used for office purposes with a temporary wood partitioning. Either the State Museum must be moved out of the Education Building, thus releasing more than 100,000 square feet of floor area for the use of the Education Department, or an addition to the Education Building must be provided.

The Museum is adding constantly to its valuable collections and in its present quarters is severely handicapped by lack of space. The obvious solution of the additional space problems of both the Education Department and the State Museum is the construction in Albany of a new building to house the State Museum, so planned that it might be expanded as need requires.

This bond issue money was spent for other urgent purposes. Since then Governor Roosevelt has suggested that the proposed State Memorial be built by *units*, as there is no bond issue money now available to build the Memorial as a whole. Accordingly plans have been made on that basis by the World War Memorial Commission, previously quoted. Of course there are evident disadvantages of such a prolonged construction program, particularly the long period of congestion in the present Education Building, and the confusion and great difficulty of conducting the regular work of the Museum in two separate buildings.

A third possibility is that one or a group of public spirited citizens make a gift to the State, of the cost of building it all at once, on condition that the State purchase the site and furnish and equip the New Memorial Museum, and staff it adequately for the best grade of modern work in science, industry, history and art.

PLANS FOLLOWED FOR THE STATE EDUCATION BUILDING

When the State Education Building was erected it was the most important and impressive public building yet built by the State of New York. It was built at a cost of less than \$3,500,000.

The plans for the building (4th Ann. Rep't, Education Dep't, 1908, reprint, p. 7-8) were matured as follows:

On August 30, 1906, the Trustees of Public Buildings announced the terms of the first architectural competition for the plans of the State Education Building. This program of competition set forth in detail the size and relation of rooms desired in the building, the plans and elevations to be submitted in the contest, and announced that the Board of Award, consisting of the Governor, the Lieu-

tenant Governor, the Speaker of the Assembly, the Commissioner of Education, the State Architect and one member of the Board of Regents, would select the 10 most meritorious designs from the sets submitted, pay to the authors of these designs \$500 each and invite them to engage in a second competition. The announcement was further made that the sum of \$1000 would be paid to each architect participating in the second competition and that the Board of Award would designate the first, second and third most meritorious designs and pay the authors of the second and third designs the additional sums of \$2000 and \$1000 respectively, and award the architect's commission for the Education Building to the author of assured responsibility presenting the most meritorious final design at the rate of compensation sustained by the American Institute of Architects after deducting the amounts previously paid him, and after charging him with any proper expense necessary for the services of architectural engineers.

Under the terms of the first architectural competition 63 sets of designs were submitted on November 1, 1906. * * *

In a prospectus issued January 10, 1907, these architects were invited to participate in a second competition. This second competition closed on April 1, 1907. After deliberation the Board of Award announced on May 16, 1907, that the design determined to have the highest merit was submitted by Messrs Palmer and Hornbostel, 63 William Street, New York City, that the second preference was given to the design submitted by Messrs Howells and Stokes, 100 William Street, New York City and that the third preference was given to the design submitted by Messrs Miller and Pember, Mutual Life Building, Buffalo. The architects, Messrs Palmer and Hornbostel, at once began work upon the plans of the building. The preliminary sketches of the plans, elevations and sections were approved by the Board of Award on August 20, 1907. These plans were further revised and approved by the Board of Award on November 27, 1907. The completed working drawings together with the specifications were approved by the Board of Award on February 10, 1908. * * *

Chapter 578, Laws of 1907, the annual supply bill, provides for the construction of the building as follows:

For beginning the construction of the new State Education Building pursuant to chapter 678, laws of 1906, one million five hundred thousand dollars (\$1,500,000) payable on the certificate of the Governor, of which one hundred thousand dollars (\$100,000) shall be available immediately, four hundred thousand dollars (\$400,000) on October 1st, 1907, and the remainder on March 1st, 1908, and from which may also be paid any deficiency in the appropriation made by said chapter for acquiring the site for the building and the expenses incidental thereto. The Trustees of Public Buildings are hereby authorized to enter into contract for the erection and completion of said building, upon terms believed by said trustees to be most advantageous to the State at a total cost of not more than three million five hundred thousand dollars (\$3,500,000) for the building exclusive of the site therefor.

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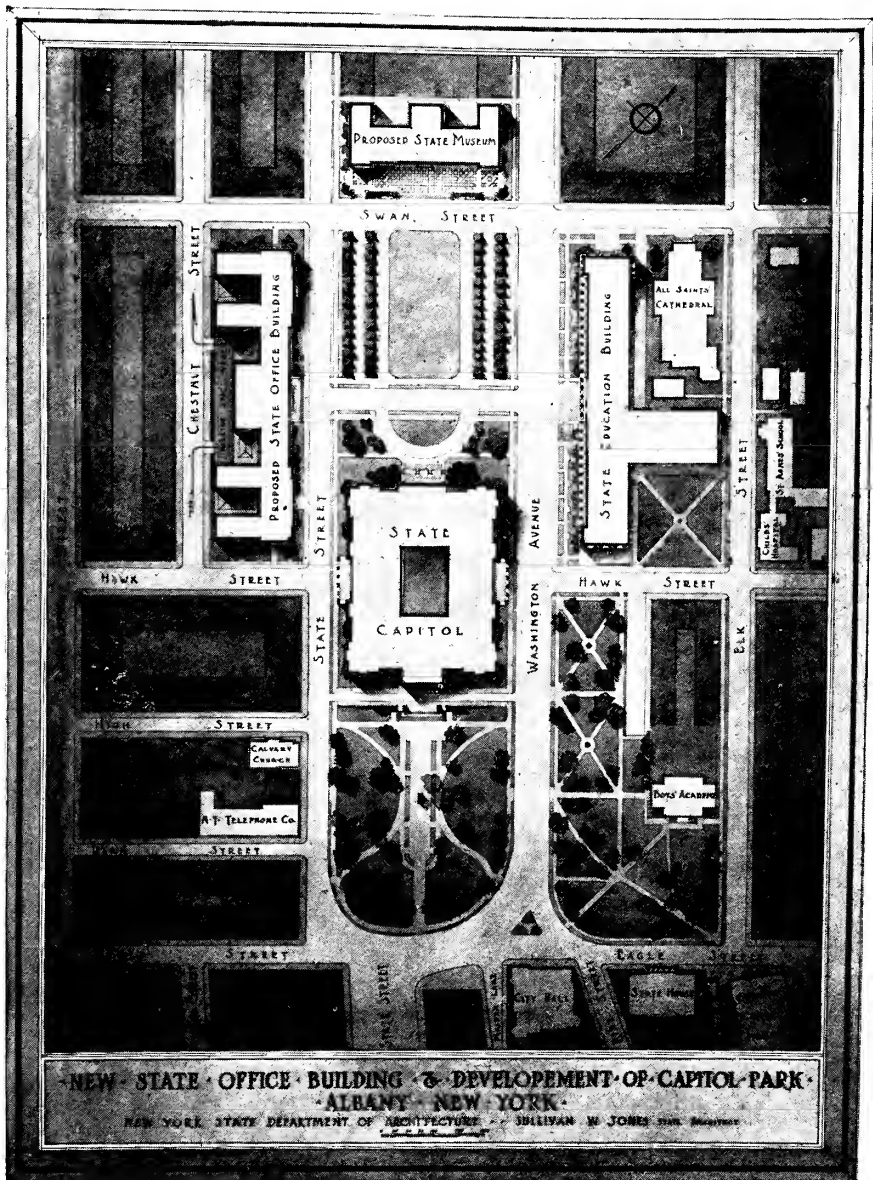


Figure 13 Development of Capitol Park, as proposed by the 1925 Legislative Commission, showing location formerly suggested for the new State Museum Building. It is now suggested that the Museum Building be placed on the site indicated for the State Office Building in the above diagram. [Legis. Doc. (1925) no. 71]

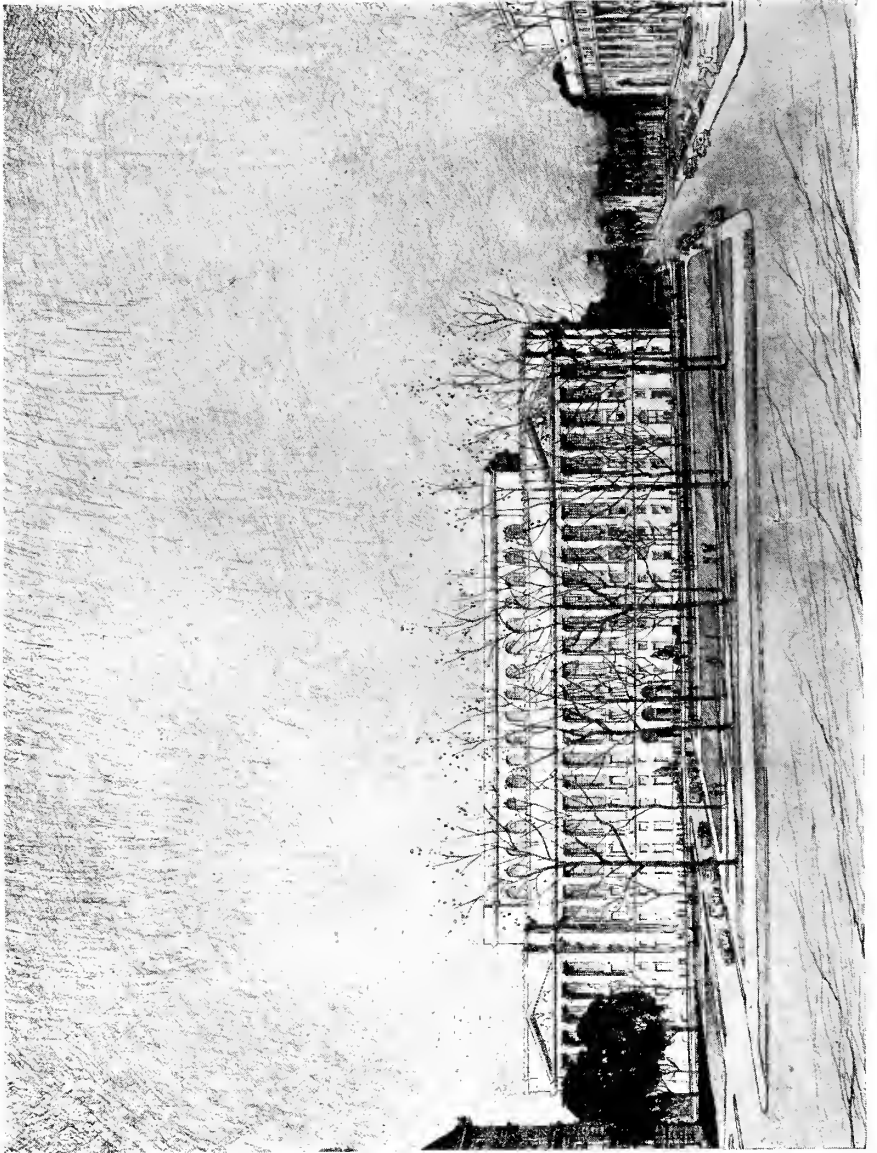


Figure 14 Architect's drawing of the type of building proposed by the 1925 Legislative Commission as suitable for the site of the new State Museum Building. [Legis. Doc. (1925) no. 71]



Figure 15 Looking from the Education Building diagonally toward the west end of the State street site



Figure 16 Looking directly toward State street site from the Washington avenue steps of the State Education Building



Figure 17 Looking diagonally toward the east end of State street site



Figure 18 Looking diagonally toward the east end of the State Education Building from State street, near the State Office Building

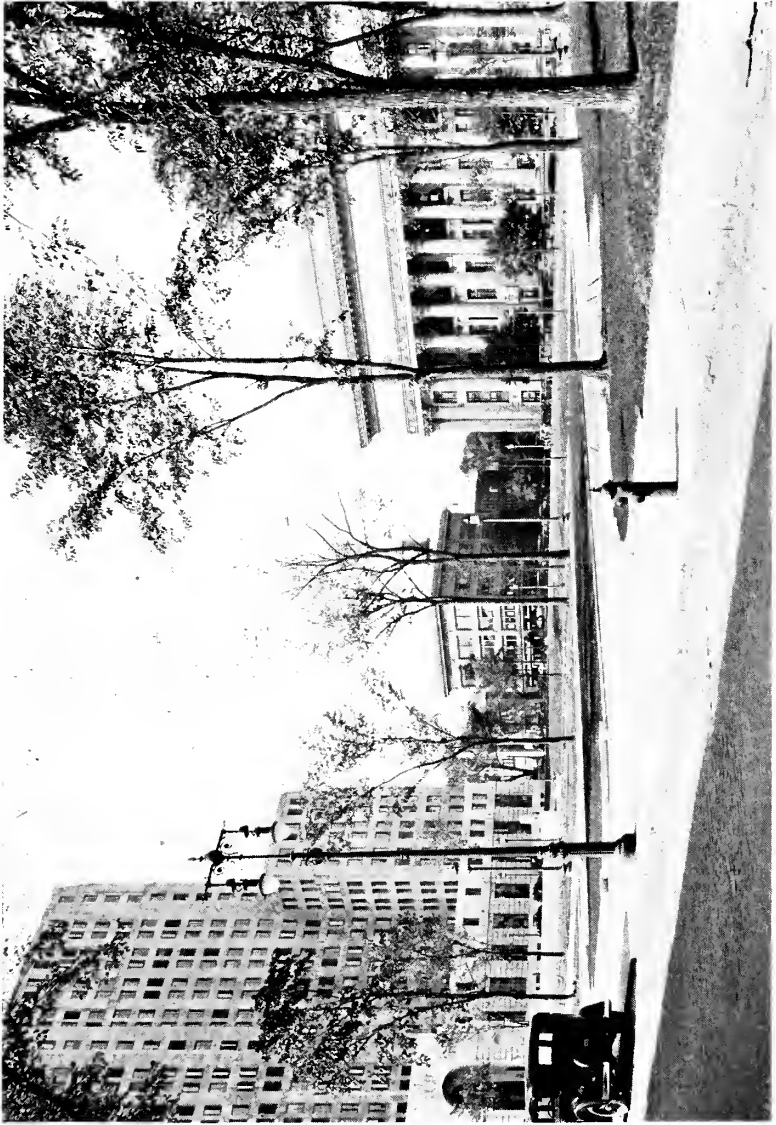


Figure 19 Looking diagonally toward the west end of the State Education Building from State street, near the State Capitol

DESCRIPTION	
FIRST STAGE	<p>THE WORLD WAR MEMORIAL PROPER WITH A BASEMENT UNFINISHED THE INTERIOR FINISH SCULPTURE MOSAIC AND OTHER DECORATION COMPLETE WITH COLUMNS 42' HIGH THE OVERALL SIZE OF BUILDING 140' BY 140'</p> <p>TOTAL COST FIRST STAGE \$1,000,000.</p>
SECOND . . . STAGE	<p>MUSEUM ELEMENTS ADDED AROUND CENTRAL WAR MEMORIAL UNIT . . . THIS WILL MAKE THE SIZE OF THE BUILDING 228' WIDE BY 175' DEEP. THIS SCHEME AFFORDS . . . 125,000 SQUARE FEET . . . OF MUSEUM SPACE.</p> <p>THE ADDITIONAL COST . . OF THIS STAGE IS \$1,531,000</p>
THIRD STAGE	<p>THE AUDITORIUM AND GROUND FLOOR OVER THE WHOLE SITE TO ADD 80,900 SQUARE FEET OF MUSEUM SPACE</p> <p>THIS STAGE CAN BE BUILT FOR AUDITORIUM \$1,750,000 MUSEUM SPACE \$500,000 TOTAL COST THIRD STAGE \$2,250,000</p>
FOURTH . . . STAGE	<p>COMPRISES THE BUILDING OF THE PORTICO AND STEPS BY THE TIME THE FOURTH STAGE IS COMPLETED THE ENTIRE TERRACE WILL . . . HAVE BEEN BUILT WITH A CENTRAL ELEMENT ENTIRELY COMPLETED]</p> <p>THE PORTICO STEPS AND APPROACHES CAN BE BUILT FOR \$ 783,755</p>
FIFTH STAGE	<p>WOULD COMPLETE THE ENTIRE FACADE EACH WING WOULD COST \$600,000 TOTAL COST FIFTH STAGE \$1,200,000 TOTAL COST \$6,764,755</p> <p>BY THE TIME THE FIFTH STAGE IS COMPLETE THERE WOULD BE IN ADDITION TO THE WORLD WAR MEMORIAL AND THE COURT OF HONOR 1,486,000 CUBIC FEET OF MUSEUM SPACE]</p> <p><i>Possible future Addition 2,500,000 cu ft of Museum space could be built for \$2,400,000</i></p>

Figure 20 Description of the successive stages of the War Memorial Building proposed by the New York State War Memorial Commission. [Legis. Doc. (1931) no. 75]

DRAWINGS

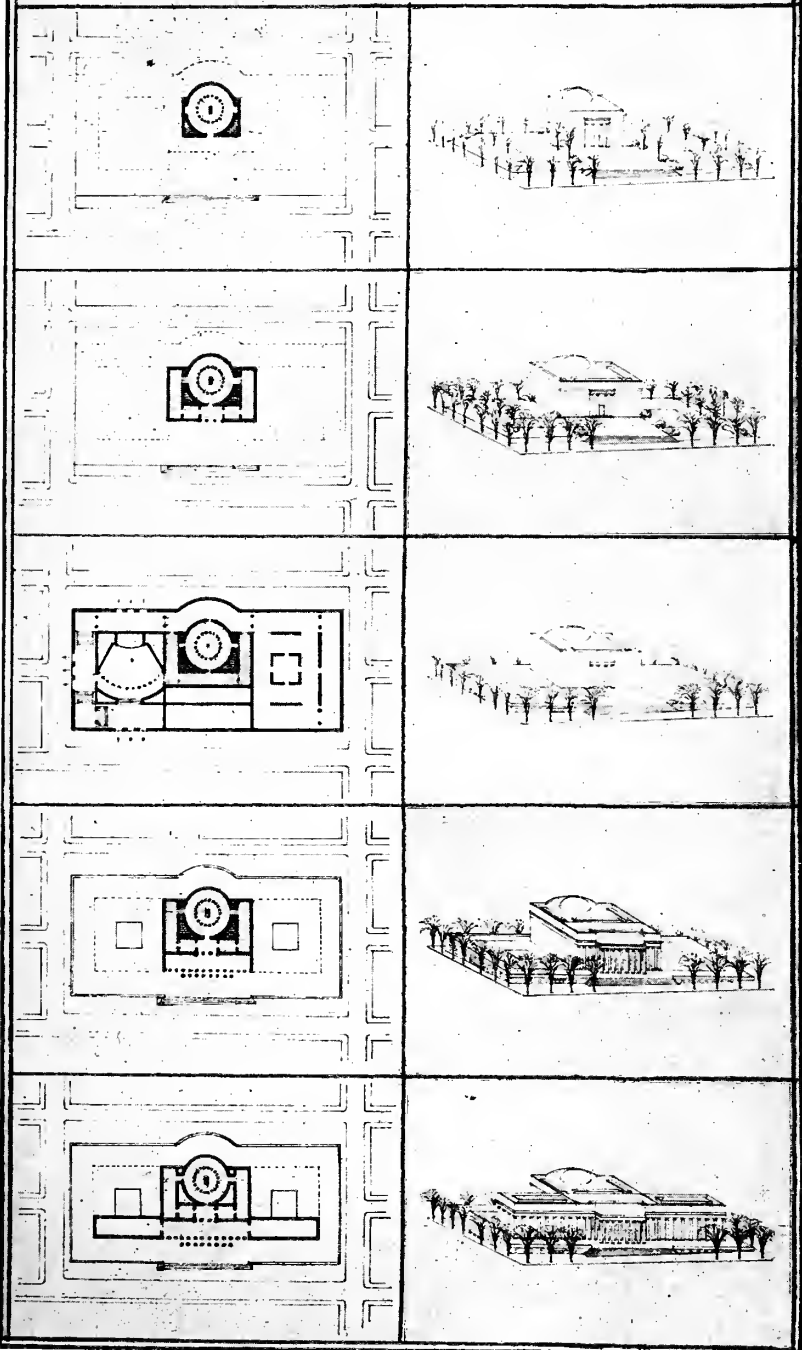
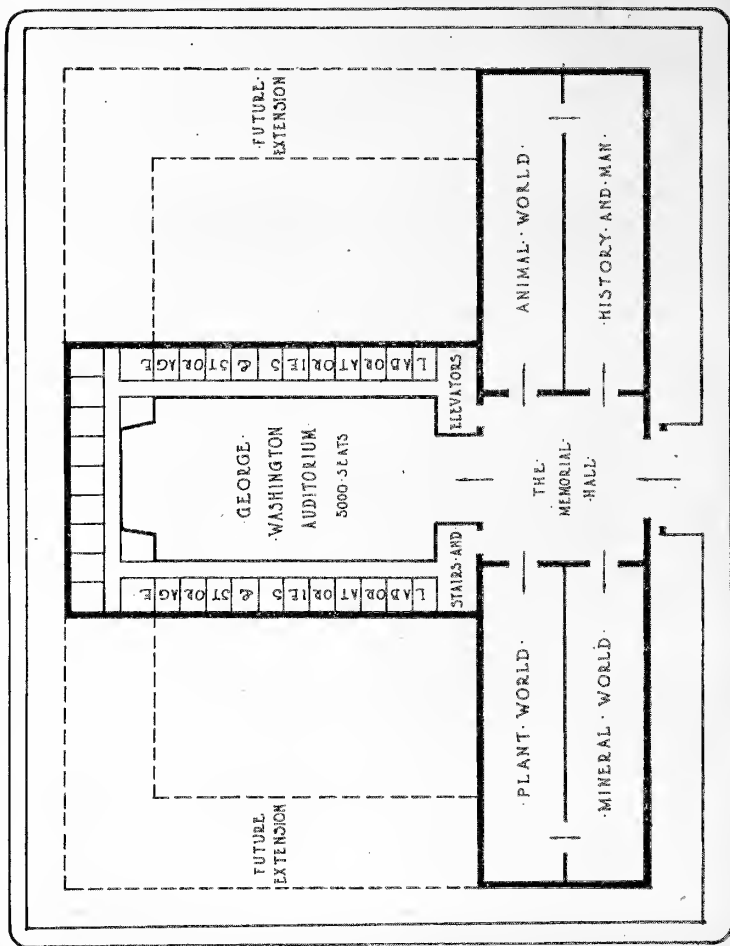


Figure 21 Drawings showing the successive stages of the proposed State War Memorial Building. [Legis. Doc. (1931) no. 75]

LANCASTER STREET

SOUTH SWAN STREET



SOUTH HAWK STREET

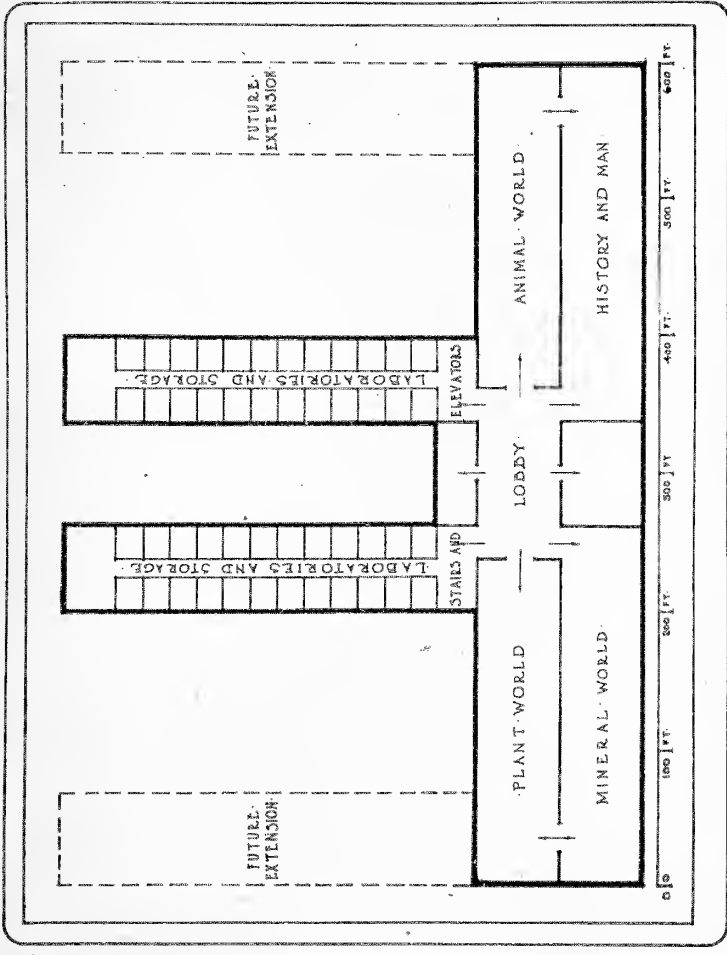
STATE STREET

Figure 22 Suggestive first floor plan for the proposed State Memorial Museum, showing the Memorial Hall, the location of the proposed George Washington Auditorium, the lateral exhibition halls for the four major types of exhibits, and the rear wings for laboratories, storerooms and offices

LANCASTER STREET

SOUTH SWAN STREET

SOUTH HAWK STREET



STATE STREET

Figure 23 An upper floor of the same plan shown in figure 22

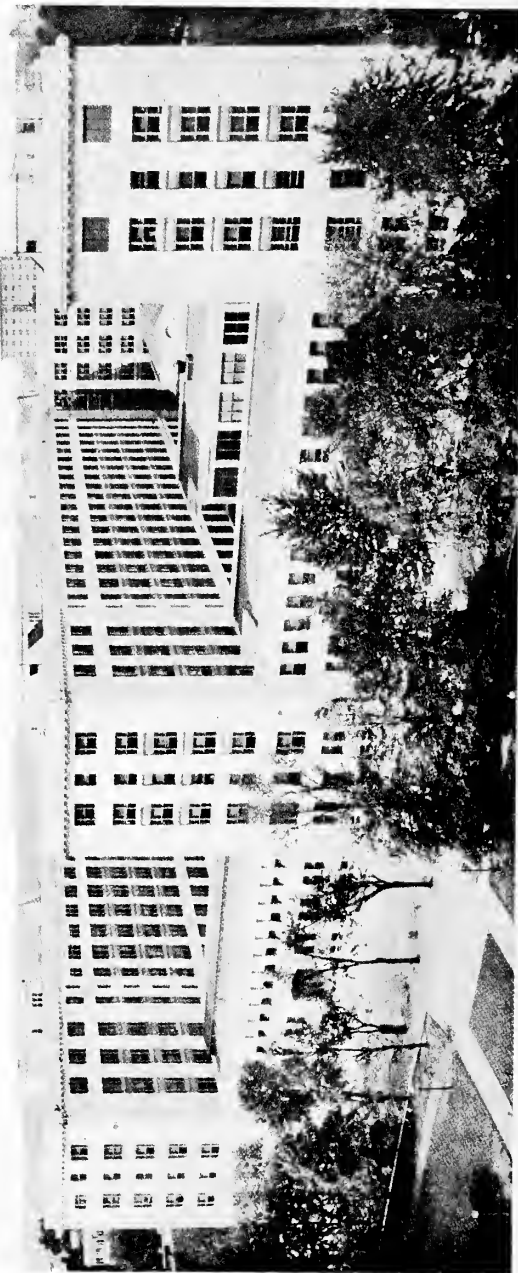


Figure 24 Rear view of the Department of Interior Building, Washington, D. C., showing type of wings making suitable laboratory, office and storage space

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