

THE AMERICAN MUSEUM  
OF NATURAL HISTORY

SEVENTY-SEVENTH REPORT  
FOR THE YEAR 1945  
AND JANUARY THROUGH JUNE, 1946





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THE CITY OF NEW YORK  
1946

*"For the purpose of establishing and maintaining in said city [New York] a Museum and Library of Natural History; of encouraging and developing the study of Natural Science; of advancing the general knowledge of kindred subjects, and to that end of furnishing popular instruction."*

FROM THE ACT OF INCORPORATION,  
APRIL 6, 1869



# SEVENTY-SEVENTH REPORT OF THE PRESIDENT

*To the Trustees of  
The American Museum of Natural History  
and to the Municipal Authorities of the City of New York*

I returned to my desk as President of the Board of Trustees of the Museum last January after a five-year leave of absence. It was a very pleasant experience. Because of the fact that I had been away so long, it would seem more appropriate for me to make observations about what I found upon my return, what our problems are for the future as I see them, than to render the usual formal report. In making this kind of statement, I am dividing my comments into those things which are gratifying and those which cause concern. I do this with considerable hesitation, but based on the assumption that my point of view may be somewhat more objective and detached than would have been the case if I had been engrossed in the Museum's problems during these five years.

First, let us consider those things which are a source of satisfaction.

I can never adequately express my gratitude to Mr. A. Perry Osborn for the fine leadership that he gave the Museum as acting president from 1941 to 1946. It was a job well done, and he deserves the appreciation of our whole Museum family, which I am sure it gives fully. Furthermore, the new and constructive point of view contributed by our distinguished director, Dr. A. E.

Parr, has gone, and will continue to go, a long way in maintaining the position of the institution as one of the leading educational and intellectual forces in the scientific and museum world. His preëminence in his own field of the natural sciences, plus his creative skill in modern methods of exhibition—the mask hall being a brilliant result of his initiative—guarantees that.

As is pointed out elsewhere in this report, the Museum made important and substantial direct contributions to the war effort. The Planetarium, of course, is ideally and uniquely equipped to train men as navigators, whether for sea or air operations. During the war, 45,000 took our course, and I am sure were better sailors, marines, or aviators because of it. You will agree with me that that is an impressive figure.

In addition to that, the Landfall Recognition program was effective not only from the naval standpoint, but also from the airman's. As you perhaps know, this involved instruction in the building of topographical models of targets, so that from naval vessels and airplanes the gunner or pilot might select his target accurately and make the best use of topographical features. Two hundred and twenty-five received this training.

It is most gratifying to know that the combined attendance of the Museum and the Planetarium was higher from July 1, 1945, to July 1, 1946, than in previous years. Furthermore, our membership increased from 26,779 to 43,917 during the war years. Surely these figures prove that interest in the Museum was not only maintained but increased.

Perhaps one of the most important developments which has taken place is the adoption of a career schedule for the scientific staff. This may not seem spectacular or of particular interest to the outsider, but it will un-

doubtedly have a profound effect upon those individuals in the field of the natural sciences who come to work with us. It gives them far more security as far as promotion is concerned, and establishes a timetable for advancement which has never existed before. This was a great step forward and will doubtless prove its worth as the years go by.

Now let us look on the other side of the picture, and consider some of the things that are not so encouraging.

I want to make perfectly clear at this point that the problems I am about to discuss had their roots way back before the war and consequently cannot be attributed to the war-time administration of the Museum. They are cumulative in effect, and were no doubt accentuated by war and post-war conditions.

First of all, it was very sad to come back and find so many of my old associates on the retired list. They made a distinguished place for themselves in the world of science, and they were my friends and I miss them terribly.

It was also bad news to find that the scientific staff has been drastically and seriously cut as to numbers. This trend must not go further. You cannot have a good museum and do justice to our public responsibilities without having a top scientific staff, any more than a hospital can give proper treatment to its patients, no matter how modern its equipment may be, without competent doctors. While we have always been pinched for funds for research and publication, the situation today is worse. The members of the scientific staff must be given facilities for research and the opportunity to publish the fruits of their work. These items are of direct interest to the general public, because they determine the type of men we can attract and hold, which



in turn affect the caliber of our exhibits and educational work.

There have been very few new exhibits. The old halls are still there with few exceptions. I am also sorry to have to report that the building itself is in a shameful state of disrepair. Our financial situation is very disturbing. The reason for this is obvious: costs have gone way up and income from our endowment fund has gone way down. However, there is very definitely a way out and that is to effect further economies and obtain greater public support.

However, perhaps the most immediate problem is that, owing to a combination of circumstances, no concrete, clear, constructive post-war program for development has been adopted. It was impossible to do this during the war for many obvious reasons, and no one is to blame for it, but anyway, there it is.

What is to be done? First, we must determine and settle once and for all our post-war program of modernization and stick to it. Such a program is now in process and should be completed in the near future. When a museum, like most other institutions, stands still, it goes backwards. That was inevitable during the war. Now it must be corrected so that our position in the museum world will not be jeopardized, and so that we will be able to keep faith with the public.

We must balance our budget. We must take proper care of our employees, not only as far as pay is concerned, but in providing those benefits which a modern world expects. In this connection, reference might properly be made to the fact that a very substantial sum is paid to our own city employees from Trustee funds in addition to their city salaries in order to give them a decent living wage and security for the future. The city officials have

indicated an appreciation of this situation, and it is to be hoped that it will be remedied and the Trustees relieved of this burden which they cannot afford to carry.

Then the question comes, how to do it? We can no longer indulge in the luxury of expanding our activities in new fields. In fact, we may have to reduce the number of fields in which we are now working. In other words we must "cut the coat after the cloth," determine what kind of Museum we are going to have, and, at the same time, fulfill our responsibility to the city, to the nation, and to the scientific world at large. We must work closely with the city, because, after all, we are partners in this great enterprise. We must maintain a museum worthy of its tradition and one which will continue to bring a thrill of pride to every New Yorker, yes—and to all Americans throughout the world.

It is a job worth doing—more worthwhile than ever in our history—and it can be done.

The forces of nature are exercising compelling influences in this disturbed world of today. Why does man act as he does? The more secrets we can wring from Mother Nature the better we shall understand ourselves and be able to carve out our own destiny with greater intelligence. Research, education, exhibition, which bring realization to the public of the significance of this problem, are certainly on the "must" list. Heaven knows, mankind should do a better job for himself than he is doing, and this is at least one way in which we can make progress if we have the will to do so.

Our friends have stood by us during the war years in larger numbers and with better results than ever before. The coming years will require not only equal or double, but triple efforts if we are going to accomplish our aims. We have a great responsibility which will be realized

only if those thousands of men, women, and children who have the same aspirations for the Museum as we have who work there daily will join us in achieving this common goal.



## IN TRANSITION

BY A. E. PARR, DIRECTOR

THE last annual report told the story of events and developments during the calendar year 1944. In 1945 it was decided to change the Museum's budget year, and the year of reporting, so that it would run from July 1 to June 30 of the following year, but it seemed inadvisable to publish a separate account of the first six months of 1945. The present report, therefore, covers the entire eighteen months from January 1, 1945, to June 30, 1946.

In this eventful period armed conflict came to an end, and the Museum has been very happy to welcome back into its organization all of those who chose to resume their careers in its employ. These include all members of the scientific staff, and a great majority of the others, who had been absent during the war.

But there were also some for whom there could be no returning. And now that the bitter struggle is over, it seems appropriate to record in our annals the names of those connected with our institution for whom a share in victory became the last splendid achievement. We remember, with sorrow and with pride: Hugh Birkhead, Robert N. Cook, Otto J. Goetz, Jr., and Kermit Roosevelt.

But the return of the many who have come back does not of itself place the Museum on a post-war basis of operations. Rather does it make more urgent and acute the problem of adjusting our ideas and our functions to the conditions and demands of the post-war world.

At the outbreak of hostilities it became necessary to

subject all forms of human endeavor to a rapid and sometimes hasty reëvaluation according to their potential usefulness in the arts of modern warfare, in order that "the actions and the policies of the entire nation could be devoted primarily, and almost exclusively, to the task of meeting the peril which threatened" our country and the causes we believe in.

Probably the most drastic changes in proportionate emphasis upon normally closely related activities were those that occurred within the spheres of education and research, which include all the functions of a natural history museum. In the subjects which held obvious promise of immediate practical results for destruction or defense, funds and facilities were limited only by the scientists' ability to make use of them. But in the fields of research where the benefits accrue more slowly and apply more exclusively to the long-range problems of the normal life of nations at peace, activities came almost to a standstill. Whenever and wherever they could, the scientists and scholars dedicated to less martial lines of inquiry set aside their primary skills in order to devote such secondary skills as they might possess to teaching or research in more urgently needed disciplines. Thus the ranks and the means of some sciences grew to unprecedented proportions, while sister sciences shrank, with frozen or reduced incomes and diminishing numbers of both practitioners and students.

With the war over, all scientific and educational institutions therefore face problems of reconversion as complex and difficult as any of those faced by industry. To some it is a question of intelligent contraction and redirection of activities in order to bring their program within the limitations and purposes of a peacetime economy, without the loss of any essential gains made

during the war. To others it is a problem of achieving the physical expansion and intellectual acceleration which will enable them to regain their place and resume their normal role in the cultural and material life of the nation.

Which is the more difficult task it is impossible to tell. The institutions which were able to take a very great and very direct part in the physical war effort may be embarrassed by the multitude of their undertakings, but they are also immensely aided by the liveliness and intimacy of their contacts with all that has transpired and all that is still in process of development. To the individuals and institutions which, because of the nature of their training and equipment, could participate only in a minor and secondary way, the greatest danger lies in the temptation to try to forget that anything has ever happened, to see as the goal of reconversion only a reversal to an earlier state of happier memory, and to seek mainly the reestablishment of previous contacts with fellow sufferers rather than attempt to reënter the turbulent main stream which left them on its shores for a while. This is the deepest pitfall across the path of the natural history museums today.

Dedicated to the material and spiritual enrichment of life through the achievement of an ever better relationship between man and his environment, the natural history museums had little knowledge and experience related to the problems of destruction by violence. With pride in the fact that their help did, nevertheless, prove of far greater value than anybody had been able to anticipate, the natural scientists may therefore also acknowledge without embarrassment that their best contributions could only be of a very minor importance compared with the results offered in other lines of



research, and that their institutions now face the task of recovering lost ground and revitalizing dormant activities, rather than the necessity of taking time out to select from a superabundance of active undertakings and to reduce speed to a more orderly rate of progress. To plan, to provide for, and to conduct the transition from the past we have left behind to the future of a post-war world in which our institutions should have greater educational functions than ever before is the gravest and most urgent responsibility of museum leadership. It is also a task that cannot be accomplished from within the museums alone.

It must be the aim of all educational institutions to strive for the development of an entirely new program, which does not merely resurrect old ideas and practices, or simply attempt to continue the hectic pace of recent activities, but adapts all our knowledge and experience to the new needs of today and tomorrow. In this endeavor those institutions that serve education by formal teaching to registered students may be greatly aided or even pushed along by the demands of their new or their returning pupils. There is little help or incentive of this kind available to the museum. Its voluntary and unrecorded students are not under the direct pressure of a concern with such material future assets as that of an economically qualifying diploma. Although their greatest service may be that given to the very young, the museums must therefore still await the much more slowly developing and less explicit reactions of a very adult world, intensely preoccupied with overwhelming problems in other spheres, before the best laid museum plans can gather behind them the force of public interest and demand which alone will make their execution possible.

The world will be truly at peace only when the

peaceful arts and sciences have fully returned to their rightful place in the thoughts and actions of the people, and again find their growth supported on a scale commensurate with the economic trends of our times. It is our task to plan and to work for that day, while forging ahead with what means are available, and this task has occupied the major part of the Administration's time and energy during 1945-46.

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It has been the general practice of most natural history museums to strive for a degree of permanency in their exhibits that leaves them in a large proportion out of date at all times, and to accord to temporary exhibits a treatment so casual and penurious that it greatly lessens the impact of these displays upon the visitor's consciousness, and severely handicaps the museums' educators, artists, and designers in their efforts to keep up with the advances made in other types of institutions and enterprises addressing themselves to the public.

Without special funds available, the Department of Education of our Museum has for several years valiantly maintained a program of temporary displays with such make-shift means and methods as could be devised, making extensive use of generous loans of material from outside sources in addition to our own. The very attractive exhibition of the use of animal motifs in commercial art, shown at the Museum during the summer of 1945, may be recalled as a fine example of what the Education Department was able to accomplish on its own. Impressed by the success of these efforts, the Museum decided to broaden the base of operations by adding the services of other departments and agencies, and giving more adequate material support to the further development of our temporary exhibition pro-

gram, with the initiative and general supervision remaining in the Department of Education. As the first result of this new arrangement, the exhibit of "Masks and Men" was opened in the spring of 1946, through cooperation with the Education Department by the Staff Architect's Office and the Department of Anthropology. The Administration intends to use every means possible to continue the development of these activities in the hope that funds may sooner or later become available to place such a temporary exhibition program on a more secure basis as a permanent feature of the Museum's regular functions.

Through the initiative of Clarence L. Hay, and the efforts of the Preparation Department, the Staff Architect's Office, *Natural History* magazine, and others, the Museum was able to participate in the International Flower Show at Grand Central Palace in March, 1946, with a large alcove of exhibits which were awarded the Silver Medal by the Federated Garden Clubs of New York State and the Gold Medal in the field of educational exhibits by the New York Horticultural Society.

During the eighteen-month period covered by this report twenty-four temporary displays were set up by the Division of Special Exhibition of the Education Department, and the division was host to fifteen exhibits set up by outside organizations.

A great deal of work has also been accomplished with the more permanent type of exhibition, especially in the Sanford Hall of Birds, and in the development of the smaller exhibits for the Hall of North American Mammals. Of particular interest were four rather spectacular groups representing birds of paradise and certain other colorful or peculiar winged inhabitants of the Pacific region, which were opened to the public in



April, 1945. In these exhibits, made possible by a gift from Cornelius Vanderbilt Whitney, the striking qualities of these interesting birds have been brought out by a suggestive rather than realistic treatment of background and accessories, in a manner reminiscent of the finer color-plates of the natural history literature, but which takes full advantage of a museum's opportunity to achieve its effects in three dimensions instead of only two. The gratifying reaction expressed by many visitors encourages us to believe that similar methods may also be applied to other subjects in which the wealth of material makes an adequate representation under simulated natural conditions a practical impossibility, while an old-fashioned systematic arrangement of specimens, unrelieved by an occasionally freer use of artistry, becomes dull and boring to the spectator.

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The Education Department continued the development of its large and varied program of direct services to the school population of New York, to the general public, and to special groups. Through the operation of the Platoon Program, 519,161 student hours, representing 110,638 individual visits, were spent at the Museum under the organized guidance of the department. Attendance hours at all the department's functions within the Museum reached a total of 1,319,214, while 18,456,640 pupil hours were spent in the study of its circulating collections and teaching materials distributed elsewhere.

At the end of hostilities the Hayden Planetarium concluded its wartime mission after having contributed to the navigational training of approximately 45,000 men for the Army, Navy, and Merchant Marine. The staff can be justly proud of this service to the country, and the department is now taking an active hand in the

formulation of plans for the creation of a large, well-trained reserve of navigators for air and surface transport.

The Planetarium had a total paid attendance of 479,987, and a total attendance of all kinds, except at certain specially scheduled lectures and courses, of 649,894. This figure includes 41,755 service men and women, and 128,152 public school children attending special lectures, who were admitted free of charge. The department also made a particular effort to encourage visits by organized classes from public schools outside of New York City and from private schools in the area, with the gratifying result that 1,508 groups of 48,902 individuals joined the audience at the regular public shows.

During the twelve-month period from July 1, 1945, to June 30, 1946, the Museum and the Planetarium together received over 2,200,000 visits from the public, which is ten per cent more than during the calendar year 1944, thus continuing the steady upward trend of recent years. Museum memberships and subscriptions to *Natural History* magazine also reached a new high of 43,917, or twenty-nine per cent more than the figure given in our last Annual Report.

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In spite of the fact that many members of the staff were still absent in service during much of the period here reported upon, the amount of research carried on at the Museum and the number of new contributions to human knowledge published by our scientists have been most impressive and gratifying to observe, as a glance at the bibliography of 193 titles printed on pages 22 to 38 of this report will show. With such a wealth of material to choose from, it is difficult to single out for special attention the individual achievements which future



An elaborately masked and costumed figure representing the God of Creation  
in the New Guinea festival of the Making of the World



progress may reveal to have been the most important ones. But in the continued development of any field of study it is necessary that there should, from time to time, be a summarization and interpretation of all knowledge previously gained, and a formulation of new philosophies to guide future research. Such works as "The North and South American Ascidians" by Van Name and "The Principles of Classification and a Classification of Mammals" by Simpson therefore become milestones in the development of their subjects, and may receive special mention without invidious comparison with the many reports on other investigations which produce the materials for future syntheses and penetrate more deeply into particular problems.

Several important new projects in research were added to the Museum's activities in the fields of advanced studies and research. Through the generosity of Robert Earll McConnell and George Monroe Moffett the Museum was able to undertake a "Survey of Contemporary Knowledge of Biogeochemistry" intended to bring together and publish as a series of monographs the available information on all aspects of the interrelationships between biology and geochemistry. This project is in charge of Professor G. E. Hutchinson, a member of our staff and of the faculty of Yale University. As pointed out by Hutchinson the contact area between the two sciences, which have only recently begun to influence each other, is of direct concern in many of man's efforts to cope with his environment. This is obviously true in the utilization of aquatic resources, in human and animal nutrition, and in certain branches of medicine. It is equally true that aspects of biogeochemistry are involved in our understanding of the history of the earth and its inhabitants, and, in fact, whenever questions arise as to

the origin, potentialities, and fate of mankind. Many collaborators have joined in the undertaking, and new research will be carried out to supplement the information already available, whenever possible without prejudice to the primary purpose of the survey. The first results to be published from this project were already in press at the end of the period of this report.

Two new research projects were initiated by the Department of Anthropology and under grants received from the Viking Fund. One of these, an endocrinological survey of developmental and behavior problems, was designed first to survey all the current literature related to the problem of hormone control of human behavior and thereafter to arrange conferences of investigators in this field in order to develop methods for a basic approach to research on this important subject. The survey is nearly completed and the project should soon be ready to enter its second phase.

The other undertaking under the Viking Fund grants was the establishment of an Institute of Human Morphology intended to assemble and to make available for research an adequate collection of specimens and other materials concerned with the form and anatomy of man. Experience has shown the creation of such a study and reference collection to be one of the outstanding needs of a medical community such as that of New York City, and it is equally essential for the further advancement of general anthropological research. Erwin H. Ackerknecht joined the staff of the Anthropology Department to undertake the immediate direction of this project which already shows excellent promise for the future.

A gradual breakdown of unnatural intellectual barriers between related subjects, with increased cross-

fertilization of ideas and a broadening of the scope of individual investigations, has long been in progress in our Museum and becomes increasingly evident in our published contributions to scientific knowledge. Our ornithologists may turn to meteorology and oceanography or to a study of insects to find the solution of problems encountered in their own field.<sup>1</sup> Our students of fishes, insects, and invertebrates may draw upon, and in turn enrich, the subjects of mechanics and liquid dynamics, and aid in their practical application to human invention, as in the collaboration between our Insect Department and the Sperry Gyroscope Company towards the development of an entirely new type of gyroscope already used by our common house fly, and in many other ways. Paleontologists join the biologists in a study of the importance of temperature for the life and evolution of reptiles,<sup>2</sup> and students in both fields and in anthropology take an active part in the modern development of genetics.

It is difficult to give a full account of the origin and causes of this extremely healthy trend towards ever wider horizons. But it is certain that the Department of Comparative Anatomy under William K. Gregory has been a factor of primary importance in its early development and has continued its influence ever since. It is also certain that the Department of Experimental Biology, under the late G. Kingsley Noble, and the Department of Animal Behavior, which succeeded the latter department, under Frank A. Beach, have given tremendous additional impetus. Dr. Beach's departure from the

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<sup>1</sup>See Mayr, "Experiments on sexual isolation in *Drosophila*" (Publications, pages 31-32 of this report).

<sup>2</sup>See Colbert, Cowles, and Bogert, "Temperature tolerances in the American alligator and their bearing on the habits, evolution, and extinction of the dinosaurs" (Publications, page 25 of this report.)

Museum to assume his duties as professor at Yale University at the end of the period here reported upon represents a great loss to our organization, but it is to be hoped that the Museum, and the public through our exhibits, will continue to enjoy the stimulating influence of the activities he developed, which have played such a significant role in our intellectual growth and offer such great possibilities for our educational program.

With the easing of travel restrictions and difficulties, and the return of personnel, many departments have been able to expand their activities in the field, and some expeditions have again crossed the seas. The Vernay Expedition, sponsored and lead by Arthur S. Vernay, is making collections in Nyassaland in cooperation with the Kaffrarian Museum of South Africa. The Mammal Department is also participating in the Rutherford African Expedition, led by Mr. and Mrs. Hugo Rutherford, for the exploration of selected areas between Capetown and Cairo. A grant from the Viking Fund enabled Helge Larsen of the Anthropology Department to spend two months making excavations on Amaknak Island in Alaska, which have shed new light upon our ideas of the native cultural history of the region. Another member of the same department left for field work in Peru during the summer of this year. A gift from Frank Johnson made it possible for the Department of Insects to have collections made in Brazil and in Mexico. New information and specimens, both living and dead, were brought back by an expedition sent out to explore various caves in Mexico in support of Charles M. Breder's interesting research on the anatomy, biology, and genetics of the blind cave-fishes and their seeing relatives. T. C. Schneirla, of the Department of Animal Behavior, also spent several months in Mexico studying



the complex social behavior of the army ants. At the end of the period covered by this report, several expeditions sent out from the Department of Geology and Paleontology had just reached their theaters of operation in the West and the Middle West. There were also many smaller excursions for research or for the collection of exhibition material for various departments, which cannot be separately mentioned in this report. In spite of these encouraging signs of a revival of field work, our expedition program remains severely restricted by financial considerations. The opportunities to do research "on location" are still too few, and the scale of operations is in most cases too small to give the greatest possible and desirable results from the projects which are actually undertaken.

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It is pleasing to find many departments reporting the receipt of exceptionally numerous, and in many instances also exceptionally large, gifts of specimens from the general public and from the special friends of the Museum. It is a particularly pleasant duty to acknowledge our debt of gratitude to the many members of the armed forces who, on their distant posts, kept in mind the needs and interests of the research organizations in their own country, and kept a steady stream of material flowing our way, in response to our requests or on their own initiative.

Outstanding among individual gifts of collections are approximately one thousand wood carvings from Bali, presented by Gregory Bateson; a large collection of archaeological specimens from the Aleutian Islands received from A. R. Cahn; a personal collection of about 50,000 fossil invertebrates from North America, Peru, Russia, and Dutch Timor presented by Norman D.

Newell, who joined the staff of our Department of Geology and Paleontology, and a collection of 33,953 butterflies, beetles, and spiders which further increases our great indebtedness to Frank Johnson for many and generous gifts, both of funds and of specimens, by which he has added to the growth of our Department of Insects and Spiders.

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Upon his return from the Army, Mont A. Cazier was appointed Chairman of the Department of Insects and Spiders. The Museum is very grateful to Herbert F. Schwarz for his able conduct of the affairs of this department during the last two years, without other reward than the knowledge of a task well done.

The Department of Geology and Paleontology completed its reorganization by the appointment of Bobb Schaeffer as Assistant Curator of Fossil Vertebrates, and the appointment of Norman D. Newell to fill the curatorship of Historical Geology and Fossil Invertebrates at the Museum concurrently with his appointment as professor of Invertebrate Paleontology at Columbia University, which also invited George Gaylord Simpson and Edwin H. Colbert to join its faculty as professors of Vertebrate Paleontology. This evidence of common interests and of a rapidly developing and intimate cooperation between Museum and University is most gratifying and promising for the continued success of our efforts both in science and in education.

The Department of Anthropology reports, with regret, the resignation of Helge Larsen, whose membership on our staff during his inability to return to his native Denmark has been of great benefit to our institution. James A. Ford has been appointed Assistant Curator of Archaeology to replace Helge Larsen. Erwin

H. Ackerknecht also joined the staff of the Anthropology Department with immediate responsibility for the organization of the Institute of Human Morphology.

The resignation of Frank A. Beach from the Chairmanship of the Department of Animal Behavior in order to join the faculty of Yale University has already been mentioned. Lester R. Aronson is now Acting Chairman of this department of the Museum.

The death of Frank M. Chapman, Curator Emeritus in the Department of Birds, on November 15, 1945, has caused great sorrow among his many friends in this institution, which has benefited so greatly by his enthusiasm, wisdom, and devotion during a long and fruitful life.

## PUBLICATIONS

JANUARY, 1945, THROUGH JUNE, 1946

This list includes all titles of scientific serial publications and books issued by the American Museum, and of other articles by staff members, except those by associates whose research was entirely done elsewhere, and those appearing in *Natural History*.

### ACKERKNECHT, ERWIN H.

- 1945. On the collecting of data concerning primitive medicine. *Amer. Anthropol.*, vol. 47, pp. 427-432.
- 1945. Primitive medicine. *Trans. New York Acad. Sci.*, ser. 2, vol. 8, pp. 26-37.
- 1946. The development of our knowledge of malaria. *Ciba Symposia*, vol. 7, pp. 38-50, 12 figs.
- 1946. The history of malaria. *Ibid.*, vol. 7, pp. 51-56, 3 figs.
- 1946. The treatment and prevention of malaria. *Ibid.*, vol. 7, pp. 56-62, 5 figs.
- 1946. Malaria in the United States. *Ibid.*, vol. 7, pp. 63-68, 2 figs.
- 1946. Incubator and taboo. *Jour. Hist. Med. and Allied Sci.*, vol. 1, pp. 144-148.

### ACKERKNECHT, ERWIN H., AND G. F. CARTER

- 1946. Malaria and rainfall periodicity in Palestine. *Science*, vol. 103, pp. 342-344.

### AMADON, DEAN

- 1945. Birding in Hawaii National Park. *Elepaio*, vol. 5, pp. 55-56.
- 1945. Birds seen on Hawaii. *Ibid.*, vol. 5, pp. 71-72.
- 1945. The bird collection of the Bishop Museum. In Report of the Director for 1944. *Bernice P. Bishop Mus., Bull.* 186, pp. 24-25.

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1945. Influence of the stimuli provided by the male cichlid fish, *Tilapia macrocephala*, on the spawning frequency of the female. *Physiol. Zool.*, vol. 18, pp. 403-415.

ARONSON, LESTER R., AND G. KINGSLEY NOBLE

1945. The sexual behavior of Anura. 2. Neural mechanisms controlling mating in the male leopard frog, *Rana pipiens*. *Bull. Amer. Mus. Nat. Hist.*, vol. 86, pp. 83-104, figs. 1-27, tables 1-5.

BARTON, OTIS

1945. *Stephanolepis (Pervagor) septemclassiensis*, a new species of aluterine fish from New Guinea. *Amer. Mus. Novitates*, no. 1303, 2 pp., 1 fig.

BARTON, OTIS, AND J. T. NICHOLS

1946. Green New Guinea parrotfishes. *Marine Life, Occas. Papers*, vol. 1, no. 4, pp. 11-13.

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1945. "Angry" mosquitoes. *Science*, vol. 101, pp. 610-611.  
1945. "Play" of fishes. *Copeia*, p. 241.  
1945. Bisexual mating behavior in the male rat: Effects of castration and hormone administration. *Physiol. Zool.*, vol. 18, pp. 390-402.  
1945. Hormonal induction of mating behavior in a rat with congenital absence of gonadal tissue. *Anat. Rec.*, vol. 92, pp. 289-292.  
1945. Current concepts of play in animals. *Amer. Nat.*, vol. 79, pp. 523-541.

See Zitrin, Arthur, and Frank A. Beach

BEACH, FRANK A., AND A. MARIE HOLZ

1945. Mating behavior in male rats castrated at various ages and injected with androgen. *Jour. Exp. Zool.*, vol. 101, pp. 91-142.

BIRD, JUNIUS B.

1945. Archaeology of the Hopedale area, Labrador. *Anthrop. Papers Amer. Mus. Nat. Hist.*, vol. 39, pp. 117-188, figs. 1-40, pls. 9-12.

**BOGERT, CHARLES M.**

1945. Two additional races of the patch-nosed snake, *Salvadora hexalepis*. Amer. Mus. Novitates, no. 1285, 14 pp., 10 figs., 1 table.
1945. *Hamadryas* preoccupied for the king cobra. Copeia, p. 47.
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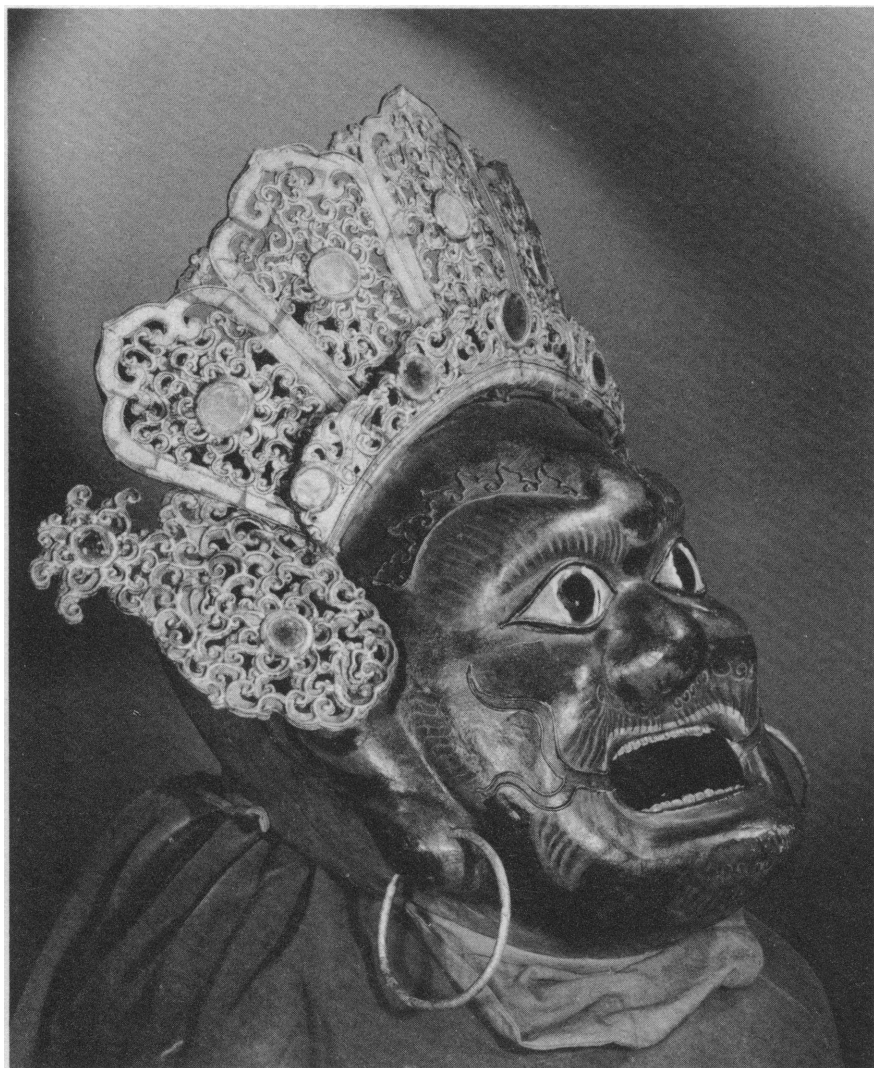
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Volumes 1-11, no. 4, 1936-June, 1946. An illustrated monthly magazine for young readers. \$1.25 a year (\$1.50 a year, Canada, Newfoundland, and all foreign countries); 15c a copy; special rates for schools.

**BULLETIN OF THE AMERICAN MUSEUM:**

Volume 1-86, art. 7, 1881-June, 1946. Scientific records of explorations and collections of the Museum, in Geology, Paleontology, Mineralogy, Zoology, and, originally, Anthropology. \$4.00-\$10.00 a volume.

**ANTHROPOLOGICAL PAPERS OF THE AMERICAN MUSEUM:**

Volumes 1-40, pt. 1, 1906-June, 1946. Discoveries, explorations, and researches in Archaeology, Anthropology, and Ethnology among the extinct and living races of man. 25c-\$5.00 a part.

**AMERICAN MUSEUM NOVITATES:**

Nos. 1-1322, 1921-June, 1946. Devoted to publication of preliminary announcements and descriptions of new forms in the fields of Zoology, Paleontology, Geology, and Mineralogy. 15c each.

**MEMOIRS OF THE AMERICAN MUSEUM:**

Volumes I-XV, 1893-1930; New Series, I-III, 1912-1921. (Volumes II, IV, V, VII, VIII, X-XV form the Jesup North Pacific Expedition series, Volumes I-XI). Prices range from 75c to \$18.00 a part.

**SPECIAL SCIENTIFIC PUBLICATIONS**

**A REVIEW OF THE PRIMATES:**

By Daniel Giraud Elliot. 1913. A monographic treatise in three quarto volumes. Paper, \$35.00; morocco, \$45.00.

**BIBLIOGRAPHY OF FISHES:**

By Bashford Dean. 1916-1923. Covers the entire literature of fishes to 1914 and embraces 45,000 titles arranged alphabetically by authors. Three volumes. Volume 1 out of print.

**THE BASHFORD DEAN MEMORIAL VOLUME:**

Complete in eight articles, 1930-1942. \$15.00.

**OCEANIC BIRDS OF SOUTH AMERICA:**

By Robert Cushman Murphy. 1936. The first comprehensive work in its field. Two quarto volumes, cloth-bound. Out of print.

**LIST OF NEW GUINEA BIRDS:**

By Ernst Mayr. A systematic and faunal list of the birds of New Guinea and adjacent islands. 1941. \$2.00.

**PROBOSCIDEA:**

By Henry Fairfield Osborn. A monographic study, in two quarto volumes, cloth-bound. Volume I, 1936, \$20.00; Volume II, 1942, \$20.00.

**TERTIARY MAMMALS AND PERMIAN VERTEBRATES:**

Hitherto unpublished plates. Prepared under the direction of Edward Drinker Cope, with descriptions of plates by William Diller Matthew. 1915. \$4.25.

**FOSSIL VERTEBRATES IN THE AMERICAN MUSEUM:**

Volumes I-XIV, 1892-1940. Collected reprints from the Department of Paleontology. \$5.00-\$18.00 each.

## ZOOLOGY OF THE CONGO:

Collected papers from the American Museum Bulletin and Novitates. List on application.

## CENTRAL ASIATIC EXPEDITIONS:

Collected papers from the American Museum Bulletin and Novitates:

Vol. I. "Preliminary Reports," 1918-1925. 8vo. \$10.40.

Vol. II. "Preliminary Reports," 1926-1929. 8vo. \$9.75.

Vol. III. Current.

"Natural History of Central Asia," 12 quarto volumes bound in cloth:

Vol. I. "The New Conquest of Central Asia," by R. C. Andrews and others. 1932. \$10.00.

Vol. II. "Geology of Mongolia," by C. P. Berkey and F. K. Morris. 1927. \$10.00.

Vol. III. "Geologic Studies in Mongolia," by C. P. Berkey, F. K. Morris, L. E. Spock, and Père Teilhard de Chardin. (In preparation.)

Vol. IV. "The Permian of Mongolia," by A. W. Grabau. 1931. \$10.00.

Vol. V. "The Topography of Mongolia," by C. P. Berkey, L. B. Roberts, W. P. T. Hill, and W. G. Wyman. (In preparation.)

Vol. VI. "The Fossil Reptilia of Mongolia," by Edwin H. Colbert. (In preparation.)

Vol. VII. "The Fossil Mammalia of Mongolia," by George Gaylord Simpson. (In preparation.)

Vol. VIII. "The Archaeology of Mongolia," by N. C. Nelson and A. W. Pond. (In preparation.)

Vol. IX. "The Fresh-Water Fishes of China," by J. T. Nichols. 1943. \$9.00, paper-bound only.

Vol. X. "The Reptiles of China," by C. H. Pope. 1935 \$10.00.

Vol. XI. "The Mammals of China and Mongolia," by Glover M. Allen. Part 1, 1938, \$10.00; Part 2, 1940, \$10.00.

Vol. XII. "The Botany and Palaeobotany of Mongolia," by R. W. Chaney. (In preparation.)

**THE U.S.S. "ALBATROSS" IN LOWER CALIFORNIAN SEAS:**

Cruise of 1911. In charge of C. H. Townsend. Collection of reprints from the American Museum Bulletin and Novitates. \$7.25.

**JOEL ASAPH ALLEN, 1838-1921:**

Autobiographical Notes and a Bibliography of the Scientific Publications. 1916. \$2.00.

**FREDERIC AUGUSTUS LUCAS, 1852-1929:**

Fifty Years of Museum Work: Autobiography, Unpublished Papers, and Bibliography. 1933. \$1.00.

**HANDBOOKS, SCIENCE GUIDES, AND GENERAL GUIDE:**

Handbook Series, Nos. 1-14, 1912-1945. Dealing with subjects illustrated by the collections rather than with the objects themselves. \$1.00-\$1.75 each.

Science Guide Series, Nos. 1-128, 1901-June, 1946. Illustrated pamphlets describing exhibits, or series of exhibits, of special interest and importance, or dealing with the contents of an entire hall. 10c-\$1.00 each.

General Guide to the Exhibition Halls of the American Museum of Natural History. 178 pages, many illustrations. 1943. \$1.00.

**A SACRED ALMANAC OF THE AZTECS:**

Edited by George C. Vaillant. Limited edition. Set of eighteen bound plates with explanation and introduction. From the original manuscript of pre-Spanish date. 1940. \$1.00.

**THE HAYDEN PLANETARIUM:**

A guidebook. 32 pages, many illustrations. 1945. 50c.

**SCHOOL SERVICE SERIES:**

A pamphlet, dealing with the Museum's first Nature Trails, by Frank E. Lutz, Curator, Department of Insect Life. 1931. Illustrated, 10c.

Six pamphlets, dealing with the Nature Trails and Trailside Museums at Bear Mountain, by William H. Carr, Assistant Curator, Department of Education. Illustrated. 15c-25c each.

Two pamphlets on Projects in Science and Nature Study, 15c-25c each.

THE REOPENING OF THE MEXICAN AND CENTRAL AMERICAN HALL,  
FEBRUARY 25, 1944:

Addresses by Messrs. A. Perry Osborn, Archibald MacLeish,  
A. E. Parr, and Harry L. Shapiro, and sixteen full-tone plates  
illustrating the collections. 1944.

A LIST OF THE MAMMALS OF THE JAPANESE WAR AREA:

Pt. 1. New Guinea and Eastward. Pt. 2. The Greater Sunda  
Area (Islands of the Northeast Margin of the Indian Ocean:  
Andamans, Nicobars, Sumatra, Java, Bali). Pt. 3. Lesser  
Sunda Islands, Moluccas, Celebes. Pt. 4. Borneo and the  
Islands of the China Sea. By G. H. H. Tate. 1944. 15c each  
part.

SPECIAL ADMINISTRATIVE PUBLICATIONS

ANNUAL REPORTS OF THE PRESIDENT:

First Report, January, 1870—Seventy-sixth, 1944.

HISTORY, PLAN AND SCOPE OF THE AMERICAN MUSEUM OF NATURAL  
HISTORY. 1911.

ANNUAL REPORTS OF THE PENSION BOARD: NOS. 1-30, 1913-1942.

STYLE SHEET FOR THE SCIENTIFIC PAPERS OF THE AMERICAN MUSEUM  
OF NATURAL HISTORY. 1943.

Price lists are available of publications on the following subjects:  
Invertebrate Palaeontology, Vertebrate Palaeontology, Invertebrates  
except Arthropoda, Arthropoda, Ichthyology, Reptiles and Amphibia,  
Ornithology, Mammalogy, Anthropology, Geology, Mineralogy,  
Botany, Palaeobotany, and List of Maps.

All publications are issued by the Trustees. Applications for  
purchase or exchange may be made to the Librarian, the American  
Museum of Natural History, Central Park West at 79th Street,  
New York 24, New York.



## REPORT OF THE TREASURER

The balance sheet showing the financial condition at June 30, 1946, and summary statements showing the changes in the endowment funds as well as income, expenditures, and balances in the current and agency funds for the period January 1, 1945, to June 30, 1946, follow:

## THE AMERICAN MUSEUM

## BALANCE

JUNE 30

## ASSETS

## ENDOWMENT AND OTHER NON-EXPENDABLE FUNDS

## ENDOWMENT FUNDS:

Cash	<u>\$394,599.40</u>	
Securities:		
Bonds	\$5,391,416.09	
Preferred stocks	3,289,458.90	
Common stocks	4,297,479.80	
Real estate	578,965.25	
Promissory notes	35,953.16	
	<u>\$13,593,273.20</u>	\$13,987,872.60

## TRUST FUNDS:

Cash	<u>\$2,878.02</u>	
Securities:		
Bonds	\$635,143.17	
Real estate	186,687.91	
	<u>\$821,831.08</u>	824,709.10

## TEMPORARY INVESTMENT FUNDS:

Cash	<u>\$39,698.74</u>	
Securities:		
Bonds	\$77,091.65	
Common stocks	26,150.00	
	<u>\$103,241.65</u>	142,940.39

\$14,955,522.09

## CURRENT FUNDS

## GENERAL FUNDS:

Cash:		
In bank	\$119,132.72	
On hand	<u>4,120.00</u>	\$123,252.72
Accounts receivable	86,913.11	
Due from other funds (contra)	35,000.00	
Loans receivable	<u>72,545.62</u>	\$317,711.45

## SPECIAL FUNDS:

Cash in bank	\$252,909.51	
Accounts receivable	14,839.18	267,748.69

## AUXILIARY ACTIVITIES:

Cash:		
In bank	\$92,002.25	
On hand	<u>750.00</u>	\$92,752.25
Accounts receivable	5,656.78	
Due from other funds (contra)	3,000.00	
Inventories	64,636.74	
Prepaid expenses	19,884.93	
Fixed assets	<u>5,981.49</u>	191,912.19

777,372.33

## AGENCY FUNDS

## PENSION FUND:

Cash in bank	\$40,867.99	
Accounts receivable	10,044.26	
Securities:		
Bonds	\$1,884,372.75	
Preferred stocks	858,181.32	
Real estate mortgages	<u>27,189.00</u>	2,769,743.07
		2,820,655.32

## OTHER AGENCY FUNDS:

Cash in bank	\$14,147.47	
Accounts receivable	<u>3,216.60</u>	17,364.07

2,838,019.39

\$18,570,913.81



# FUNDS AND LIABILITIES

## ENDOWMENT AND OTHER NON-EXPENDABLE FUNDS

### ENDOWMENT FUNDS:

Principal of funds with income available for—

Restricted purposes	\$6,845,316.91
Unrestricted purposes	2,672,335.05
	<u>\$9,517,651.96</u>

Principal of funds functioning as endowment  
available for—

Restricted purposes	\$49,401.23	
Partially restricted purposes	1,130,035.04	
Unrestricted purposes	3,290,784.37	
	<u>\$4,470,220.64</u>	\$13,987,872.60

### TRUST FUNDS:

Principal of funds with income available for—

Restricted purposes	\$70,164.56	
Unrestricted purposes	754,544.54	824,709.10
	<u></u>	

### TEMPORARY INVESTMENT FUNDS:

Principal of funds available for—

Restricted purposes	\$131,790.39		
Unrestricted purposes	11,150.00	142,940.39	
	<u></u>		\$14,955,522.09

## CURRENT FUNDS

### GENERAL FUNDS:

Suspense account	\$28,000.00	
Deferred income	100.00	
Post-war equipment fund	3,290.00	
Post-war building fund	434,919.92	
	<u>\$466,309.92</u>	
Contributed capital	15,000.00	
	<u>\$481,309.92</u>	
Deficit	163,598.47	\$317,711.45

### SPECIAL FUNDS:

Balances of funds		267,748.69
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### AUXILIARY ACTIVITIES:

Accounts payable	\$12,881.28	
Accrued liabilities	4,048.73	
Suspense account	83.80	
Due to other funds (contra)	38,000.00	
Deferred income	72,213.28	
	<u>\$127,227.09</u>	
Surplus	64,685.10	191,912.19
	<u></u>	777,372.33

## AGENCY FUNDS

### PENSION FUND:

Principal of fund	\$2,819,677.51	
Welfare fund	977.81	2,820,655.32
	<u></u>	

### OTHER AGENCY FUNDS:

Balances of funds		17,364.07	
		<u></u>	2,838,019.39
			<u>\$18,570,913.81</u>

# SUMMARY STATEMENT OF ENDOWMENT AND OTHER NON-EXPENDABLE FUNDS

For the Period January 1, 1945, to June 30, 1946

## BALANCE, JANUARY 1, 1945:

Endowment funds	\$13,493,745.23	
Trust funds	827,991.21	
Temporary investment funds	<u>92,135.17</u>	\$14,413,871.61

## ADDITIONS:

### New Funds:

Gifts and bequests	\$346,105.65	
Sale of specimen	<u>691.00</u>	\$346,796.65

### Net Profit on Sales of Investments:

Proceeds	\$4,596,907.75	
Book value	<u>4,368,663.50</u>	<u>228,244.25</u>
		<u>575,040.90</u>
		<u>\$14,988,912.51</u>

## DEDUCTIONS:

Transfers to current funds		<u>33,390.42</u>
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## BALANCE, JUNE 30, 1946:

Endowment funds	\$13,987,872.60	
Trust funds	824,709.10	
Temporary investment funds	<u>142,940.39</u>	<u>\$14,955,522.09</u>

**NOTE:** The Museum owns an interest in certain mining properties representing a bequest received during 1945 which is available for general purposes. At June 30, 1946, no valuation had been recorded on the books for this asset; therefore it is not reflected in the balance sheet or in the annexed statements of funds. During the eighteen months ended June 30, 1946, net royalties, amounting to \$249,760.21, were received from this source and set aside in the Post-War Building Fund.

# SUMMARY STATEMENTS OF INCOME, EXPENDITURES, AND BALANCES OF CURRENT FUNDS

For the Period January 1, 1945, to June 30, 1946

## GENERAL FUNDS

### INCOME

Appropriations from the City of New York	\$788,114.68	
Income from capital funds	933,648.44	
Income from outside trusts and foundations	39,567.97	
Membership dues	79,260.00	
Sales and services	41,446.38	
Contributions	<u>116,942.82</u>	\$1,998,980.29

### EXPENDITURES

Executive, administrative, and general expenses	\$561,597.50	
Care and use of collections and supervision of exhibitions	572,960.50	
Education and exhibition	290,855.33	
Operation and maintenance of physical plant and other general services	<u>803,757.40</u>	2,229,170.73.
Excess of expenditures over income		230,190.44
Transfers from capital funds		33,390.42
Excess after transfers from capital funds		<u>\$196,800.02</u>

SURPLUS, JANUARY 1, 1945

33,201.55

Deficit, June 30, 1946

\$163,598.47

## SPECIAL FUNDS

### INCOME

Income from capital funds	\$47,111.96	
Sales and services	36,328.19	
Contributions	<u>187,556.91</u>	\$270,997.06

### EXPENDITURES

Executive, administrative, and general expenses	\$3,392.80	
Care and use of collections and supervision of exhibitions	209,120.37	
Education and exhibition	<u>22,676.12</u>	235,189.29
Excess of income over expenditures		<u>\$35,807.77</u>

BALANCE, JANUARY 1, 1945

231,940.92

BALANCE, JUNE 30, 1946

\$267,748.69

## AUXILIARY ACTIVITIES

### INCOME

Sales	\$557,665.01	
Less: Cost of sales	<u>334,313.83</u>	
Gross profit	\$223,351.18	
Other income	<u>15,386.76</u>	\$238,737.94

### EXPENSES

Distribution expenses	\$19,420.09	
Selling expenses	117,088.60	
Administrative expenses	7,120.14	
Financial expenses	14,055.10	
Circulation expenses	<u>73,319.39</u>	231,003.32

Surplus for the period

7,734.62

SURPLUS, JANUARY 1, 1945

56,950.48

SURPLUS, JUNE 30, 1946

\$64,685.10

# SUMMARY STATEMENTS OF INCOME, EXPENDITURES, AND BALANCES OF AGENCY FUNDS

For the Period January 1, 1945, to June 30, 1946

## PENSION FUND

### INCOME

Contributions by subscribing employees	\$90,314.74	
Contributions by trustees and others	125,965.95	
Payments by Equitable Life Assurance Society	22,432.87	
Payments of interest on deferred contributions, etc.	759.36	
Income from invested funds	<u>157,769.38</u>	\$397,242.30

### EXPENDITURES

Payments to subscribers and beneficiaries:		
Pension allowances	\$178,840.76	
Death gratuity payments	165.88	
Refunds of contributions and interest	39,545.71	
Expenses	<u>174.90</u>	218,727.25
Excess of income over expenditures		<u>\$178,515.05</u>
Add: Net gain on sales of investments:		
Proceeds	\$2,810,905.92	
Book value	<u>2,661,660.42</u>	149,245.50
Total additions to fund		<u>\$327,760.55</u>
BALANCE, JANUARY 1, 1945		<u>2,491,916.96</u>
BALANCE, JUNE 30, 1946:		
Pension Fund	\$2,818,699.70	
Welfare Fund	<u>977.81</u>	<u>\$2,819,677.51</u>

## OTHER AGENCY FUNDS

### INCOME

Receipts for account of individuals and societies	\$354,915.24
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### EXPENDITURES

Payments for account of individuals and societies	<u>352,735.36</u>
Excess of income over expenditures	<u>\$2,179.88</u>
BALANCE, JANUARY 1, 1945	15,184.19
BALANCE, JUNE 30, 1946	<u>\$17,364.07</u>

# REPORT OF THE SECRETARY

## MEMBERSHIP

The total number of members and subscribers at the end of June, 1946, was 43,917, divided as follows:

Associate Members.....	30,348	Fellows.....	107
Annual Members.....	4,701	Honorary Fellows.....	6
Sustaining Members.....	145	Patrons.....	159
Corresponding Members.....	32	Associate Benefactors.....	46
Supporting Members.....	10	Associate Founders.....	9
Contributing Members.....	5	Benefactors.....	15
Life Members.....	843	Endowment Members.....	1
Honorary Life Members.....	75	Natural History subscribers.....	7,415

## STATISTICS OF ATTENDANCE

### THE MUSEUM

#### General attendance:

January, 1945, to December, 1945.....	1,295,721	
January, 1946, to June 30, 1946.....	<u>486,269</u>	
		1,781,990

#### Lectures, meetings, special exhibits, concerts, etc.

January, 1945, to December, 1945.....	271,866	
January, 1946, to June 30, 1946.....	<u>336,934</u>	
		608,800

Total, January 1, 1945, to June 30, 1946.....	2,390,790
-----------------------------------------------	-----------

### HAYDEN PLANETARIUM

Paid admissions.....	479,987
Classes, through the Board of Education, free.....	128,152
Men and women in uniform, free.....	<u>41,755</u>
Total.....	649,894

### EDUCATIONAL SERVICES

Teaching services.....	1,261,469
Dance and lecture programs.....	52,479
Audio-visual aids institute and information.....	5,266
Films, reached by circulation.....	4,731,500
Slides and kodachromes, reached by circulation.....	1,074,517
Loans of circulating collections to schools, libraries, and colleges.....	<u>12,650,623</u>
Total.....	19,775,854

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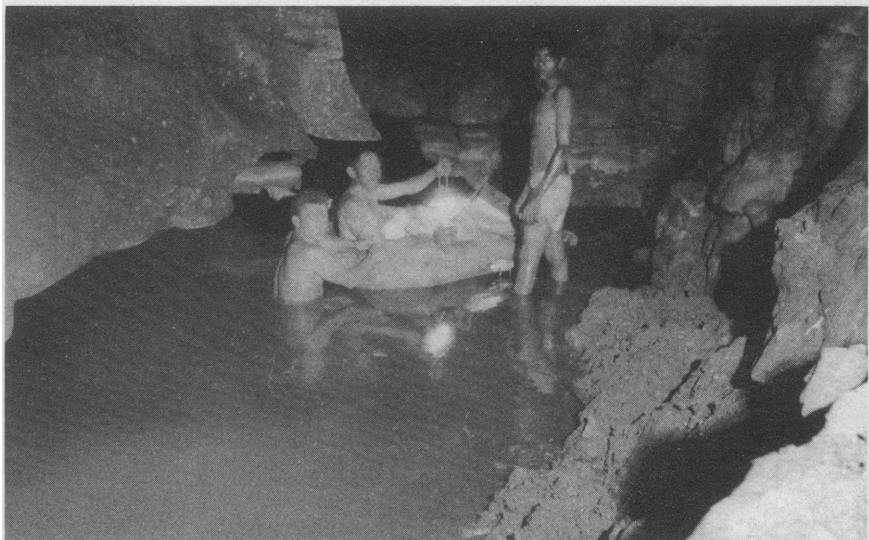
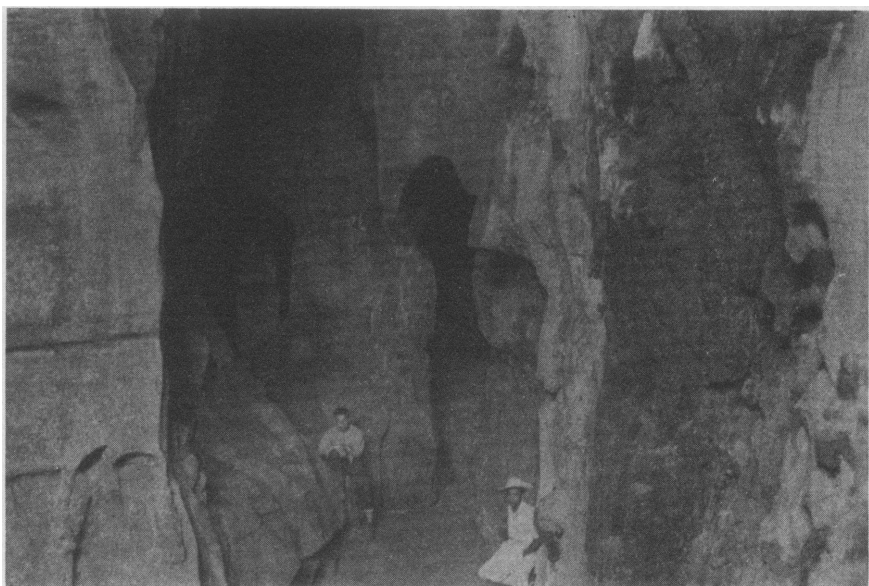
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<sup>1</sup>The President is *ex-officio* a member of all advisory committees.

<sup>2</sup>Member of the Staff.







Searching for blind fish in caves in Mexico

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HAROLD E. ANTHONY, D.Sc., Dean of the Council of the Scientific Staff

CHARLES M. BOGERT, A.M., Secretary of the Council

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G. EVELYN HUTCHINSON, M.A., Consultant in Biogeochemistry

## ANTHROPOLOGY

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MARGARET MEAD, Ph.D., D.Sc., Associate Curator of Ethnology

BELLA WEITZNER, Associate Curator of Ethnology

JUNIUS B. BIRD, Associate Curator of Archaeology<sup>1</sup>

GORDON F. EKHOLM, Ph.D., Assistant Curator of Archaeology

ERWIN H. ACKERKNECHT, M.D., Dipl. Ethn., Assistant Curator

JAMES A. FORD,<sup>1</sup> M.A., Assistant Curator of North American  
Archaeology

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<sup>1</sup>Appointment effective after June 30, 1946.

#### ANTHROPOLOGY—(continued)

CLARENCE L. HAY, A.M., Research Associate  
MILO HELLMAN, D.D.S., D.Sc., Research Associate  
ROBERT VON HEINE-GELDERN, Ph.D., Research Associate  
RALPH LINTON, Ph.D., Research Associate  
FRANZ WEIDENREICH, M.D., Research Associate  
FREDERICK H. OSBORN, Honorary Associate  
ANTOINETTE K. GORDON, Associate  
A. R. CAHN, Ph.D., Field Associate

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CHILDS FRICK, D.Sc., Honorary Curator of Late Tertiary and Quaternary Mammals  
G. H. H. TATE, D.Sc., Curator<sup>1</sup>  
GEORGE G. GOODWIN, Associate Curator  
T. DONALD CARTER, Assistant Curator  
JOHN ERIC HILL, Ph.D., Assistant Curator  
RICHARD ARCHBOLD, Research Associate  
ARTHUR S. VERNAY, Field Associate  
WILLIAM D. CAMPBELL, Field Associate

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JOHN T. ZIMMER, D.Sc., Curator  
ERNST MAYR, Ph.D., Curator of the Whitney-Rothschild Collections  
JAMES P. CHAPIN, Ph.D., Associate Curator  
CHARLES E. O'BRIEN, Assistant Curator  
E. THOMAS GILLIARD, Assistant Curator  
DEAN AMADON, B.S., Assistant Curator  
ELSIE M. B. NAUMBURG, Research Associate  
CHARLES K. NICHOLS, Research Associate and Honorary Librarian  
JEAN DELACOUR, Lic.Sci., Research Associate  
CHARLES VAURIE,<sup>1</sup> D.D.S., Research Associate

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HARVEY BASSLER, Ph.D., Sc.D., Research Associate  
JOHN A. MOORE, Ph.D., Research Associate

<sup>1</sup>Appointment effective after June 30, 1946.

## FISHES AND AQUATIC BIOLOGY

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JOHN T. NICHOLS, A.B., Curator of Fishes

FRANCESCA R. LAMONTE, B.A., Associate Curator of Fishes and  
Museum Secretary for International Game Fish Association  
Affairs

JOHN C. ARMSTRONG, A.B., Assistant Curator of Invertebrates

PRISCILLA RASQUIN,<sup>1</sup> A.B., Scientific Assistant

WILLIAM BEEBE, Sc.D., Research Associate in Fishes

CHRISTOPHER W. COATES, Research Associate in Fishes

DANIEL MERRIMAN, Ph.D., Research Associate in Oceanography

FRANK J. MYERS, Research Associate in Rotifers

HORACE W. STUNKARD, Ph.D., Research Associate in Parasitology

A. L. TREADWELL, Ph.D., Sc.D., Research Associate in Annelids

LIBBIE H. HYMAN, Ph.D., Sc.D., Research Associate in Invertebrates

H. E. CRAMPTON, Ph.D., Sc.D., Research Associate in Mollusks

VAN CAMPEN HEILNER, M.S., Field Representative

MICHAEL LERNER, Field Associate

ROSWELL MILLER, JR., C.E., Field Associate

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MARGARET L. GUY,<sup>1</sup> Scientific Assistant

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ERNEST L. BELL, Research Associate

CYRIL F. DOS PASSOS, LL.B., Research Associate

T. D. A. COCKERELL, Sc.D., Research Associate

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WILLIAM P. COMSTOCK, B.A., Research Associate

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<sup>1</sup>Appointment effective after June 30, 1946.

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JOHN ERIC HILL, Ph.D., (Assistant Curator of Mammals), Temporarily in Charge

J. HOWARD MCGREGOR, Ph.D., Research Associate

DUDLEY J. MORTON, M.D., Research Associate

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ALBERT P. BLAIR, Ph.D., Assistant Curator

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WILLIAM ETKIN, Ph.D., Research Associate

W. DOUGLAS BURDEN, M.A., Honorary Associate

BARBARA BOGGS, Honorary Associate

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NORMAN D. NEWELL, Ph.D., Curator of Historical Geology and Fossil Invertebrates

FREDERICK H. POUGH, Ph.D., Curator of Physical Geology and Mineralogy

OTTO H. HAAS, Ph.D., LL.D., Associate Curator of Fossil Invertebrates

BOBB SCHAEFFER, Ph.D., Assistant Curator of Fossil Vertebrates

RACHEL HUSBAND NICHOLS, A.M., Scientific Assistant

HORACE ELMER WOOD, 2ND, Ph.D., Research Associate in Fossil Mammals

ERICH M. SCHLAIKJER, Ph.D., Research Associate in Fossil Reptiles

LOUIS HUSSAKOF, Ph.D., Research Associate in Fossil Fishes

J. BROOKES KNIGHT, Ph.D., Research Associate in Fossil Invertebrates

ARTHUR K. MILLER, Ph.D., Research Associate in Fossil Invertebrates

<sup>1</sup>Resigned after June 30, 1946.

<sup>2</sup>Appointment effective after June 30, 1946.

## MICROPALAEONTOLOGY

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ANGELINA R. MESSINA, M.A., Associate Curator  
ELEANOR S. SALMON,<sup>1</sup> Ph.D., Scientific Assistant  
HANS E. THALMANN, Ph.D., Research Associate  
MAYNARD P. WHITE, Ph.D., Research Associate  
STANLEY G. WISSLER, M.A., Research Associate

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HUGH S. RICE, A.M., Research Associate

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KATHARINE BENEKER, Supervisor of Special Exhibition  
ETTA FALKNER, M.A., Associate Supervisor of Special Exhibition

<sup>1</sup>Appointment effective after June 30, 1946.

<sup>2</sup>Resigned after June 30, 1946.

## EDUCATION—(Continued)

MARION B. CARR, Supervisor of Museum's Popular Publications  
ANNA MONTGOMERY, Supervisor of Guest Services

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EDWARD MOFFAT WEYER, JR., Ph.D., Editor  
ROBERT EDGAR WILLIAMSON, Production Manager  
CHARLES J. O'CONNOR, Manager of Circulation and Advertising

## THE JUNIOR NATURAL HISTORY MAGAZINE

DOROTHY LEE EDWARDS, Editor  
CHARLES J. O'CONNOR, Circulation Manager

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HELEN M. GUNZ, Assistant Librarian

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JAMES PERRY WILSON, B.A., B.Ar., Staff Associate  
GEORGE E. PETERSEN, Staff Associate

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<sup>1</sup>Appointment effective after June 30, 1946.



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CLARK WISSLER, Ph.D., LL.D., Curator Emeritus, Department of  
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Argentine Museum of Natural Sciences, "Bernardino Rivadavia," Buenos Aires, Argentina

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Paris, France

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Research Professor of Neuropsychology, Harvard University,  
Cambridge, Massachusetts; Director, Yerkes Laboratories of  
Primate Biology, Orange Park, Florida

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Professor Emeritus of Mineralogy, Harvard University, Cam-  
bridge, Massachusetts

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British Museum (Natural History), London, England

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Museu Paulista, São Paulo, Brazil

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Professor of Geology and Mineralogy, University of Queensland,  
Brisbane, Australia

MR. NORMAN DENBIGH RILEY

Keeper of Entomology, British Museum (Natural History),  
London, England

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Curator of Vertebrate Paleontology, Museum of Comparative  
Zoölogy, Harvard College, Cambridge, Massachusetts

PROFESSOR HARLOW SHAPLEY

Director, Harvard College Observatory, Cambridge, Massa-  
chusetts

DR. FILIPPO SILVESTRI

R. Istituto di Entomologia Agraria, Portici, Italy

RIGHT HON. JAN CHRISTIAAN SMUTS

Chancellor, University of Cape Town, Cape Town, Union of  
South Africa

DR. LEONARD JAMES SPENCER

Editor of *The Mineralogical Magazine and Journal of the  
Mineralogical Society*, London, England

DR. ERWIN STRESEMANN

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University of Berlin, Berlin, Germany

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University College, London, England

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Professor of Psychology, Yale University, New Haven, Con-  
necticut

# THE AMERICAN MUSEUM OF NATURAL HISTORY

INCORPORATED BY THE

LEGISLATURE OF THE STATE OF NEW YORK IN 1869

The Corporation consists of a self-perpetuating Board of forty Trustees, elected for terms of five years. Also, *ex-officio*, the Mayor, the Comptroller, the Commissioner of Parks of the City of New York, and a representative of the Board of Education of the City of New York.

## FOUNDERS AND INCORPORATORS OF 1869

JOHN DAVID WOLFE	BENJAMIN B. SHERMAN	MORRIS K. JESUP
ROBERT COLGATE	WILLIAM A. HAINES	D. JACKSON STEWARD
BENJAMIN H. FIELD	THEODORE ROOSEVELT	J. PIERPONT MORGAN
ROBERT L. STUART	HOWARD POTTER	A. G. PHELPS DODGE
ADRIAN ISELIN	WILLIAM T. BLODGETT	CHARLES A. DANA
JOSEPH H. CHOATE		HENRY PARISH

## HISTORY

PRESIDENCY OF JOHN DAVID WOLFE, 1869-1872.

- 1869 Museum incorporated. Constitution adopted as drafted by Joseph H. Choate.
- 1870 First home secured, the Arsenal, Central Park.
- 1871 The City of New York appropriated \$700,000 for building. (Section I.)

PRESIDENCY OF ROBERT L. STUART, 1872-1881.

- 1874 Cornerstone of first section of building laid by President Ulysses S. Grant.
- 1878 Contract adopted between Trustees and Department of Parks, as drawn up by Andrew H. Green and Joseph H. Choate.
- 1880 Educational work with the schools inaugurated by Professor Albert S. Bickmore.

PRESIDENCY OF MORRIS K. JESUP, 1881-1908.

- 1892 Museum opened to the public on Sundays.
- 1887-1905 The City of New York appropriated \$4,218,820.94 for eight new building sections, II-VIII, and XV.
- 1907 Museum opened free to the public every day in the year.
- 1908-1917 Mr. and Mrs. Jesup bequeathed \$6,000,000 to the Museum.

PRESIDENCY OF HENRY FAIRFIELD OSBORN, 1908-1933.

- 1908 Constitution amended making the Mayor, the Comptroller, and the President of the Department of Parks, *ex-officio* members of the Board of Trustees.
- 1921 Greater New York Charter amended, placing the Museum on the same basis as Public Schools with respect to Corporate Stock Appropriations by Chapter 618 of the Laws of 1921, State of New York.

### HISTORY—(continued)

- 1921—1925 The City of New York appropriated \$2,233,800 for new sections, IX-XI, and equipment and alterations of old sections.
- 1924 The State of New York provided for the Theodore Roosevelt Memorial. Cost \$3,500,000. (Original Chapter 615 Laws of 1924.) (Building Section XII.)
- 1929 Appropriation of \$3,550,000 by the City of New York for construction of African Wing, Power Plant and Service Building, and Whitney Wing. (Sections XIII, XVII, and XIX.)  
Contribution of \$750,000 by Harry Payne Whitney for one-half cost of Whitney Wing. (Section XIX.)
- 1932 Completion of the African Wing. (Section XIII.)
- 1933 Completion of the Whitney Wing. (Section XIX.)

#### PRESIDENCY OF F. TRUBEE DAVISON, 1933—

- 1934 Contribution of \$156,000 by Charles Hayden for purchase of Zeiss Projection Planetarium and Copernican Planetarium.  
The American Museum of Natural History Planetarium Authority erecting Planetarium Building with funds (\$650,000) secured through loan from the Reconstruction Finance Corporation. (Section XVIII.)
- 1935 Opening of the Hayden Planetarium. (Section XVIII.)
- 1936 Dedication of the Theodore Roosevelt Memorial. (Section XII.)
- 1942 Constitution amended making a representative of the Board of Education of the City of New York an *ex-officio* member of the Board of Trustees.

## CAPITAL FUNDS

The Capital Funds were established in 1884. They now amount to \$14,955,522.09 (book value). The Trustees especially desire to insure the permanent growth and welfare of the Museum through an increase of the General Endowment Fund. The additional sum of \$10,000,000 is needed at present.

## FORM OF BEQUEST

*I do hereby give and bequeath to "THE AMERICAN MUSEUM OF NATURAL HISTORY" of the City of New York*

.....

.....

## GIFTS AND BEQUESTS EXEMPT FROM TAXATION

Gifts to the American Museum of Natural History are exempt from Federal Income Tax, subject only to the general limitation that the total deduction for charitable gifts in any year may not exceed fifteen per cent of the donor's net income.\*

Gifts and bequests in any amount to the American Museum of Natural History are exempt from Federal Gift and Estate Taxes.\*\*

## MEMBERSHIP, CONTRIBUTORY AND HONORARY

ASSOCIATE MEMBERS	(annually)	\$4	LIFE MEMBERS.....	\$1,000
ANNUAL MEMBERS	(annually)	10	PATRONS.....	5,000
SUSTAINING MEMBERS	(annually)	25	ASSOCIATE BENEFACTORS.....	10,000
CONTRIBUTING MEMBERS	(annually)	50	ASSOCIATE FOUNDERS.....	25,000
SUPPORTING MEMBERS	(annually)	100	BENEFACTORS.....	50,000
FELLOWS.....		500	ENDOWMENT MEMBERS.....	100,000
HONORARY LIFE MEMBERS			HONORARY FELLOWS	
CORRESPONDING MEMBERS				

FOR INFORMATION APPLY TO THE SECRETARY OF  
THE AMERICAN MUSEUM OF NATURAL HISTORY  
Central Park West at 79th Street

\*The same deduction is allowed for New York State Income Tax.

\*\*A similar exemption is granted from New York State Estate Tax.

# THE AMERICAN MUSEUM OF NATURAL HISTORY PLANETARIUM AUTHORITY

The Hayden Planetarium is operated by the American Museum of Natural History for the Planetarium Authority in accordance with a recorded management agreement.

The balance sheet showing the financial condition at June 30, 1946, and a summary statement of the income and expenses for the fiscal year ended June 30, 1946, follow:



# THE AMERICAN MUSEUM OF NATURAL HISTORY

## PLANETARIUM AUTHORITY

### BALANCE SHEET

JUNE 30, 1946

#### ASSETS

Cash:		
Operating Fund	\$37,947.61	
Surplus Fund	1,425.00	\$39,372.61
Account receivable		171.23
Inventory of publications		4,167.08
Prepaid expenses		587.21
Building and equipment	\$646,771.04	
Less: Depreciation	46,700.91	600,070.13
Planetarium instruments	<u>\$156,869.27</u>	
Less: Depreciation	<u>112,360.24</u>	<u>44,509.03</u>
		<u><u>\$688,877.29</u></u>

#### LIABILITIES

Interest on bonds (past due)		\$168,172.50
Accrued interest on bonds (current)		2,827.50
4½% refunding serial revenue bonds (past due)		193,000.00
4½% refunding serial revenue bonds (current and future maturities)		377,000.00
Loan from the American Museum of Natural History		72,545.62
Interest on loan from the American Museum of Natural History		11,435.63
Deferred income		<u>1,664.04</u>
		<u>\$826,645.29</u>
Deficit, July 1, 1945	\$404,956.08	
Deficit for the year	<u>20,605.74</u>	
	<u>\$425,561.82</u>	
Less contributed capital	<u>287,793.82</u>	
Deficit, June 30, 1946		<u>137,768.00</u>
		<u><u>\$688,877.29</u></u>

### SUMMARY STATEMENT OF INCOME, EXPENSES, AND DEFICIT FOR THE YEAR ENDED JUNE 30, 1946

<b>INCOME</b>		
Admission fees	\$107,825.86	
Other income (fees, etc.)	2,926.94	
Profit from sales of publications	<u>3,222.36</u>	\$113,975.16
<b>EXPENSES</b>		
Operating expenses	\$65,579.11	
Administrative expenses	25,007.17	
Publicity expenses	1,902.34	
Interest on bonds	25,650.00	
Interest on loan from the American Museum of Natural History	1,838.82	
Depreciation	<u>14,603.46</u>	134,580.90
Deficit for the year		<u><u>\$20,605.74</u></u>

THE AMERICAN MUSEUM OF NATURAL HISTORY  
PLANETARIUM AUTHORITY

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EDWIN C. MEYENBERG, Bursar  
ROBERT J. SEIBERT, Assistant Bursar  
CHARLES J. KERR, Acting Assistant Bursar  
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FRED RAISER, Scientific Assistant  
CATHARINE E. BARRY, Scientific Assistant  
SHIRLEY I. GALE, B.S., Special Lecturer  
EDWIN H. PRESTON,<sup>1</sup> Special Lecturer  
HUGH S. RICE, A.M., Research Associate

<sup>1</sup>Appointment effective after June 30, 1946.





