

Annual Report: 17
July 1966-June 1967

LIBRARY

ROYAL ONTARIO MUSEUM

100 QUEEN'S PARK TORONTO 5 ONTARIO CANADA


ROM



P.S.
Ro
610
1966-
1967

LIBRARY
ROYAL ONTARIO MUSEUM

P.S.
To
105
no. 17

Cover illustration: Fido, a Monitor Lizard from Africa, holds court for young admirers in the Main Rotunda. Fido helped in the collection of funds for the purchase of his distant ancestor, *Protoceratops*, as a centennial project of the children of Ontario.

Candid by Leighton Warren, R.O.M.

The Director's Report

To assume the responsibility for one of the world's great museums is a stimulating but daunting task. This is particularly true when museums are insufficiently financed and yet are being called upon to accept an increasingly active role both in education and in public life. The Royal Ontario Museum has earned international fame for its collections built up in the past by dedicated men of vision and for the quality of its staff recruited with care by past directors. Its research work is highly respected wherever scientists and archaeologists meet. In many respects it can claim to have acted as a National Museum though without the funds that a national museum, a mirror of a country's culture, generally commands.

It has long been recognized throughout the museum world that the equipment of the R.O.M. is hopelessly inadequate, that it is grossly overcrowded and financially under-supported. The inspiration of men like Currelly and his backers who gave Toronto this great cultural resource seems to have faded. The effect has been cumulative. Galleries have grown antiquated, shoddy and require renewal. The educational services which introduce our rapidly growing population of children to the wonders of nature and man are badly over-worked and under-staffed. Study/storage and offices have been created only at the cost of closing prime exhibition areas. Proper storage for valuable collections, which though vital for research have been squeezed out or are not required for actual exhibition, hardly exists. Some departments like Entomology have no galleries at all. The whole museum needs atmosphere control—an absolute essential in the North American continent and without which, in a humid atmosphere and one of increasing pollution, valuable objects cannot be preserved and museum staff cannot even work. The library cannot keep up with the minimum needs of a self-respecting museum library. Research and expeditions, if they survive at all, do so only on a hand-to-mouth basis. Publications, which carry the flag of Canadian scholarship across the world, are held up for want of finance. The purchase grant to be shared among twenty-one departments works out at less than \$1,000 per department per year. Exhibitions must be turned away for want of funds to allow the province to enjoy them. The guardian staff is reduced to dangerous levels as vandalism increases. The decoration of the Museum theatre is a source of shame, the restaurant facilities would daunt even the most tolerant visitor. An incoming director is driven to the conclusion that the survival of the institution is little more than a triumph of faith and loyalty on the part of its staff over frustrations, parsimony and total lack of appreciation.

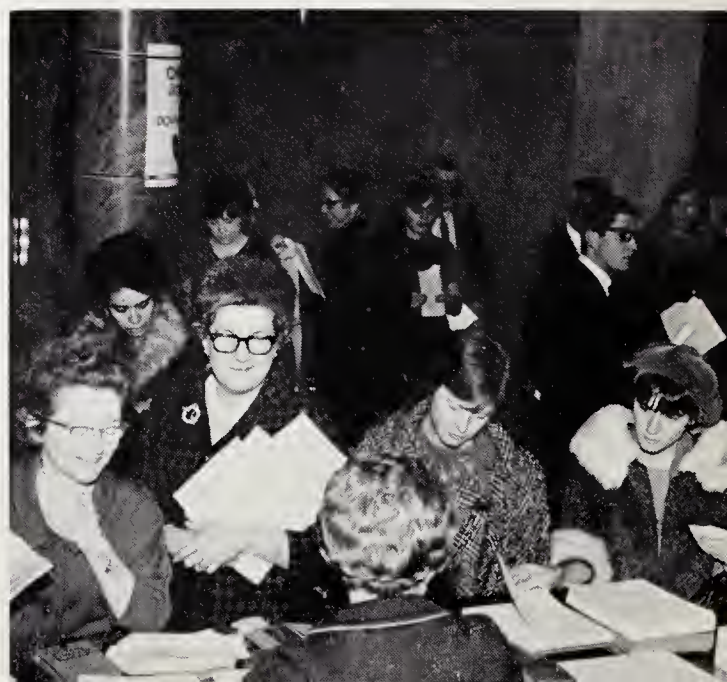
None of this is new. Year after year past directors have underlined the shortcomings and indicated the dangers of the situation. Only last year, my predecessor in his report said, "It may be that the time has now come when bold replanning should be done. The easing of pressure can only be obtained by adding substantially to the present building, by creating 'live' (that is, usable and accessible) storage on the outer limits of the city or by separating either the Arts or the Sciences from the present union and housing them elsewhere." To somebody anxious to improve these

intolerable conditions, the most depressing aspect of the Cinderella situation is the complete lack of communication with those government powers which can effect the necessary reforms and a complete absence of constructive authoritative direction. But it is no solution to a huge and costly problem simply to ignore it.

At the same time, the R.O.M. has a secure place in the hearts of the people of Toronto and it has served and continues to serve the whole country so well that its needs, massive though they seem, must be considered as a welcome challenge not only to the Director and his staff but also to the provincial government and the many well-wishers who, with mounting frustration, have tried to help it over the lean years. Having stated what needs to be done, the coming decade must be devoted to the generous restoration and rehabilitation of Canada's greatest museum. Within such an affluent society, half measures, patching up and making do can no longer and should no longer be tolerated by the public, the staff and the education authorities.

Much of the affection of visitors for the Museum springs from familiarity with it gained from an early, formative age. The R.O.M. gives classes to over 95,000 children each year, a service which, in a world dominated by materialistic values, is of increasing importance. It is encouraging to see the long line of buses outside the door and the mounting pressure of young visitors who form one eighth of our attendance. They have created a problem which can be solved only by imaginative, large-scale planning. The pressure has forced the staff to deny instruction to children below Grade 5 in the hope that over-worked facilities can be reserved for those most likely to profit from them. The Toronto Metropolitan Boards of Education, themselves very conscious of what the Museum provides, were immediately responsive to an appeal from the Director for more funds for the year ahead. They tripled their grant and welcomed a suggestion that they establish a system whereby each year two school teachers will be seconded to the Museum for one year of service. We hope that these temporary recruits will enjoy the experience—though they have already expressed their sense of shock at the conditions in which the Education Department is forced to work. For our part, we shall certainly be stimulated by their contribution and benefit from their constructive criticism and advice on means whereby we can enrich the school curricula and, still more, widen the horizons of the young. The possibilities for service to the community in this direction are limitless and the Museum was most grateful for the sympathy and encouragement which the Boards so readily proffered as well as for their quick appreciation of the value of the services they used so freely. As a result of these changes it is hoped to reorganize the teaching system in order to handle more children more efficiently than hitherto. As a means of establishing contact with teachers the Museum held its first Open Night for Teachers. It was well attended and proved most valuable both to our staff and, as the teachers assured us, to them also.

Line of buses awaits high school students gathering on the steps after a Museum visit. At right, during the Open Night for Teachers, guests gather information sheets at an improvised information desk.



Faced with all these vital shortcomings in almost every aspect of the work of the Museum, it was a shock to learn that the government made a cut of \$300,000 in the budget for 1967-68, as a result of which the Museum would have been obliged still more to restrict its activities with an inevitable decline of morale. This in turn would lead to a loss of the kind of qualified staff which is already difficult to find. As a result of representations made on the part of the University, the Department of Education agreed to reconsider the Museum's budget. Meanwhile, in order to carry the Museum over the immediate period ahead, it was forced to apply to the University for a loan to help it meet its most pressing financial difficulties—a sad recourse indeed for such an institution! Fortunately the government showed a generous measure of understanding and sympathetically replaced \$250,000 of the cut. Thus the Museum will at least be able to meet its immediate obligations without positive distress.

In the spring the provincial government informed the University that it intended to separate the Museum from the University under whose trusteeship it had served for 17 years. The Director was subsequently informed of this decision. Thus the end of the academic year was taken up with involved and, it must be confessed, somewhat disturbing considerations of its future. The Museum, with its 21 departments and numerous ancillary services, is in effect, a university in microcosm and its government is worthy of as careful a study as that of the University itself.

This is hardly the place to discuss the advantages and disadvantages of the University affiliation, on which there are many opinions. The academic staff, over the years, have gained the respect of and some measure of parity with their colleagues on the teaching staff of the University. They have secured a degree of tenure without which security no museum will ever be able to attract and hold first-class staff in what has become an increasingly demanding career. While watching over the Museum's academic and administrative staff, the University has, in return, made good use of the Museum's teaching and research facilities and has done what it could, within the context of its infinitely larger problems, to help it financially. Above all it can be said that the University has understood the functions of a museum, the needs of its staff and the importance of its integrity. The change when it comes will bring added administrative responsibilities, considerable added costs and the need for more staff for which the space simply does not exist.

The divorce, it is hoped, will give the Museum an independent status which will enable it to seek more adequate funds than it has hitherto enjoyed. At the same time it is vital to create a system whereby, on a basis of mutual respect, the academic association is maintained and, we hope, strengthened. It is most desirable that the University, in some way, will continue to exert an understanding influence on its affairs. The Museum, for its part, has contributed to the resources and, modesty aside, as the world's largest university museum, to the lustre of this great University. It is interesting to note in passing that a recently compiled list of learned publications emanating from the science departments alone during the years of University control amounts to more than three hundred items and of scientific expeditions about fifty. This is no mean record.

In keeping with the appreciation of the expanding role of the Museum in public life, the R.O.M. has long felt the need for a comprehensive museum training programme designed to serve the whole of Canada. Much thought and research has gone into establishing such a programme. The Museum hopes to launch it in 1968 under the aegis of the University of Toronto School of Graduate Studies and that it will lead to a degree from the University. The resources, variety and long experience of the R.O.M. in all aspects of museum life fit it to serve the whole and growing museum world of Canada by maintaining a steady supply of young, well-trained museum personnel. It will be satisfying to be able to help some of the many young people who write to the Museum asking how they can embark upon such a demanding but rewarding career.

Internally, the old Near Eastern Department was divided to create an Egyptian Department and a West Asian Department under Dr. Cuyler Young. This is a

natural development and should benefit both new departments by enabling Miss Needler to devote more of her remaining valuable time than hitherto to research without the heavy administrative load she has carried in the past. It will stimulate Dr. Young to create an interesting exhibition of the art and archaeology of the large area covered by his new department. Needless to say the change, though logical and forward-looking, intensifies our present problem of shortage of space.

A determined effort has been made to interest and involve more of the public in the activities of the Museum. As a result membership has risen rapidly from about 1,000 to over 1,500 and this must be considered as only a beginning. The number of visitors has continued steadily to rise and will soon reach one million per annum. It is by no means unusual for us on a Sunday afternoon to have six thousand visitors.

It was a surprise to the Director, on assuming office, to discover that, unlike most museums, the R.O.M. enjoyed no Purchase Trust Fund. Although a museum has a right to look for some purchase funds from responsible government agencies, much of this money should come from the public at large. The Board authorized the establishment of such a fund and the Director initiated a search for a "Group of One Hundred," a body of philanthropic and interested men and women who will each match dollar for dollar his personal contributions up to \$1,000 per year for ten years or as long as they are willing to do so. Of this Fund, only the interest will be spent. The response to date has been most encouraging and it is gratifying to note that the group includes two of the Museum's own Board—Mr. R. A. Laidlaw and Mr. R. G. Meech. Members of the Museum's own staff have also contributed in a most generous way. Meanwhile it has been a source of the deepest concern that the Museum is forced to refuse even bargains offered at a fraction of their value on the open market. Other great museums have purchase trusts ranging up to one hundred million dollars. It may be unrealistic to expect that of Toronto, but it is truly shameful that in a situation of shrinking supply, Canada's greatest museum should be forced to refuse objects costing only from five to twenty-five thousand dollars, items which most large museums would consider minor purchases.

Another effort to interest the public will be a new quarterly bulletin, to be called *Rotunda*, the first number of which will appear in January, 1968. For the launching of this we are grateful to the most generous support of the Laidlaw Foundation to which, so often in the past, the Museum has appealed, and, it must be said, seldom in vain. It is hoped to make this a feature of the cultural life of the community and to provide through it an added inducement to membership. If it maintains the standard planned for it, the influence of *Rotunda* should extend beyond Toronto alone.

Perhaps the most encouraging aspect of the year was the beginning of the McLaughlin Planetarium, the initial planning for which was so thoroughly carried out by my predecessor, Dr. W. E. Swinton, and by the Chief Mineralogist, Dr. V. B. Meen. As the very distinctive structure rises to the south of the Museum, one wonders with mixed emotions of pleasure and concern what difference it will make to the life of the Museum as a whole. Operating day and evening, seven days a week, fifty-two weeks a year, it will serve very large numbers of children and of the public in the most exciting way. Equally, of course, it will add to the expenses, responsibilities and difficulties of the Museum. Dr. Henry C. King, formerly of the London Planetarium, joined the staff as first Curator of the Planetarium and it is fortunate that the energetic and imaginative running of this very complex service is thus in the hands of a man pre-eminent in his field.

The Director would like to take this opportunity to thank Colonel R. S. McLaughlin for yet another most generous gift of the funds to design, create and install imaginative galleries leading up to the planetarium theatre itself. He then, with characteristic generosity and foresight, gave the Museum a Trust Fund of no less than \$1,000,000 which will ensure that at least this fine enterprise will not lack funds for all the many extra things which it will need to keep it alive—for the essential but costly changing of shows, for special lecturers, publications, publicity, etc. This Fund, though expressly not intended for day-to-day running expenses which

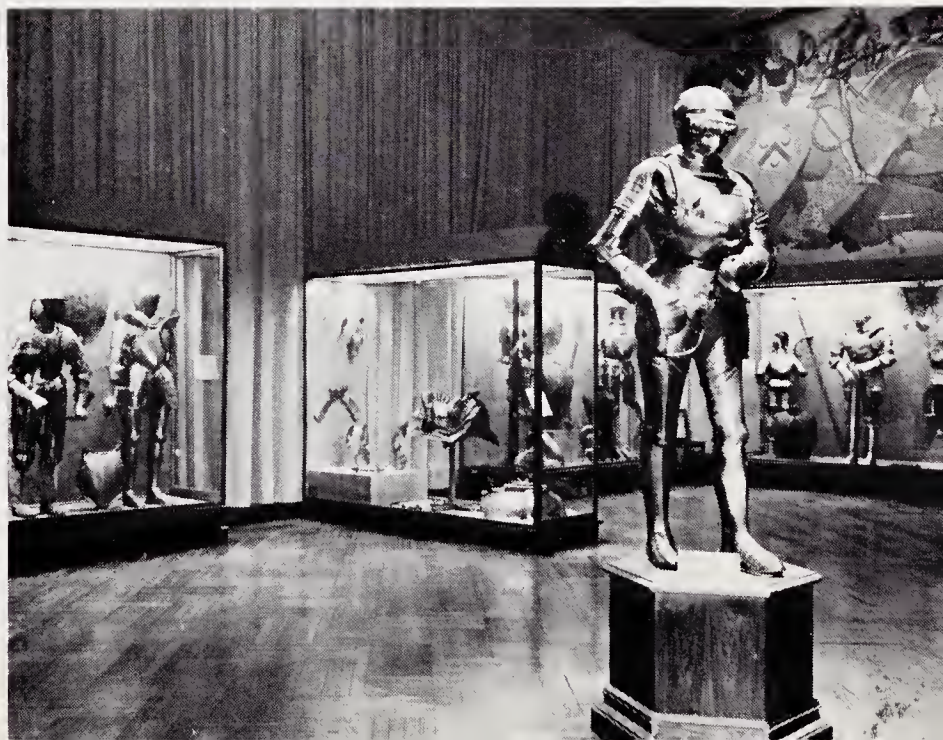
must be met by the government, will make all the difference between a flagging hand-to-mouth existence and a lively, exciting one. It is a source of encouragement that the vision and generosity of this great Canadian will ensure that his benefaction will not be as constantly beset by financial problems as the Museum itself.

The second encouraging augury for the future occurred when the President of the University established a Users' Committee to study a brief on the expansion and reorganization of the whole Museum. The brief was assembled with the enthusiastic assistance of the staff. Following the Committee's acceptance of the brief, the University granted funds for the appointment of a consultant to work out in detail the necessary changes and expansion. It is expected that this work, due to be completed in October, will lay down a manual of requirements which any future architect will be required to satisfy. For this timely assistance our thanks are due to the University whose funds are always hard-pressed and to the President whose support and interest have been a source of encouragement. These are the initial steps which we are convinced will lead, at some future date, to Toronto being able to boast one of the finest museums on the continent with facilities and services second to none.

This is an exciting prospect but one which lies a few years and a few million dollars in the future. Past directors have emphatically stressed the need for this expansion and the Museum looks forward to its implementation. Without it the Museum, on which the demands are great and increasing, will not be able to cure its present ills and re-establish itself as a dynamic force in the cultural life of a growing metropolis. The sooner it is started the less it will cost and the more it can provide.

A number of major improvements started by my predecessors have been completed. The Gallery of Invertebrate Palaeontology, more easily identified by the neophyte visitor as "The Hall of Fossils," was opened in January and met with general approval. Designed by Mr. Harley Parker and built by our own hard-pressed force of craftsmen, it incorporates some new ideas in display. Certain problems of temperature control and ventilation remain but these will probably only be solved when the whole building receives proper temperature control. The Armour Court has been completely remodelled by Mr. Hickl-Szabo in such a way that the fine collection of armour is now visible and attractively, though not revolutionarily, shown. This greatly improves the dignified entrance to the Museum. The cases are arranged in such a way that they can quickly be screened and the whole area used for large temporary exhibitions which the Exhibition Hall alone cannot accommodate. The Museum hopes in the future to be able to initiate more exhibitions than hitherto rather than just accept those distributed by other organizations. It is a pleasure to be able to acknowledge the debt we owe to Mrs. Mary Early who contributed most generously to the cost of the materials used in the new Armour Court.

Suit of armour on pedestal permits walk-around viewing, and can readily be moved when the remodelled Armour Court is used for special events.



The most notable exhibition of the year was organized by the Textile Department under the enthusiastic direction of Mrs. K. B. Brett and with some financial assistance from the Centennial Commission. It comprised a collection of Canadian costume entitled *Modesty to Mod—Dress and Underdress in Canada 1780–1967*. Most imaginatively shown, the exhibition demonstrated the wealth and scope of the collections which the Department has assembled over the years, ranging from the most modest home-spuns to recent haute-couture and uncompromising abbreviation. It is a consolation to a curator of textiles that the miniskirt and bikini of 1967 will, at least, create fewer problems of storage than the bustle and the crinoline! A splendid catalogue contains eight colour plates for which the blocks were produced in a size suitable for making into postcards. These have proved a great success. The Museum has sadly lacked a good range of its own postcards and a start has now been made to build up its stock. The exhibition was graciously opened by Princess Alexandra before the largest attendance for an opening which the Museum has enjoyed.

Another notable exhibition was the *Loch Collection of Cypriote Antiquities*, organized by Mrs. Neda Leipen, and the occasion was taken also to commemorate the late Mr. Lionel Massey through whose efforts the collection came to the R.O.M. The Director would like here to add a note of personal regret that Mr. Massey's premature death deprived him of the opportunity of working with a friend of great charm and devotion to the interests of the Museum.

Looking around the R.O.M., no serious museum man could fail to recognize that a number of important galleries have, from lack of money, been sadly neglected. Two are notably deficient—the Ethnology Galleries with their fine collections of Indian and Eskimo artifacts fundamentally unchanged for 30 years, and the galleries of Vertebrate Palaeontology, the Museum's fine collection of dinosaurs. During the year imaginative plans have been drawn up for these two major gallery renovations but finance in the region of \$280,000 must be found for them. This is a relatively small price to pay for the value children and adults could derive from such outstanding collections. The projected new wing will enable the Museum to enlarge the areas which these galleries occupy and also provide galleries for other science departments, for instance the Department of Entomology.

The completion of the new Gallery of Mineralogy is drawing near and this fine display, three years in the making, should open in October. It will prove a revelation to the public of the beauty locked in these minerals. Would that there were more public-minded companies like the International Nickel Company which provided the funds for these galleries! Thanks are due to the President who enabled the Department of Mineralogy to purchase for \$25,000 a spectroscope indispensable to its work.

Once completed, this area will lead to the Planetarium and the Museum here acknowledges with gratitude the ready help and expert advice of the University's Department of Physical Plant which has helped it with many problems. It is easy to take such services and advice for granted and in the forthcoming separation the Museum will miss them greatly. Not the least of its services was an estimate for the very essential humidity control and air-conditioning of the present building, amounting to \$1,250,000 at present-day prices. This, at the moment, exists only in estimate but it must be carried out if the Museum is to protect its treasures. It also assisted with the minimum redecoration of the dilapidated theatre and with plans for the development of the area outside the building. The theatre redecoration, in which Mrs. Vaughan of our Board has taken such an active interest, will be carried out during the summer when it is not needed for Museum or University use.

Two new dioramas were completed during the year under the sensitive direction of Mr. T. Shortt, one of the Galapagos Islands and the second of Ellesmere Island in the Canadian Arctic. It is hoped to start on an African diorama and to modernize the remainder of this gallery which gives so much pleasure to visitors of all ages. However, much work remains to be done in the general renovation and lay-out of these galleries.

Children admire the diorama constructed from specimens taken and sketches made during the R.O.M. expedition to the Galapagos Islands.



Thanks are due to our Members' Committee among whose many activities have been two series of guided midday public talks which have proved most popular. They also *inter alia* continued their voluntary assistance in the galleries and helped as hostesses and programme-sellers on many occasions. They also organized a centennial project for Ontario children whereby young visitors will contribute towards a total of \$1,500 required for the purchase of a skeleton of *protoceratops*. This was a most imaginative and original idea to add to the fund-raising potential of the Museum while also giving children, through their own press conferences, an insight at a tender age into the workings of the press and the demands of public relations.

This was only one of a number of successful publicity ventures handled by the Museum's new information officer, Mr. Bruce Easson. His small department which is expected also to handle publications is under-staffed and overworked. It is estimated that during this year and next the Museum staff will write no less than eighty publications but, with a budget of only \$14,000 per annum for this purpose, prospects of seeing their appearance in print seem bleak indeed. Certain basic publications such as gallery guides are badly needed and are in course of preparation. Press, radio and television media are becoming increasingly aware of the interest in the Museum, the Director has made about ten television appearances and under the direction of Mr. R. Kelly is engaged in a Telescope show for the C.B.C.

It has been a pleasure to co-operate with the programme of the Art Institute of Ontario which provides a most valuable service in sending travelling exhibitions throughout Ontario. This is a service which should be expanded as a means of stimulating other centres eventually to build their own museums. The Museum contributed to the programme two exhibitions: *Nineteenth Century Ontario Needlework* and *Cityscapes of Early Canada (1845-1884)*. These were shown in a total of 20 places and will continue to circulate for another year. We are convinced that this kind of travelling exhibition, accompanied by lectures, is only in the early stages of realizing its potential and should be encouraged. The Education Department performed a similar function for children in a number of areas far from Toronto and the appreciation they always receive is most heart-warming.

During the year the Museum lost the services of two Curators, Dr. R. R. H. Lemon of Invertebrate Palaeontology and Mr. R. M. Organ of Conservation. Both will be missed and it is a source of regret to lose the latter through inadequate facilities to do the work he wished to do. Experts in Conservation of his standing are very hard to find and he was the only man in Canada in his particular field. Dr. Lemon completed his new galleries and a guide to them before leaving for warmer climates. Miss Joan Biggar resigned from the Canadiana Department and with our thanks for her excellent work go good wishes for her future career. Mr. Parker is accompanying Professor Marshall McLuhan to New York where he will spend a year in research into "the response of museum audiences" and the Museum awaits with keen anticipation the outcome of his researches.

The first joint meeting of the American Museums Association and the Canadian Association of Museums proved a brilliant occasion. On some of our staff, notably Mrs. Downie and Mr. Brook, fell much hard work to organize what proved to be a most successful convention. The arrangements they and the whole committee made met with universal praise.

Six of the science departments co-ordinated their academic ambitions to produce a well-designed, far-reaching plan for systematic and evolutionary biology in order to qualify for a grant from the National Research Council to establish a "Centre of Excellence." Our science departments have contributed in the most imaginative way to the country's research facilities and have often been the only source to which the government agencies could turn for help. The collections and staff are second to none. Their past contribution and future potential should be recognized and not, as so often seems to happen, be ignored in the pursuit of what is new and untried.

The plan for the future development of Toronto prepared by the City's Planning Department, which appeared last year, surprisingly enough made no mention of the place museums and similar institutions should take in the developing city. The Director made representations, joined Mr. Matthew Lawson in discussions on the problem and it is hoped that this important area of public life will not be neglected in future planning on the grounds that it is "marginal" and "difficult to assess." The resignation of Mr. Lawson deprives the city of a dedicated man and the Museum of a sympathetic ear.

Finally the Director would like to take this opportunity to thank all the staff of the Museum for the warmth with which they welcomed him and for the loyal way in which they have met his demands and supported the Museum during the first year. It reflects the greatest credit on them and on the institution.

Much of this first report strikes a note of discontent with the *status quo* but it also indicates my conviction that no institution with the international renown and local affection of the Royal Ontario Museum will be allowed to languish while the determination and goodwill exist to revive it.

Office of the Chief Archaeologist

The pace of our archaeological programme has been maintained during the past year. A modest increase in funds from the Museum budget and also a continuation and expansion of support from other institutions and individuals fortunately made this possible. The following report briefly lists the projects, expresses our appreciation for the assistance received, and outlines plans for the future.

During the summer of 1966, Dr. Kenyon conducted the first season of excavation on a group of burial mounds in the Rainy River district, supported with a grant from the Historic Sites division of the Department of Indian Affairs and Northern Development. The excavation of the Armstrong Mound—about 57 feet in diameter and 6 feet high—at the Long Sault Rapids was the first investigation of a Laurel Culture mound in Canada. Dating from about A.D. 950, it provides important evidence for the influence of the Illinois Hopewell Culture on the Rainy River District and an adequate sample of Laurel ceramic material for analysis.

In collaboration with the Minnesota Historical Society, the Museum also investigated the waters of Boundary Falls on the Winnipeg River north of Kenora. A magnificent sample of trade-goods was recovered from two different areas at the foot of the rapids. Some of the material was almost certainly lost on August 9, 1800, by Alexander Henry the Younger. The remainder represents the cargo of a canoe which capsized between that date and 1821.

With the assistance of a faithful volunteer helper, Mrs. C. Finnigan, and a new departmental technician, Mr. Claus Breede, the long-overdue recataloguing and preparation of storage-records on the extensive collections of archaeological specimens was begun in the autumn of 1966. This project will take at least two or three more years.

Historic archaeology received a new impetus as a result of the interest of Mr. Donald B. Webster, the Curator of Canadiana, in early pottery and glass kilns

in the province. With the assistance of a grant from the Ontario Department of Tourism and Information, an important salvage excavation was carried out under his directorship on the site of the Brantford Pottery.

The Archaeological Council for Canadian Waterways has continued to provide a happy and profitable collaboration of trained scuba-divers with the Museum. But to make it more efficient and to permit the more elaborate programme of underwater research which is required, the Museum needs an historic archaeologist who could devote some of his time to this group. In spite of this, four small investigations of wrecks and underwater installations were made during the summer of 1966 under Dr. Kenyon's general supervision.

From January to June, 1967, Dr. David M. Pendergast, the Field Director, conducted the fourth season of excavations at the site of Altun Ha. As in past years, this project enjoyed the support of the Harvie Foundation. For the first time, the Canada Council made a generous grant to the project. Here, work has continued on several of the major structures in the ritual complex and their structural history is being worked out. Although all appear to belong to the classic Maya period—i.e. seventh to tenth centuries A.D.—traces have been found of post-classic occupation which may well bridge the gap and explain what happened between that time and the Spanish conquest of the sixteenth century.

The pond, which was the chief water-supply of the community, was carefully investigated in April, when a team of scuba-divers from the Museum—Dr. Kenyon, Mr. Breede and Mr. Gantert of the R.C.A.F.—went to the site for this purpose. Somewhat disappointingly, the pond did not prove to be a “sacred well” containing quantities of sacrificial offerings, but it was discovered that the ancient Maya had ingeniously modified what was a natural feature to ensure a larger and cleaner supply of fresh water. The natural exit has been dammed and the pond lined with clean clay to make a reservoir adequate to their needs.

The work at Altun Ha has proved so important and rewarding that the field project may well be continued for two more years rather than for the one year which had been originally planned. Dr. Pendergast and his devoted wife—as archaeologist, housekeeper, artist and general factotum—have done remarkable work. This year, again, in spite of our best efforts, they have had to work without a competent full-time assistant.

In 1965–66, Dr. T. Cuyler Young, the field director of the Iran project, carried out a programme of exploration and sounding to discover a site which could be the focus of the Museum's interest in Iran. During the past year, Dr. Young has been doing research on the results of that project and preparing for the coming first season at the site chosen for work—Godin Tepe, a city-mound between Hamadan and Kermanshah. In June, 1967, largely as a result of a substantial grant from the Harvie Foundation and the assistance of Yale University, Dr. Young will initiate a programme of excavation which is planned to continue for five years.

The fifth season of collaboration between the Museum and the British School of Archaeology in the excavation of the Old City of Jerusalem, Jordan, took place in the summer of 1967. The Museum was supported in this effort by the University of Toronto, the University of Trinity College, McGill University, Trent University, Carleton University, Waterloo-Lutheran University and by private contributions. Representatives of several of these institutions participated. Dr. A. D. Tushingham was head of the Canadian party and Associate Director of the expedition, the Director being Miss Kathleen M. Kenyon, Principal of St. Hugh's College, Oxford.

As in past years, the major interest of the expedition has been to elucidate the limits of the ancient city at different points in its history. This, in fact, means the discovery and dating of the lines of the walls which protected the city at the different periods. Our efforts have resulted in the definition of these lines—and so of the cities they contained—from the earliest period (about 1800 B.C.) down to the present. The extent of the City of David (Zion) is now clear, as are the lines which the walls followed at the time of the Crucifixion. Unfortunately, because Jerusalem is a living city, it is not possible to excavate at many points which are crucial if the full story is

to be told. However, inference—based on ascertained evidence and probability—generally leaves little room for doubt.

Much of the Chief Archaeologist's time over the past year has been devoted to research on the history of the Iranian crown jewels. The study and publication of this collection was assumed by the Museum two years ago and has had the collaboration and support of the Central Bank of Iran—its custodian—and the government of that country. In connection with his researches, Dr. Tushingham made a second visit to Tehran in February, 1967, and returned via Moscow and Leningrad to study comparable Persian materials in the collections of the Kremlin and the Hermitage Museums. Dr. V. B. Meen, the Chief Mineralogist, who is responsible for the study of the gems, and Dr. Tushingham have almost completed the first draft of their manuscript which is to be published by the University of Toronto Press. The Birks Family Foundation, which in the spring of 1966 made the initial study by eight persons possible, has made a further generous contribution to the costs of producing the book.

During the summer of 1966, the Museum made a further contribution of £200 to the important project which has, until recently, been carried out by Mr. James Mellaart at the early Neolithic site of Catal Hüyük in Turkey. Excavations have now come to an end at this site, but the study of the important results and their publication is being pushed forward.

The *Newsletter* has now appeared regularly, on a monthly basis, for two years. The great interest shown in the reports of our field projects and in the technical means used to preserve, analyse and evaluate the objects discovered has had direct results. There is a growing public interest not only in this aspect of the Museum's work but in the Museum itself. There is no doubt that this interest is often translated into tangible support for the Museum, in memberships and direct contributions. Much credit is due Miss Lucile Hoskins, who has borne the chief responsibility of producing the *Newsletter*.

Dr. T. Cuyler Young and Dr. A. D. Tushingham have held cross-appointments in the Department of Near Eastern Studies of the University over the past year and have taken an active part in developing the postgraduate programme for that Department leading to a degree in archaeology.

Over the past year, much of the Chief Archaeologist's time has been devoted to carrying out his responsibilities as programme chairman of the joint American Association of Museums/Canadian Museums Association Conference held in Toronto May 30–June 2, 1967.

Dr. W. A. Kenyon received his doctorate from the University of Toronto at its spring convocation, 1967.

Dr. Kenyon, Mr. Claus Breede, and Mr. Tom Gantert of the R.C.A.F. attended the Underwater Archaeology Conference held in Miami at the end of the March and Dr. Kenyon presented a report of underwater archaeological activities in Ontario. As noted, the three men then proceeded to British Honduras to carry out underwater investigations of the pond at Altun Ha. Mr. Claus Breede remained in British Honduras with Dr. Pendergast to assist in mapping, planning and drawing of artifacts. His appointment to the staff a year ago has been of great value for he possesses many skills and much enthusiasm.

There is a great need for additional staff at the curatorial level to assist in our field projects. Even though there have been funds available to hire an historic archaeologist, no recruit with the required qualifications has been found. Also our archaeological work in British Honduras requires attention for a full twelve months in each year and an expert is needed for this as well as to take responsibility for the important Central American collections which the Museum now has. Unfortunately, space restrictions in the Museum make a suitable appointment difficult in the immediate future.

The Chief Archaeologist expresses to the Director, the Secretary-Treasurer and other officers of the Museum, his appreciation for the interest they have shown and the support they have given to the projects under his supervision. The archaeological

programme may seem to be a lively one, but the responsibility of the Royal Ontario Museum in this regard is far greater than we can meet with the present staff, funds and space. Negotiations are under way for excavations at Taima, in Saudi Arabia, and the authorities have assured us that we will be granted a permit for the work. But the Museum should be the focus for Canadian archaeological efforts abroad; its experience, collections and staff all qualify it for this position. But if it is to assume this leadership, it will need the support—so far almost unsolicited—of the federal government and far broader sources of money and staff than have been available up to now.

Canadiana Department

Mr. Donald Webster, curator, reports that as was to be expected in Centennial Year his Department has been extremely active. It has held six exhibitions and the popular *In a Canadian Attic* has been continued. The exhibitions included: *La Belle Province*, watercolours and oils of early Quebec from the Department's collections; *Canadian Profile, 19th and early 20th Century Photographs by William Notman of Montreal*, circulated by the McCord Museum, McGill University; *Ships and the Sea*, paintings and prints of vessels, maritime scenes, and naval engagements, eighteenth and nineteenth centuries, from the Department collections; *An Old Canadian Winter*, paintings, watercolours, and prints, from the Department collections, of nineteenth-century winter scenes and activities; *Sculptures anciennes du Canada français*, eighteenth- to twentieth-century Quebec woodcarving and cabinetwork, including figurines and religious articles from the collection of Mrs. Nettie M. Sharpe, St. Lambert, Quebec, and armoire doors and recent furniture acquisitions in the Department collections; *Discovery and Mapping of Upper Canada*, fifteenth- to nineteenth-century maps, from the collection of Dr. Alexander MacDonald, illustrating the cartography of Upper Canada.

Demands for loans were equally heavy and the Department was happy to help other institutions whenever possible.

It is encouraging to see increasing activity in field work. On December 10 and 11, 1966, and from March 13 to 24, 1967, this Department excavated the site of the Brantford stoneware pottery (1849–1905) at Brantford, Ontario. This was a salvage operation conducted under considerable pressure of time and inclement weather conditions, but was eminently successful. A preliminary report has been made to the Ontario Historic Sites Board; an article has been prepared for *Meeting Place*, and a full report and survey will be prepared for Historic Sites and museum publication early in 1967–68.

On June 15, excavations began at the William Eby pottery, Conestogo, Ontario under Dr. Walter Kenyon, an operation requiring about 10 working days and completed prior to July 1, 1967.

The Curator has published in *Canadian Collector* and *Meeting Place* and his new book, *American Decorated Stoneware Pottery*, is with the publisher. Mr. Gerald Stevens' new book, *One Hundred Years of Canadian Glass*, is also with the publisher. Mary Allodi's catalogue of *Watercolours in the ROM Collection* is now complete, and could quickly be made ready for museum publication when funds are available.

The Curator has lectured to numerous groups in Ontario, largely on furniture and pottery, has taken part in University of Toronto and McMaster University extension series and made numerous appearances on CBC-TV and CTV, and various radio programmes. Mrs. Helen Ignatieff has lectured to groups in Toronto and Montreal. Mr. Gerald Stevens has taken part in a McMaster University seminar and a Corning Museum of Glass seminar. The Curator, Mrs. Ignatieff, Miss Biggar, and Mr. Stevens lectured to students as part of the Museum's Fine Arts 324 course.

On June 5, four students started a summer task of recataloguing the collection of approximately 8,000 prints, unframing prints on racks, and carrying out a general rematting of pictures. The latter is now essential to the preservation of the collection. The main objective of a complete recataloguing of the print collection is the preparation of separate subject area catalogues for publication.



Tin and sheet iron weathercock from Quebec.

With the aid of volunteers of the Members' Committee, the cataloguing of books has continued through the year. During May, with the assistance of the Museum's Library staff working with Miss Janet Holmes, all outstanding cataloguing of books in the Department library was completed.

Book and publication acquisitions during the year have been considerable. Our library budget of \$275, as expected, proved to be insufficient for even very minimum essential purchases. From this allowance and the Sigmund Samuel endowment funds, the Department, by the end of April 30, spent more than \$1,100 for books and other publications.

In September, 1966, Miss Elisabeth Head joined the Department as departmental secretary. Miss June Biggar, curatorial assistant, resigned effective March 30, 1967, and in thanking her for her many able and energetic contributions, the Department also wishes her good fortune in her new career.

The year has been most enriching in acquisitions and support. Approximately two hundred items entered the Department of which the most important were: two watercolours, "A Group of Indian Men and Women" and "A White Trader in Cloak and Fur Hat," *circa* 1800; a tall clock of mixed woods, *circa* 1860, belonging to Sir John A. Macdonald, the gift of Mr. E. Murray Leahey; one bird's-eye maple, Hepplewhite style chest of drawers, Nova Scotia, *circa* 1830; one tin and sheet iron weathercock, Quebec, mid-nineteenth century; one ink and wash drawing "The City of Quebec from the Anchorage, 1809," by Francis Beaufort; and a pine cupboard, Germanic influence, *circa* 1830, Peterborough County, Ontario.

Our sincere thanks are due to the following foundations and organizations without whose generous support this Department, a vista, so to speak, of Canadian history and culture, would have been denied some most important objects.

The following benefactions and grants have been received to April 30, 1967: the J. P. Bickell Foundation, \$6,000, for the purchase of a collection of armoire doors; the Laidlaw Foundation, \$5,100, for the purchase of an eighteenth-century Quebec commode; the MacLean Foundation, \$3,000, for the purchase of a pine diamond-point armoire, Quebec, late eighteenth century; sustaining members, Junior League of Toronto, \$150, for the purchase of the watercolour, "H.M.S. Barque *Wanderer*, Aground in the St. Lawrence, Quebec," *circa* 1810; the Ontario Historic Sites Board, \$2,800, for pottery works excavations at Conestogo and Markham, Ontario, and glass factory excavations at Malloytown, Ontario; the Ontario Historic Sites Board, \$300, for stoneware pottery excavations at Brantford.

Total attendance, including school groups, for the Canadiana Galleries from July 1, 1966, through April 30, 1967, was 22,714, an increase of 1,528 over the same period in 1965-66. It is a source of regret that these collections are not with the main body of the R.O.M. where they would be enjoyed by forty times as many visitors.

Conservation Department

Two varieties of crystal observed on tin pannikins recovered from the Winnipeg River have been identified as compounds that have not been reported hitherto to occur in nature. In co-operation with the Mineralogy Department, study of these crystals is proceeding with a view to obtaining their acceptance as new minerals by the appropriate international committee.

We are co-operating with the Arbeitsgemeinschaft für Metallurgie of the Württembergisches Landesmuseum in Stuttgart in the spectrographic study of Irish gold by providing minute samples from four objects in our collection.

A study of native copper used by the Indians for artifacts in the collections is under consideration as a topic for postgraduate study by the Department of Metallurgy and Materials Science of the University.

Data obtained during a study of the possibility of humidifying the European galleries have been shared with the engineers at a time when they were estimating the cost of humidification. Records of relative humidity and temperature in Exhibition Hall have been obtained regularly to serve as an indication of the behaviour of the automatic conditioning equipment. A recorder is to be installed also in the European galleries in order to obtain data in preparation for humidification at some future date. It may be of interest to record that an account of the provision of a high relative humidity for the exhibition of Japanese Art Treasures has been contributed to the programme of a conference on museum climatology to be held by I.I.C. in London during September, 1967.

The Department was opened to visitors to the joint meetings of the Canadian and American Associations of Museums and to museum staff.

Extensive assistance has been given to the European Department in cleaning and restoring their exhibits for the renovated Armour Court. Material has been provided for the vapour-phase inhibition of rusting and advice given on the provision of a cooler environment for the more susceptible of the objects. Assistance has also been given to Canadiana and to the Textile and other departments as required by their exhibition programmes.

Vandalism in the galleries has continued, the result of a shortage of guards. About twenty examples of damage came to the attention of the Department during the year.

Special lectures given by R. M. Organ are as follows: In the R.O.M. series *Digging into the Past*, on "The Conservators' Contribution to Archaeology"; at an international conference on Historic Archaeology held in Dallas, on "The Conservation of Iron Objects"; at a colloquium at the Massachusetts Institute of Technology on the problems of conservation presented by ancient silver; and on the "Methods and Purposes of Electrolytic Reduction of Metal Antiquities" at the meeting of the American group of the International Institute for Conservation in May.

A series of twenty lectures on the Chemistry of Conservation have been delivered to those members of the museum staff who wished to attend. The greatest attendance at any one lecture numbered 28, drawn from thirteen departments.

Lectures given outside Toronto have been repeated within the Department for the benefit of our own staff and, as problems arose, informal talks have been given on the theory of the various techniques brought into use for specific purposes. Technicians attached to other departments have attended on these occasions.

With the aid of the Director and through the generosity of the Chairman of CFTO a videotape transfer of the "University of the Air" programme on "Conservation at the R.O.M." has been acquired. It was shown at the I.I.C. annual general meetings in Ottawa in May and was attended by about 150 conservators.

The staff increased in number and particular importance is attached to the future addition of a second scientist competent in metallography and chemical analysis. The need in the Museum for studies of the materials of archaeological objects is pressing.

Provision of working space for this member has been made possible by addition of a third room to the Department. Much-needed space for the safe housing of

paintings while they await cleaning and relining can now be provided and the augmented departmental records and library can also expand a little and become more accessible to the larger staff.

New equipment has also been acquired, most of it of a kind immediately useful in actual conservation procedures or in the control of these procedures. Perhaps the most important item is a still, together with a 150-gallon reservoir, from which to fill our new large sinks. Until now, water of distilled quality has only been available in small quantities.

Examination of 34 objects was made for six departments, using microscopes and facilities for chemical analysis already available to us, together with the X-ray diffraction unit in the Mineralogy Department. Condition reports were made of 945 objects. At least 350 objects passed through the Department for repairs, restoration or conservation during the current fiscal year, in addition to the several hundred objects in the armour collection that have received routine attention.

In June the Curator left the Museum to join the Smithsonian, Washington, where the equipment exists for the kind of advanced work to which he wishes to devote his energies.

Egyptian Department

A historic event in the life of the Museum was the official division, in October, of the former Near Eastern Department into two separate departments: the Egyptian Department and the West Asian Department. The Curator takes the opportunity to thank the Director and the Secretary-Treasurer for their efficiency and understanding in bringing about this administrative change, which is natural and very desirable in a developing institution. West Asia and the Islamic Near East are valuable and proper peripheral studies for an Egyptologist but the twenty-year curatorial responsibility for all three areas, assumed of necessity, is now gratefully relinquished. Even without the complications of extended absences on field work and University commitments outside the Museum it is in practice impossible in this complex institution for a curator to avoid some responsibility for decisions made by his department. Division was the logical means of giving Dr. Young full responsibility for a growing department covering a large part of the Middle East. It will also give the Curator more time to concentrate on the development and publication of the Egyptian collection.

The work which the departmental reorganization involved interfered less with this year's normal productivity than the temporary loss of the study-room that will be shared by the two new departments. This study-room has been rendered useless and its material inaccessible by the construction work in the west-central area of the second floor. No space exists to spread out, classify and study large groups of objects even for projects which do not involve the now inaccessible material awaiting accommodation in drawers and cupboards yet to be installed.

In spite of the natural frustrations caused by this situation the success of the construction now nearing completion is becoming evident. Not only will it furnish new desperately needed work and storage space for the three departments concerned but it will improve the proportions of the gallery, where the original plan for the partitioning of the space has at last been put into effect. It is gratifying, too, to see that Dr. Young's office, whose removal to this area had been recommended by the undersigned as the only possible relief for our space problems, is at last becoming habitable.

Comparatively little gallery work was accomplished during the year, having been hampered by the lack of work space. However about one hundred explanatory labels were re-typed on the justifying typewriter, with checked and, in many cases, revised copy.

Short of complete reinstallation in modern cases, lighting is the most urgent need in the galleries. The six lighted wall-cases in the Second Egyptian Gallery, which were not completed until the beginning of the present year, clearly demonstrate the advantage of such lighting.

Several minor changes and improvements were made in the galleries, carrying on the progressive work of illustrating ancient daily life and technology. Among these were the reorganization of the metal-working and faience exhibits in the Second Gallery.

With the completion of the gallery part of the location file, work on the study-room and storage parts of this project has been interrupted. The storage material must first be reorganized, and nothing can be done with it until the cabinet-work for the study-room is completed. In the meantime in collaboration with the Registration Department work has progressed on the recataloguing of the "Yellow Book" entries into the card accession-index. It is hoped to complete the assignment of new numbers by the end of June. The typing of the stencils for the cards is being done in the Egyptian Department, as this work involves rearrangement, checking and sometimes revision of the given information in the case of old entries. When all the "Yellow Book" entries have been assigned new numbers (a total of almost 4,000 items), the re-numbering of the objects themselves in order of accessibility can start.

The 19 fragments of Amarna relief acquired in 1965 have been catalogued in detail and photographed.

Picture files, clipping files, slides, subject indexes and other aids to the general care and interpretation of the collection and to research have been worked on as usual.

The Curator undertook the following research projects: detailed study of the nineteen Amarna reliefs mentioned above with a view to publication; an unpublished graffito discovered by her near Buhen (Sudanese Nubia), on which she will read a paper at the International Congress of Orientalists at the University of Michigan next August; research in connection with the final publication of the Predynastic human figures in the collection, completed after reading a paper on the same subject at the 1965 annual meeting of the American Research Centre in Egypt in Chicago.

In addition to a very few informal talks to outside groups, the curator also delivered an illustrated lecture course (one hour a week) on Egyptian art and archaeology as part of the first year Near Eastern History course at University College and participated in the planning of the graduate programme in archaeology, Department of Near Eastern Studies.

The Museum contributed \$1,000 to the excavations of the Egypt Excavation Society at Saqqara, directed by Professor W. B. Emery, for the second season.

As the member of the University of Toronto faculty most familiar with the total record of the American Research Centre in Egypt, and in the absence abroad of the other senior Egyptologist on the campus, the Curator was pleased to write a brief account of the A.R.C.E. expressing appreciation of the University's decision to become a Research Supporting Member of the Society. This memorandum was prompted by the hope that the Museum may eventually participate in, or even initiate, field-work in Egypt. During the year there has been some discussion, in informal conversations, of the possibility that the University of Toronto might excavate in Egypt in the near future. On his own initiative Dr. Redford planned to visit the Delta during the summer of 1967 to investigate possible sites, particularly Tell el Maskhuta. For this project he obtained limited official sponsorship from the President's Office. That the Museum ought to take part in such a venture, should it materialize, is agreed. The professional and material advantages of taking some initiative in negotiations are obvious, and the Museum's opportunities in Egypt for years to come might benefit by a thorough study of the matter.

It is unfortunate not to be able to record, in this auspicious year, even the minor Egyptian accessions usually included in the annual report. The material returns from last year's contribution to the Egypt Exploration Society have not yet arrived owing to postponement of the division and of an exhibition to be held by the Society in London. We have been assured that the division has been generous and that we shall receive a fine selection.

The most exciting and exasperating event of the year has been the continuing effort to acquire the 18th-Dynasty wall-painting, offered at the reasonable figure of

\$25,000 U.S. The Museum's Egyptian collection contains no wall-paintings; they are indeed very rarely seen outside of Egypt on account of their fragility. This would have been a fitting gift to the Museum during the year but with the hopelessly inadequate purchase funds available to the Museum this great opportunity was lost.

All the work reported in the above paragraphs has been constantly interrupted, as is normal and right, by attending to inquiries by mail and receiving visitors. There have been colleagues from other North American centres, from Europe and from the Near East. Students, teachers, writers, broadcasters and advertisers have come with inquiries of all sorts and the usual number of objects were submitted for examination. It has been rewarding, as always, to co-operate with specialists in other fields of study. In medicine alone we were approached this year by three different scholars; we provided mummy-tissue and literature to a pathologist for histological study (receiving copies of the resulting micro-photographs, unintelligible to us but potentially useful), exchanged information on ancient Egyptian teeth with a professor of dental research, and produced specimens, literature and ancient pictures for a doctor specializing in arthritis who is interested in ancient headrests in connection with research on sleeping habits. Special bibliographies were prepared for groups. A textile and several items from our picture file were lent for a special exhibition to the Textile School at Hamilton, through the offices of the Du Pont Company of Canada. These are but a few examples of the "reference work" done during the year.

Miss Geraldine Bull resigned as departmental secretary to study in France. She has been replaced by Miss Elspeth Bogle, who graduated this spring from the University of Toronto, General Arts Course. Mr. Hadaway leaves this Department at the end of June to work full-time in the West Asian Department. He will be replaced by Mr. Nick Wasiliw, another graduate of the Central Technical School, Art Department, whose appointment is also full-time. The Curator wishes to record here the excellent work Mr. Hadaway has done since he came to the Museum in September, 1965. The established post of curatorial assistant in this Department has not yet been filled. Such a curatorial assistant is urgently needed to allow the Curator more time for publication, teaching and general work with the collection during her remaining years at the Museum, and to provide continuity and adequate assistance for a successor.

Department of Ethnology

Dr. E. S. Rogers reports that, beginning in July, 1966, under the supervision of Mrs. Wood, approximately 20,000 specimens were moved from unsatisfactory storage in the Borden Building to new storage facilities in the Museum. Unfortunately, this necessitated the closing of galleries to make room for the essential move. A study/laboratory was created and all the specimens were classified, recorded and stored as they should be. Three hundred were properly catalogued.

With the help of a grant from the Wenner-Gren Foundation, a programme of training for anthropology students during the summer months for museum work started. They received training in the collections and visited other departments where they also received instruction. The two mainly concerned continued to assist on a part-time basis during their academic year.

An inventory of all the major departmental holdings was compiled and forwarded to the Committee on Anthropological Research in Museums which has been sponsored by the American Anthropological Association and the Wenner-Gren Foundation. More than one thousand specimens were photographed, filed according to accession number and classified according to type and culture area.

Loans were made to thirteen university, school and gallery organizations, including three to Expo '67.

The Department received approximately 180 gifts, a number of which are of major significance. Needless to say it looks forward to the time when it will be able to show Canadians and foreign visitors alike much more of its very valuable material. With this in mind it was a source of great satisfaction that the Display Department undertook to redesign the present galleries which have, through lack of money,

remained untouched for nearly three decades. A most stimulating model was made and photographed with a view to interesting a benefactor in this long overdue reorganization. It is a source of profound disquiet that even our many thousands of children who visit the Museum cannot experience through the galleries this aspect of Canada's culture.

The Department co-operated with the National Film Board in Montreal in the preparation of film strips to be distributed throughout schools in Canada, the United States and Europe. Two of these films were made during the year, one showing the life and customs of the Subarctic Indians and the other those of the Plains Indians. The Department did the research for this and used its own collections.

The public has continued to draw heavily on the resources of the Department. Expo '67, the Centennial Train, small historical museums, public libraries, the CBC, publishers and other universities all profited, as indeed they should. The growing interest in primitive art and the increased number of private collectors creates much enjoyable work for the staff. At the request of the Ontario College of Art, a display of specially selected material was arranged for the benefit of students.

In all, sixteen talks were given at the unveiling of plaques for the Ontario Archaeological and Historic Sites Board, for television, radio and other agencies. The Curator also gave two papers and attended eleven conferences. Father Trudeau of St. Paul's University, Ottawa, and the Curator have initiated the planning of a meeting next fall of university and government personnel involved in Indian research projects to discuss mutual plans and their work. An integrated programme of research, designed for a five-year period and involving ethno-biological field-work, was submitted to the Ontario Department of Lands and Forests. Miss Loraine Spencer has, for the past eight months, been engaged on a Bibliography of the Patricias, Ontario, which now amounts to nearly one thousand titles and is near completion. The Department continued its customary services to graduate students and the University in general.

One of the most encouraging developments was the formation of a Committee for Arctic and Subarctic Research which had been requested by the federal government. On the request of the Research Board, the Director served as chairman and the Curator as secretary. The Curator also acted as consultant for five other organizations and for the fourth year continued his work on the Parry Island project. A grant from the Committee for Arctic and Subarctic Research enabled him to initiate a project on the Webique Indians. A colouring book for children entitled *Canadian Indians* appeared and six more serious publications are in course of writing.

European Department

Mr. Hickl-Szabo, Assistant Curator-in-charge, reports that the main activity of the year was the complete renovation of the Armour Court, as a result of which this important and handsome area, the first seen by a visitor to the Museum, creates a distinguished impression. The fine collection of arms and armour is also properly visible for the first time. The watch collection was properly arranged and displayed in lighted cases, as also a case of Chinese export-wares.

The staff of the Department has been busy preparing for future exhibitions such as *Glass and Iron* and *Prized Possessions* and active in research for publications. Miss Ferguson has worked on the watches and clocks, on a group of painters at the Derby Factory as illustrated by objects in the Museum's collection and on the whole collection of arms and armour. We gratefully acknowledge the help of the Conservation Department, the carpenters and preparators in creating this gallery at a time when they were under considerable pressure for other work.

Mr. Brett continued his research on the history of English pottery for his third book which will deal with the Museum's collection of English wares. This early pottery is one of the strong points of the collection which has hitherto not received its due recognition. The Assistant Curator-in-charge has worked on an article entitled the "Iconography of The Fall of Man," some preliminary investigation of the fine Romanesque capital presented by Mrs. John David Eaton in 1964 and, of course, on

the arms and armour. It is natural that this Department should be called upon to answer many questions from the public, a service which it renders with pleasure and which occasionally results in valuable additions to the collections.

The staff of the Department gave a total of forty lectures during the year. Mr. Brett's second book *Dinner is Served*, which deals with eating habits in England from the Middle Ages to 1900, is now in the press and he has published two articles. Miss Ferguson has written one article and Mr. Hickl-Szabo has completed four, one of which, on "Stained Glass Panels" in the Museum, will appear in *Rotunda*, the new R.O.M. Bulletin.

Among the 22 accessions most notable was the collection from the Miss Aileen Larkin Bequest. It is a source of great regret that the Museum was not able to take advantage of a number of very fine opportunities to acquire excellent material for relatively small outlay due to the inadequate purchase fund. Such opportunities are becoming increasingly rare and Canada is the loser. The European Department is in need of considerable financial support to help it raise its collections to a higher level and to fill serious gaps. It is, at times, difficult to convince the public of the urgency of this task.

Far Eastern Department

Mr. Trubner reports that this year, although lacking the excitement and constant pressure of a large exhibition, enabled the Department to catch up with postponed research and projects. Work continued on recataloguing the extensive storage collections, and on making the card catalogue file consistent by transferring all information to large format cards.

The Department's new acquisitions, gifts as well as purchases, were catalogued and placed on exhibition.

Mrs. Murray Bell again worked in the Department during the year, continuing the mounting and labelling of record photographs of Museum objects and comparative material in other collections. The photographic reference file has grown over the years and now contains approximately 1,000 photographs which are invaluable to the staff, students working on research projects and visitors. As in former years, most appreciated help and assistance has also been provided by Mrs. Frank H. Ferris, Jr., for which the Department is deeply grateful.

Considerable additions were also made to the Department's expanding slide collection which is one of the basic tools required for the teaching of courses on East Asian art at the University. Among the major additions were sets of slides of Indian bronze images and representative examples chosen from the renowned collection of His Majesty King Gustaf VI Adolf of Sweden.

Mr. Trubner and Mrs. Stephen were both invited to participate in the week-long international symposium on Asian Art, held at the M. H. de Young Museum, San Francisco, to mark the opening of the Avery Brundage Wing of Oriental Art, which houses Mr. Brundage's renowned collection. The symposium drew scholars from all over the world.

Mr. Trubner wrote a review article for the May, 1967, issue of *Antiques*.

The entire curatorial staff of the Far Eastern Department, including Mrs. Motamedi, former curatorial assistant, collaborated in the writing of the catalogue entries for the International Fine Arts exhibition *Man and His World* at Expo '67, published by the National Gallery, Ottawa. The Far Eastern Department lent one of its major Chinese stone sculptures to the exhibition. Both Mr. Trubner and Mrs. Stephen attended the official opening of the exhibition on April 27.

In January, 1967, the Far Eastern Department Library received an important and major gift of rare books on various aspects of Japanese art. These expensive books were purchased in Japan by the Ministry of Foreign Affairs and presented by Mr. Ryoko Ishikawa, Consul General of Japan, in Toronto, at an intimate ceremony held in the Library of the Far Eastern Department.

Several important gifts of objects have been given to the Department during the past year, including a rare and very important Japanese, early seventeenth-century

inlaid lacquer cabinet of the Momoyama period (1573–1615), the gift of Mr. and Mrs. Frank H. Ferris, Jr., and a group of early Korean pottery, Silla period, fifth to tenth century, the generous gift of Mrs. George G. R. Harris.

In view of last year's major effort with the *Art Treasures from Japan* exhibition, the Department held no special exhibition during the fiscal year, 1966–67. An agreement was, however, made with the Museum of Fine Arts, Boston, and the other participating Museums to allow a very important travelling exhibition, *The Nasli and Alice Heeramaneck Collection of Indian and Nepalese Art* to be shown early in 1968. Formal arrangements for this were completed early in 1967, and preparations for the installation and display of the exhibition, which will be on view from January 22 to March 10, 1968, have already begun.

Mr. Trubner, cross-appointed in the University's Department of East Asian Studies, taught the University's fall term of East Asian Studies 331/431, an honour course on *The Art and Archaeology of East Asia*. This was devoted to "The Buddhist Art of India," followed by "The Buddhist Art of China and Japan" in the spring term, the latter taught by Professor H. Y. Shih, thus completing the year's programme devoted to the Buddhist art of Asia. This and other services as examiner add to the resources of the University.

The academic staff wrote a number of articles and reviews.

Ten accessions of significance entered the Museum's collection and the Department repeats its appreciation of the kindness of Mrs. Ferris and Mrs. Harris, both of whom have directed their generosity with an awareness of those areas in the collections which need strengthening. The Museum will greatly miss the enthusiasm, connoisseurship and interest which Mrs. Ferris has shown over the years she has been associated with it.

Invariably, every year, other institutions make heavy demands for loans from the Far Eastern collection to major exhibitions. Whenever feasible, the Department is happy to lend to other museums and art galleries, so that our collections may become better known outside Toronto. A major loan of objects from the Yuan Dynasty (1280–1368) has been promised to the Cleveland Museum of Art for 1968, for an important exhibition, the first of its kind devoted to the arts of the Mongol Dynasty. During 1966–67 the Department authorized more than 76 loans.

Mrs. Motamedi left the Museum in November to rejoin her husband in Kabul. Her position will be filled from July, 1967, by Miss Doris Dohrenwend, a graduate student at the Fogg Art Museum, Harvard University. She is expected to complete her requirements for the Ph.D. degree in Fine Arts before coming to Toronto to join the staff as curatorial assistant.

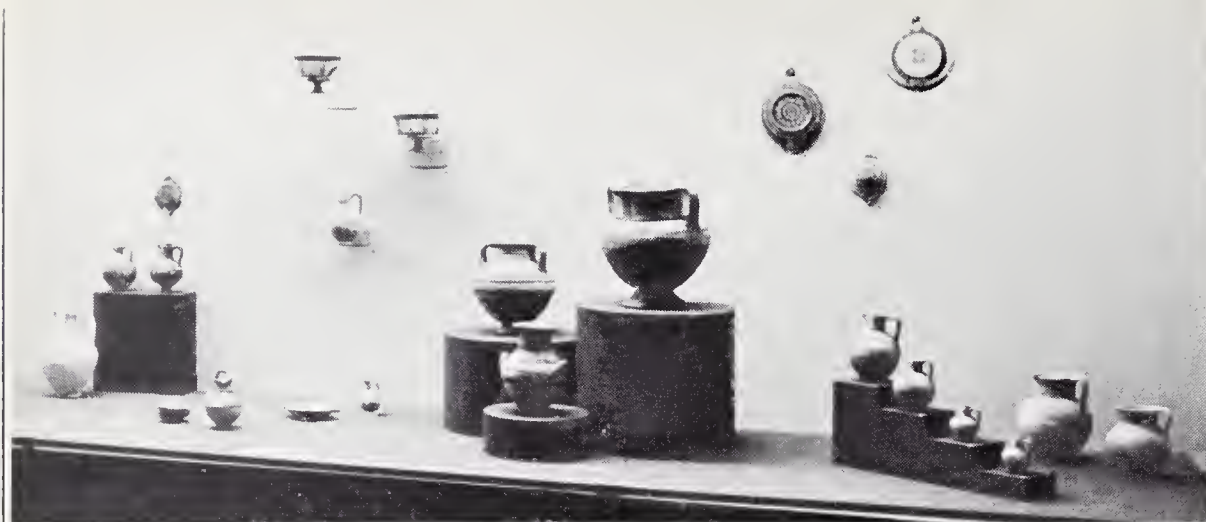
Miss Chung, who replaced Miss Glyn as Department technician, resigned to return to secretarial work, and was succeeded by Miss Candace Coates.

Three hundred books, pamphlets and periodicals were added to the collection and the library now contains 7,986 volumes, including serials. All volumes in the Mu Library have now been removed to the Department of East Asian Studies, leaving a small number of works on art and archaeology which have not been included in the above total. Two hundred and sixty-eight titles were catalogued. One hundred and two slides have been accessioned, making a total of 8,402.

Greek and Roman Department

Preliminary to a planned rearrangement and improvement of some of the gallery exhibits, Mrs. Leipen, Associate Curator-in-charge, has done research on the Coptic and other early Christian material. The excellent quality of this material, primarily bronzes, pottery, and wood and bone objects, merits a more attractive installation which is now in progress in the small Coptic Room. Miss Harle, Curatorial Assistant, studied and re-catalogued the major part of the collection in the Romano-British gallery, particularly the pottery, jewellery and the bronze and iron implements.

On the invitation of the American School of Classical Studies, Agora Excavations, Mrs. Leipen collaborated on one of the series of monographs reporting on



Display of pottery from the Loch Collection of Cypriote Antiquities exhibited in memory of the late Lionel Massey.

the finds from the Athenian Agora. She spent July and August 1966 on the site in Athens classifying the "small finds" of bronze to be included in a comprehensive volume on *Small Finds* in general.

A special exhibition of the *Loch Collection of Cypriote Antiquities*, was held from October 17 to December 26, 1966, in memory of the late Lionel Massey through whose good offices in 1965 this generous gift of about three hundred exquisite pieces of Cypriote pottery, sculpture, terracottas, glass and jewellery found a welcome home in the R.O.M. An illustrated catalogue, written by Neda Leipen, accompanied the exhibition. She also directed and supervised the installation of the show.

Three of the Graeco-Roman mummy portraits from Egypt were sent on loan to the Detroit Institute of Arts to form part of a comprehensive special exhibition of *Mummy Portraits from Roman Egypt*.

Mrs. Leipen gave two talks, and in addition to the major publication of the catalogue of *The Loch Collection of Cypriote Antiquities*, also wrote "Small Finds from the Athenian Agora" for *Meeting Place* in the *Varsity Graduate*, Summer, 1967.

A desperate scraping of the bottom of the shallow barrel of R.O.M. purchase funds enabled the Department to acquire a Roman mosaic panel from Syria, 3rd-4th century A.D.—a notable addition to its collections. The only other acquisitions this year were a small bronze figure of Eros and some pieces of pottery.

As usual the Department has dealt with innumerable inquiries by scholars, students, publishers and members of the public. A large number of objects brought to the Museum were inspected and identified—a welcome duty and service.

Department of Philately

Mr. Douglas Patrick has continued to enrich the Museum with his enthusiasm, expertise and persuasive good humour. As a result, the collections increased by \$600 worth of Canadian stamps kindly contributed by members of the Canadian Stamp Dealers' Association. These stamps bring the collection up to date from 1947 to 1967.

Work progressed on re-mounting the Canada collection to the 160-page limit in one case. Overflow materials will be mounted on album pages supplied by a friend who prefers that his thoughtful donation of \$60 shall remain anonymous.

Changing displays in the small area off the lower rotunda have drawn many enthusiasts to enjoy the scarce or rare stamps displayed there.

Outstanding exhibits since July, 1966, included *Disinfected Mail from 1485 to 1850*, *Israel Rarities from Harry Zifkin's Collection*, and *Austrian Christmas Cancels*. A loan collection of *Academy of Medicine Swiss Stamps* was shown in February 1967, and *Rare Canadian Coil Postage for Vending Machines* and *Old Cork Canadian Cancels* complete the year's displays.

Mr. Patrick co-operated in a radio programme with Dr. E. S. Rogers, Curator of Ethnology, on "Beaver Pelts" which was later converted to a *Globe & Mail* story.

Articles on all the exhibitions appeared in the same newspaper, and there is no doubt that Mr. Patrick's lively radio talks and articles bring many visitors to the Museum. It would be of great value to the Museum to have a more worthy area in which to show the stamp collections.

Textile Department

For the past year the activities of this Department have concentrated on two major projects: *Modesty to Mod*, the Centennial Exhibition of costumes worn in Canada, and research in the field of Canadian textiles.

In April, 1966, an application to the Centennial Commission was prepared by Mrs. Brett and Mrs. Downie, on three days' notice, for a grant of \$8,500 for the exhibition and for a worthy catalogue to accompany it. In September the grant was approved. During July, while on leave of absence without pay, Mrs. Brett designed the exhibition, selected the costumes to be shown and planned their arrangement. In September, in consultation with Mr. Harley Parker, the design was finalized. A number of costumes of the later periods (after 1850) had to be excluded through lack of space. The mounting of all costumes not previously photographed was begun and photography continued until the end of December.

Following the announcement of the award of a Centennial Grant in October, Mrs. Brett went to England for two weeks to spend one week at the Gallery of English Costume in Manchester which houses the Cunnington collection of English Costume, the most important of its kind in England and the one most closely related to our own collection. Displays of costumes in the Victoria and Albert Museum and the Assembly Rooms in Bath (the Boris Langley Moore Collection) were studied with a fresh eye and particularly for hints on how not to display costume!

The Centennial Commission had recommended that the catalogue should be bilingual and a decision was reached to translate the preface, general introduction, introductions to each of the ten sections which together covered the period from about 1780 to 1967, and the captions for the illustrations, but not the descriptions of individual costumes. All loan material to be included in the catalogue arrived on schedule and this part of the catalogue was completed by the deadline date—the first week in January 1967. By the first week in February the descriptions of 100 of the most important costumes in the show were completed and eight costumes (six of which had to be remounted) had been photographed in colour against drapery backgrounds—one of the most gruelling and acrobatic sessions in the whole undertaking for Mr. Warren, Mrs. Zoubek and Mrs. Brett.

Not until nearly the last week in February was it possible to move the accumulation of costume mounts and mounting materials into the upper part of the Exhibition Hall. At the same time carpentry and painting also began. The colours in each section were chosen in consultation with Mr. Parker who happily suggested drapery as a background for the 1839–59 section.

Mrs. Brett composed labels, mounted underwear and other accessories on panels and generally supervised the installation. Mrs. Zoubek made a systematic search through the catalogue cards for all costume accessories in the collection which were Canadian or were worn in Canada. When, in September, the idea of a collage of mod clothes proved possible she readily made this her special project and it was entirely due to her efforts that gifts and loans of mod clothing from local boutiques were obtained and assembled including, finally, the "turn-on" dress. She designed and carried out the collage. She also devised and made the system of wire "silhouette" heads for mounting dresses with hats and head-dresses and also did much of the mounting of dresses for photography and for the show.

Mrs. Burnham rejoined the Department in September, part-time on certificate; she first completed the pattern drafts which, because of the Centennial Grant, could now be included in the catalogue and also prepared the essential notes on each pattern. She mounted a group of dresses of the 1925–29 period against figures drawn from contemporary fashion plates and fashion plate settings derived from a set of fashion plates in the Department, and helped with the mounting of costumes.



Left, Mrs. Brett prepares a display of underclothing for *Modesty to Mod.*, the Centennial Exhibition of costumes worn in Canada. At right, women's costumes at the time of Confederation.

Through the kind offices of our Women's Group, the Department obtained some valuable illustrative material at about the last moment.

Mrs. Jarvie pressed costumes and accessories, almost all of it delicate work. Mrs. Zuppinger was almost entirely occupied in mending and conservation, beginning in the spring of 1966; at least four dresses required major conservation, skilled work which took many weeks to complete. Mr. Burnham was responsible for the selection of Indian material and the arrangement and labelling of that case and the group of Currelly material. It was also on his suggestion that the projections were related to that material rather than to the fashion plates of 1867. The throwing of projections on the curved wall of the stairway was Mr. Warren's idea. Mrs. Holdford mounted all the men's costumes. Mrs. Priverts did all the typing necessary for the catalogue and labels. The Department's two volunteers, Mrs. Donald and Mrs. Kilgour, gave most valuable assistance throughout all the preparations, and they were joined by Mrs. Purchase. The exhibition was the outcome of devoted work by Museum and volunteer staff and a worthy contribution to Centennial Year.

Meanwhile, in the spring of 1966 Mr. Burnham had been awarded a Senior Fellowship by the Canada Council for research on textiles made and used in Canada before 1900. The research was planned in four phases, of which three have been completed during the current year. In the summer of 1966 he spent three months in Quebec and the Atlantic Provinces on the first phase, and in the autumn of that year visited museums in New York, Boston and Harvard University. Early in 1967, he travelled across Canada to British Columbia and returned through the northern United States, visiting museums and making detailed studies of the Canadian and related material in their collections. The final phase of this research will be completed in the summer of 1967.

In the course of the year, detailed information, supported by photographs, has been added to the central file on Ontario textiles covering 53 items, and to the file on Canadian textiles covering 394 items. In addition, photographs and notes were made on a wide range of equipment.

Apart from the exhibition 722 textiles and costume items were acquired and 525 catalogued. Naturally this work has fallen somewhat behind because of the time and effort required for the costume exhibition. The new storage area in the Pre-history Gallery has been used as temporary storage space for Canadian costumes and accessories and mounting material to be used for the costume exhibition. Mrs. Jarvie blocked 37 pieces of lace and eight pieces of various kinds were mounted by Mrs. Zuppinger. Mr. Burnham laundered twenty textiles.

This year the Department has been flooded with inquiries for information on costume worn in Canada during the last hundred years and not covered by the folders *Costumes for Canada's Birthday* (the Museum's bestseller) prepared by Mrs. Burnham. Most of them came in autumn and early winter, many from areas far from a public library and from every corner of the country. These received particular attention. Numerous visitors came to the Department to study actual costumes which they proposed to copy for their centennial projects. One dress of about 1900 was mounted, photographed and lent to the Ontario Pavilion at Expo '67.

Early in 1967, at the request of members of the staff of the Textile Museum, Washington, a brief study was made by Mr. Burnham of all the Chinese rugs and Chinese ancestor portraits showing rugs in the Museum's collections.

While in England Mrs. Brett examined new additions to the Victoria and Albert Museum's collection of Indian chintzes and reviewed parts of the typescript of descriptions of chintzes of the catalogue raisonné of Indian chintzes at present being prepared by her and Mr. John Irwin, the Keeper of the Indian Department of that Museum.

Other minor exhibitions included a display of *Canadian Textiles and Weaving Equipment* arranged in three cases which temporarily enclose the Pre-history storage area, a display of *Canadian Weaving and Quilts*, mostly new acquisitions, set up in the Ontario Textile Gallery and the Small Textile Gallery and a display of *American textiles* in the Small Textile Gallery.

Members of the staff gave 39 lectures and classes. Mrs. Priverts made a number of most useful translations from German and Russian.

The Textile Department's rich accretions of gifts from its many friends is an enviable record and one which reflects the interest of the public and the enthusiasm of the staff. How delightful it would be to be able to show the collection more adequately and provide better working conditions for the curators and their helpers! Mrs. Edgar Stone continued her generous gifts, notably in the field of oriental textiles, and the whole Department must be congratulated on a most productive and successful year.

West Asian Department

Dr. Cuyler Young, Assistant Curator-in-charge, reports that the West Asian Department was created in October, 1966, part way through the period covered by this report. Thus, much of this report represents a continuation of activities begun by the old Near Eastern Department under Miss W. Needler. It is fitting to include a word of thanks to all those concerned with the implementation of the decision to divide the old Near Eastern Department into the Egyptian and West Asian Departments. The administrative and physical chores involved in the division took much time and effort but the fullest co-operation from all involved resulted in a minimum of wasted time. The result in nine months has been a good start to a new department.

The reconstruction of the West Asian departmental office and work space began late in November, 1966, and has not yet been completed in full. Inevitably this has had a slightly disruptive effect on the work of the Department. As always, more space is needed, and the pinch will be particularly painful from September, 1967, when two more full-time staff members must be housed. Indeed, if more work and office space is not found within the coming fiscal year, some curtailment of the activity of the Department must be envisaged.

Plans for the installation of a comprehensive display covering the prehistory of the Near East, to be undertaken in co-operation with the Egyptian Department and mentioned in the annual report of the Near Eastern Department for 1965-66, have been in a state of suspended animation due to the slow pace of reconstructing the offices of this Department and the study rooms of the Greek and Roman Department. The space allocated for this display is directly involved in that reconstruction but it is hoped that the display can be completed next year. Minor changes have been made in the Palestine gallery and a small display of recent acquisitions is now in preparation.

A good start has been made on the reorganization and expansion of the Department's slide collection. Approximately 450 slides have been mounted, many of them new additions to the collection. A major project has been the continuing effort to recatalogue into the new card system those objects originally catalogued only in ledger form. Thanks to the co-operation of the Registration Department under Miss Hecken, some 200 items have been processed. The Department's sherd library has been reorganized, stored and labelled.

A small collection of display and study items from the Jerusalem excavations was added to the Palestine collection. Several objects, notably a fine pottery vessel dating to approximately 5000 B.C., were added to the collection from the Godin Tepe excavations conducted by the Department and the Office of the Chief Archaeologist. A complete ceramic sequence of sherds from this important site was added to the Department's sherd library. A modest purchase grant brought to the collection seven items including some valuable Amlash Culture figurines.

The sherd collection from Godin Tepe has made possible exchanges of sherd material with both the Peabody Museum, Harvard University and the Oriental Institute of the University of Chicago. These exchanges have greatly enhanced the Department's sherd library which is now the best teaching and study collection of sherd material from Western Asia in Canada. Continued growth at this pace will put it in the front rank of sherd collections in North America. Such a collection is the *sine qua non* of graduate teaching in West Asian archaeology.

No active field work was undertaken in the past year. However, considerable effort went into the sorting, classification and analysis of the finds from the 1965 R.O.M. excavations at Godin Tepe and in planning, in co-operation with the Office of the Chief Archaeologist, for large-scale excavations at this site in the summer of 1967. Since this is the first full-scale season of excavation at Godin Tepe, major equipment purchases and all long-range planning for the coming four years have been a heavy departmental responsibility.

Dr. Young delivered some 26 lectures in the University course History 200-220 (History of Ancient Western Asia) in the undergraduate programme of the Department of Near Eastern Studies, University College. He also gave a seminar in the School of Graduate Studies, Department of Near Eastern Studies, on The Archaeology of Mesopotamia, Anatolia and Iran. The students in this course, as a part of their studies, made a major contribution to the work of the new West Asian Department by assisting in the analysis of excavated materials from Godin Tepe and by classifying sherd materials received from the Peabody Museum and the Oriental Institute.

Dr. Young wrote two articles under his own name alone and three others in collaboration with P. E. L. Smith and D. B. Stronach.

Department of Geology

According to the Curator, Dr. W. M. Tovell, the period covered in this annual report marks a distinct upward swing in the fortunes of the Department. On September 15, Miss Jean Fraser joined the staff as senior technician and in February, Dr. John McAndrews accepted an appointment as associate curator, from July, 1967, as palynologist.

Miss Fraser, assisted by Dr. Peter Peach, the Research Associate of the Department, have made excellent progress in upgrading the systematic petrographic collection. They have processed some 10,000 specimens and initiated a fresh catalogue. This has been undertaken because of the very complex numbering systems hitherto in use as a result of the numerous exchanges that have taken place within the Museum. Numbering systems on the specimens were, in part, derived from old geological collections, old mineralogical collections, and new geological and mineralogical collections. All material is being renumbered.

Dr. McAndrews will add a new dimension to the geological work, not only to the Museum, but also to the Province of Ontario. His interests in paleo-climates will make a significant contribution to research programmes in glacial and post-glacial

climatic environments of Ontario. It is anticipated that he will start work with material already at hand, and particularly the cores obtained from the Georgian Bay area.

In the field, the Department has continued its study of glacial lake levels in the Sault Ste. Marie, Georgian Bay and Lake Huron regions, and organized a special 3-day operation to obtain cores from the bottom of Georgian Bay. The Great Lakes Institute made the research vessel C.C.G.S. *Porte Dauphine* available, and the Geological Survey of Canada allowed Dr. C. F. M. Lewis to co-operate in the venture. This was the first investigation of the bottom materials in an interesting and important area of the Great Lakes.

A small, temporary exhibition on granite was arranged at the exit of the Geology galleries.

The Department attracts much public attention and it identified numerous specimens for the public and answered numerous queries from teachers, students and the public in general.

It conducted for the University a series of evening tutorial classes on Geology in the Museum and for the Department of Geology its annual Geology Survey Camp at Tweed, Ontario. Also for the University it contributed the Geology Course 100 to first year general students (4 hours per week) and contributed to the Pleistocene Geology course for fourth-year civil engineers, in the Faculty of Applied Science and Engineering (5 hours total). For the College of Education it conducted the Type B Seminar course in Geology (for high school teachers) and gave lectures to outside societies on Some Aspects of the Niagara Escarpment. The Curator attended the annual meeting of the Geological Association of Canada, and led field trips to the Albion Hills Conservation Area and the Boyd Conservation Area for the Ontario Geography Teachers' Association, the Hamilton secondary schools (Grade 13) geography students, and the Desk and Derrick Club. Three school lectures were given and a number of miscellaneous addresses.

The Curator served on ten boards and published six articles.

McLaughlin Planetarium

Dr. H. C. King, Curator, took up his duties on October 20, 1966, and immediately assumed responsibility for the staffing and planning of this complicated undertaking. He reports that he has recruited eight members of his staff on either full or part-time basis. Some start on July 1, some later as the planetarium progresses, and some go to the Zeiss-Jena in Germany for training. It is a source of great satisfaction that it has been possible to assemble a most promising team in a field where good staff are very difficult to find.

However, owing to the difficulty of obtaining the services of a suitably qualified associate curator, it has been decided temporarily to leave this post vacant and appoint a second assistant curator. Another curatorial assistant and a technician (electronics) will be appointed in due course.

Meetings with the project engineers and consulting architects have resulted in a number of interior changes, e.g. the redesign of bookshop and optical workshop, a larger main lobby, an additional (larger) kitchen, the reorientation of the spiral staircase in the north wing, and an over-all change in concept regarding the nature of finishes in the display areas. At the time of writing a strike has held up the construction for six weeks but it is hoped that this will soon be settled and the work return to schedule.

An outline plan for the nature and scope of the exhibits in the display areas has been prepared and discussed with consultants in design and communications. Competitive tenders for the detailed design, fabrication and installation were invited. The contract has been awarded to Opus International Limited, Toronto. That the construction of these important galleries was possible is due to yet another generous gift from Colonel McLaughlin (see Director's Report).

Outline plans for furnishings, fitments, machinery (for Mechanical Workshop) and the lock-system have been made in consultation with the appropriate University

departments. A study has been made of the different types and availabilities of supplementary slide and film projectors, equipment for the sound-recording and photographic rooms, and slides, films and astronomical photographs. Several of these items have been ordered.

A measure of the extent to which the Planetarium can assist the work of the University's Graduate Department of Astronomy has been ascertained. The special lectures envisaged could provide first-class training for both students and planetarium curatorial staff.

The contribution which the Planetarium can make to public school education has been discussed with several educational authorities at various levels. The conclusion is that the Planetarium has only to offer an initial set of demonstrations on aspects of elementary astronomy to be assured of the full support of schools over a large area. Initially, it will be left to the Planetarium to guide teachers regarding the provision of suitable class preparation and follow-up activity. Subsequently these activities, together with the Planetarium educational sessions, will be arranged in consultation with teachers and/or heads of science departments.

Decisions have been reached regarding admissions and basic scheduling. The latter is designed to meet five main requirements: organized parties of students in two separate streams—Primary (Grades 3–6), and Junior (Grades 7–9); adults and students above Grades 9 or 10, whether attending singly or in organized parties. It will serve the Graduate Department of Astronomy, operating alone or in collaboration with other similar departments in the University or neighbouring universities, also groups interested in navigation; a wide variety of special events of a scientific and social nature; and finally, instrument-free staff-training time. (The last of these will make heavy demands during the first year of operation.)

The planned schedule permits an initial run of about 25 sessions per seven-day week, with a potential increase to a maximum of forty sessions.

Merchandise for the Planetarium bookshop has been discussed and selected in co-operation with Mrs. R. E. Smith of the Sales Desk. A sales agreement has been made with the California Institute of Technology for the purchase in quantity at cost price of colour slides, photographs, booklets, and postcards prepared under the auspices of the Mount Wilson and Palomar Observatories. This is the first retail sales-agreement between the Observatories and a Canadian planetarium.

The Toronto Centre of the Royal Astronomical Society of Canada has agreed to operate the telescope-making room of the Planetarium and has accepted the offer to hold its regular meetings in the Planetarium's lecture room. We have received, and will continue to receive, the fullest possible co-operation and support of the Centre and also of the National Committee of the R.A.S.C.

A Planetarium brochure, planned as an inexpensive adjunct, is in course of preparation. The copy, now completed, runs to about 26,000 words and includes material to accompany about fifty illustrations.

The Curator has given five lectures on the subject of the McLaughlin Planetarium and has made three television appearances. He visited the Queen Elizabeth Planetarium, Edmonton, also three major planetariums and several science museums and observatories in Southern California, prepared an initial list of 150 books, charts and maps for the Planetarium Library and Information Centre, and established numerous personal contacts in areas important to the successful establishment and development of the Planetarium. He was given the cross-appointment of Special Lecturer in the Department of Astronomy, is a member of the Advisory Committee on Astronomy and Space Science set up by the Ontario Department of Education, and recently completed the book *Pictorial Guide to the Stars*, scheduled for publication in July, 1967.

Last, but by no means least, the wholehearted thanks of the Museum are due to Colonel McLaughlin for his most generous gift of one million dollars to establish a Trust Fund, the income from which will enable the Planetarium to provide a lively, frequently changing programme of a standard which other planetariums will find it difficult to match.

The Chief Mineralogist

Dr. V. B. Meen reports that he spent most of the year in collating the data acquired on the crown jewels of Iran with the generous support of Birks Family Foundation, Montreal. This work has been assisted by the two research associates, Messrs. G. G. Waite and E. B. Tiffany. In collaboration with Dr. A. D. Tushingham, the manuscript for a major publication on the subject is being prepared for publication by the University of Toronto Press, again with the support of the same Foundation.

The examination and recataloguing of the gems in our collection continued with the assistance of Mr. G. G. Waite.

Dr. Meen gave a total of eight lectures on the crown jewels and worked on the re-display of the Museum's gem collection which will form part of the new Mineralogy Gallery. He made a television appearance on "The Royal Ontario Museum's Study of the Crown Jewels of Iran," and attended two professional meetings. He also published two articles.

The gem collection received seven stones from Mr. W. S. Richardson, House of Onyx (Canada) Ltd., to whom it is most indebted, but unfortunately the most important opportunity to acquire a magnificent morganite example had to be sacrificed for lack of purchase funds.

Continuing his work on the Planetarium until the arrival in the fall of the newly appointed Curator, Dr. Henry King, Dr. Meen spent considerable time in consultation with Professor D. A. MacRae, Department of Astronomy, the engineers and architects and the Superintendent of the University of Toronto in forwarding the affairs of the McLaughlin Planetarium. This he now hands over with good wishes, and the Museum for its part thanks Dr. Meen for the very considerable work and enthusiasm which he put into a project so far removed from his own immediate field of interest. That the preparations have gone so well is due to his devotion to a difficult task.

Department of Mineralogy

Dr. Mandarino, Curator, reports that the 1966-67 academic year brought important changes to his Department. Dr. D. C. Harris, Assistant Curator, resigned after almost four years of service to the R.O.M. He left to accept a position in the federal government where he receives a much higher salary and where he has all the essential research equipment at his disposal. Mrs. Ruth Gallant, as Technical Assistant, joined the permanent staff.

A major factor in the future development of the Department was the receipt of a generous \$25,000 grant from the President of the University of Toronto. The money, which was made available from the Merrill Trust, has enabled the Department to purchase sorely needed X-ray spectrographic equipment. The installation of this equipment, which is expected to be completed in July, 1967, will bring to the ROM its first modern tool for non-destructive chemical analysis.

Although most research in the Department was curtailed because of curatorial commitments and the demands made on the staff by the construction of the new gallery, J. A. Mandarino and D. C. Harris continued their work on the minerals on Mont St. Hilaire, Quebec. A paper, co-authored by Drs. Mandarino and Harris, Dr. G. Chao and Mr. A. Hounslow of Carleton University and Dr. G. Perrault of Ecole Polytechnique, is in press.

The Curator initiated a study of the quantitative determination of colour in mineral powders, using the reflectance spectrophotometer acquired by the Museum's Department of Ornithology. The initial measurements have proved interesting and it is hoped that this line of research will be pursued after the gallery has been completed.

The Department's major field project was a one and a half month collecting trip which covered parts of Nova Scotia, New Brunswick and Quebec, resulting in many specimens both for the collections and for exchange.

The staff contributed two papers to the eleventh annual meeting of the Miner-

ological Association of Canada in Halifax, Nova Scotia, and in addition the Curator gave four lectures on "The ROM's New Gallery of Mineralogy," and a two-hour lecture on "The Functions of the Museum's Department of Mineralogy" to the Advanced Prospectors course of the Ontario Department of Mines.

The Department again carried out the three-year mineralogy course for the Junior Field Naturalists. Dr. D. C. Harris, Dr. D. H. Gorman and Mrs. Helen Bush ably carried out the instructional duties. The annual field trip was led by J. A. Mandarino, assisted by Mrs. Bush and Mr. Pawlik.

It is pleasing to report that the new Gallery of Mineralogy, financed by the International Nickel Company, is nearing completion. It is scheduled to be opened on November 13, 1967.

Three scientific papers were published.

Following the work on the new gallery, for the first time in many years the "cream" of the Department's collection was selected for display. This showed some gaps in our holdings and led to a search for suitable material to fill them. Among the most important additions to the collection are the following: a large spinel crystal from New York; an exceptional apatite crystal from Portugal; a beautiful felted mass of cuprite (variety, chalcotrichite) from Southwest Africa; a fine group of twinned cerussite crystals from Southwest Africa; a pink smithsonite crystal group from Southwest Africa; and a large blue topaz crystal from Brazil. In addition, about two dozen species new to the collection were obtained. The result should be a fine comprehensive display most attractively exhibited.

The Curator continued his abstracting of papers dealing with mineralogical nomenclature, acted as assessor for papers in learned journals and wrote the mineral section of a Department of Tourism publication entitled *Rocks and Minerals in Ontario* which is in the press.

As usual, the public submitted approximately 300 specimens for identification this year. In addition, numerous requests for research material were received from mineralogists throughout the world.

The Chief Biologist

Dr. L. S. Russell reports that he spent about six weeks in July and August in the Atlantic Provinces, mostly in the Bay of Fundy region of New Brunswick and Nova Scotia. The object was to explore the possibilities of obtaining fossils from the Triassic rocks of this area. Fragmentary remains of early reptiles have been obtained from here by the Nova Scotia Museum. The search was concentrated in the area of the Annapolis Valley adjacent to Minas Basin. The Permian rocks of Prince Edward Island were also examined. No important specimens were found, but information that would be useful for future expeditions was obtained. It was concluded that intensive collecting at the appropriate time of the year would probably yield valuable material. While in the Annapolis Valley, some historical investigations were carried on regarding the work of the pioneer Nova Scotian geologist and inventor, Dr. Abraham Gerner. A short visit was made to Newfoundland to assess the effect of the newly finished Trans-Canada Highway on the possibilities of biological and geological field work in that province.

A number of palaeontological studies were completed during the year, the most important being a report on the fossils obtained from the Swan Hills area of Alberta by the expedition of 1965. Other materials studied included the skull of a primitive whale from the Oligocene rocks of Vancouver Island, a collection of fossil shells from Alberta and Montana, and a fossil barnacle from the Cretaceous of Saskatchewan.

Dr. Russell gave a lecture on "Palaeontology of the Swan Hills Area, North Central Alberta" (Royal Society of Canada, Sec. III, Geology), and an informal report on the correlation of Cretaceous mammal-bearing formations in western North America.

As part of the University's teaching programme, three lectures were given in the course on Vertebrate Palaeontology for fourth year and graduate students in

Zoology, and eleven in the course on Vertebrate Palaeontology for third year students in Geology. A practical course on the techniques of vertebrate palaeontology was given to a fourth year student in Geology, with the assistance of the laboratory staff of the Department of Vertebrate Palaeontology.

The constant effort to improve Museum teaching facilities resulted in the addition of two further specimen cabinets to house the teaching collection. These cabinets were generously donated by the Department of Geological Sciences and the Department of Zoology.

The Chief Biologist represented the Museum at the Centennial Celebration of the Peabody Museum of Natural History, Yale University, October 26–28, and at the conference of the Directors of Systematic Collections, Field Museum of Natural History, Chicago, April 19–21. He also undertook research into the Museum's proposed training programme and prepared an outline proposal.

The artist-craftsman prepared art work and illustrations for the Departments of Mammalogy, Ichthyology, Invertebrate Palaeontology, and Vertebrate Palaeontology, as well as for the Chief Biologist.

Department of Entomology and Invertebrate Zoology

Dr. Glenn B. Wiggins, Curator, reports that a major event in the past year was the publication of *Centennial of Entomology in Canada 1863–1963: A Tribute to Edmund M. Walker*. This volume, edited by the Curator, is, among other things, a mark of appreciation from the Department to its founder and Honorary Curator.

The Curator's work on *Trichoptera* this year has been heavily committed to field studies with two major expeditions to the western United States. These are part of a major project on the systematics of the immature stages of North American *Trichoptera* supported by the National Science Foundation. The first was planned to concentrate on the fauna of the southwestern United States and lasted from June 15 until August 5, covering a distance of about 10,000 miles. Intensive field work was done in Arizona in the Chiricahua Mountains and in the Verde River area, in California in Sequoia National Park, in the Convict Creek and Hot Creek areas of Mono County, and in the University of California's Sagehen Creek Research Station area (north of Lake Tahoe) and at several points in Utah.

The second trip was planned to study the fall-emerging caddisflies of the entire western part of the United States, a segment of the fauna which is very little known. The trip lasted from September 8 until October 23, and covered an additional 10,000 miles. Work was begun in Wyoming in the Medicine Bow Mountains, progressed through Montana and northern Idaho to Oregon with intensive work in that state and through most of the entire length of California. The results of these two field expeditions combine to make this the most productive year yet experienced for enlargement of the research collections in *Trichoptera*. Several thousand specimens of both larval and adult caddisflies were collected and field observations were obtained for a number of species.

A short period in August was also spent at the Queen's University Biological Station where larval stages not previously known were obtained for a genus of *Trichoptera*.

The Curator has been involved for much of the winter in a study of the immature stages of the caddisfly genera *Philocasca* and *Pseudostenophylax* in association with Dr. N. H. Anderson of Oregon State University. A second study of the genus *Neophylax* was begun in conjunction with the Curatorial Assistant.

A supplement to the Curator's grant from the National Science Foundation supporting the research programme on the *Trichoptera* was received for the participation of Mr. Yamamoto, the newly appointed curatorial assistant, and for the installation of a controlled-temperature room for the rearing of these insects.

The work of our research associates has also made a substantial contribution to the progress of the Department during the past year. Father J. C. E. Riotte, our one research associate on permanent staff, continued his studies of Ontario *Lepidoptera*. Through his field work in the Geraldton–Nakina–Nipigon area during most

of June, the collections of subarctic butterflies were enriched by some 300 specimens. Father Riotte completed his study of the sphingid genus *Lapara*, and three papers arising from his studies on various groups of *Lepidoptera* were published during the year.

A second research associate, Mr. T. W. Beak, continued the base-line survey of the insect larvae and other aquatic invertebrates in portions of the St. Lawrence and Ottawa Rivers.

Another entomological project begun this year was directed at enlarging our study collection of immature stages of the *Diptera*, the two-winged flies. Particular emphasis was given to working out associations of these immature stages with the adults, and hence having material in the collection of known species identity. A biology student from Queen's University, Mr. Paul D. Herbert, was engaged upon this project, and in addition to the general concern, he made a particularly detailed collection of the family *Empididae*, a group in which the larvae are of considerable importance in the ecology of fresh waters, but little known in a taxonomic sense.

In invertebrate zoology the manuscript for the Department's study of Ontario crayfishes was completed by our research associate Dr. D. W. Crocker and co-author, Mr. D. W. Barr, a former student assistant now undertaking graduate study at Cornell University. This work has now been accepted for publication by the University of Toronto Press under a joint arrangement with the Museum as an R.O.M. Life Sciences Miscellaneous Publication.

It is particularly satisfying to report that Dr. Ralph O. Brinkhurst, very widely known for his studies of *oligochaete* worms, has been appointed as a research associate in the Department this year.

The Department's project on water mites was continued by a student assistant, Mr. Ian M. Smith. This study is being concentrated upon the systematics and life histories of the water mites inhabiting temporary ponds, and thus becomes a specialized outgrowth of the Curator's general study on the phylogeny and ecology of the invertebrates inhabiting these highly specialized aquatic habitats.

Work continues as time is available on the labelling and installation of our study collection of terrestrial and freshwater Molluscs, returned last year from the University of Michigan Museum.

The Curator, by invitation, presented a paper on his study of the phylogeny and life-history of the *Trichoptera* inhabiting temporary ponds at the annual meeting of the Entomological Society of America in Portland, Oregon.

At the annual meeting of the Entomological Society of Ontario held at the University of Toronto, all three members of the Department's scientific staff presented papers.

A considerable portion of the Curator's time was involved with the organization and writing of a proposal to the National Research Council for a Negotiated Development Grant on behalf of those departments in the Museum working in systematic and evolutionary biology. The grant, if received, would provide support in the neighbourhood of \$400,000 over a three-year period for the addition of laboratories, data processing facilities, and other assets to the Museum's present programme in systematic biology, and would represent a major advance in several respects for the R.O.M. in this field of study.

All plans for initiation of a gallery of living invertebrates have been suspended because of the disclosure that the Director plans a new wing and a major reorganization of the space allotted to Museum departments.

Our departmental artist, Mr. Ankar Odum, has been involved full-time with the preparation of illustrations of invertebrates for various publications. Studies on various groups of *Trichoptera* by the Curator and Curatorial Assistant mentioned previously have occupied the major part of his time, but he has also collected several more of the highly detailed half-tone plates for the book planned by the Curator on invertebrates occurring in buildings, and he has recently commenced a set of illustrations for Father Riotte's study of the moth genus *Lapara*.

Our departmental secretary, Mrs. Isabel J. Smythe, resigned at the end of

February to await the birth of a son. Mrs. Smythe has entered enthusiastically into the life of the Department during her two years here and her work has been very much appreciated.

One of our volunteer assistants, Mrs. Helen Sutton, a highly skilled photographer of biological subjects, has proved especially valuable. Mrs. Sutton has undertaken to build up the 35 mm. slide library of the Department with slides taken from living insects and other invertebrates. This year Mrs. Sutton won the nature photography section of the Toronto Camera Club with the highest total number of points gained over the year's competitions, and also won the McGregor trophy for the outstanding natural history slide of the year.

The staff collected several thousand specimens of *Trichoptera*, with incidental collections of *Plecoptera* and other groups of aquatic invertebrates; 1,700 specimens of *Lepidoptera* and other insects; and several thousand *Hydracarina* and other aquatic invertebrates. By gift it received a further 200 insects, mainly *Lepidoptera*, and by purchase throughout the world nearly 3,000 more.

Department of Ichthyology and Herpetology

Dr. W. B. Scott, Curator of Ichthyology and Head of the Department, is satisfied that the Department has had a most successful year both in publication and in enrichment of the collection. Some 29,330 specimens were catalogued, which is twice as many as in any previous good year. Also, the many modifications in the offices and laboratories have enabled the staff to operate more efficiently.

It should be emphasized that this current level of operation would have been impossible without the funds made available from the Fisheries Research Board of Canada contracts. The increase in cataloguing was made possible only by paying overtime and hiring additional help. At the present time, when all part-time and full-time helpers are present, eleven people are working in the Department.

As the termination date of the freshwater fishes project approaches (1969), the tempo of activity in the Department will quicken and next year the Department anticipates an even busier period.

The Curator, Dr. W. B. Scott, continued his study of lanternfishes (family *Myctophidae*) under a contract agreement with the Fisheries Research Board. This now continues principally under Mrs. Radforth, our research associate. Many fruitful opportunities for original work have opened up, and the reference collection has been greatly enriched. Some of this material is now being used by a graduate student proceeding to an M.A. under the supervision of the Curator. His research on the cottid genus *Triglops* in the North Atlantic Ocean is complete except for the final report, and his study of the food of the swordfish, *Xiphias gladius*, in the Northwest Atlantic Ocean has been carried to its final stages. His *Fishes of the Atlantic Coast of Canada* was finally released by the Queen's Printer in December, 1966, and, with encouragement from the Fisheries Research Board of Canada, a short-term study of the pleural and epipleural ribs of two gadid fishes was undertaken and a report prepared.

The Associate Curator, Dr. E. H. Crossman, continued his research project on the fossil history of the esocoid fishes and on his description of the comparative osteology of members of the suborder *Esocoidei*. He completed the analysis of characteristics of salmonid hybrids. Mrs. Isobel Radforth, in addition to continuing her systematic studies of myctophid fishes, is preparing a report on the fishes she collected in the Falkland Islands during the winter of 1966-67.

Both curators have devoted increasing amounts of time to the joint project, "The Freshwater Fishes of Canada," the goal of which is a comprehensive text to include all Canadian freshwater fishes.

An annotated checklist constituting the first stage in the manuscript and embracing the whole of Canada has been completed. It will be widely distributed throughout Canada and the northern United States.

Field studies on Atlantic pelagic fishes were conducted by the Curator at the Biological Station, Fisheries Research Board of Canada, St. Andrews, New Brunswick.

One of the major research projects was a food study of the swordfish.

Several field trips were made by the Associate Curator in the conduct of his research on esocoid fishes. This work is supported by National Research Council funds and during this stage involves biochemical analysis of the several species in the suborder.

The Associate Curator has also organized a field research programme to be conducted during the current summer west of Lake Superior in Ontario. This work is partially supported by a grant from the Quetico Foundation and is being conducted with the active co-operation of the Ontario Department of Lands and Forests.

The Research Associate, Mrs. Radforth, visited the Falkland Islands and obtained an excellent representative collection of fishes from this locality in the southern hemisphere.

In conjunction with the "Freshwater Fishes of Canada" project, Mr. P. Buerschaper conducted field studies in the Ottawa River and tributaries.

Dr. Crossman lectured twice and Dr. Scott once. Both curators served in the field of graduate studies. In the area of gallery reconstruction, one habitat group in the Gallery of Canadian Fishes was closed for renovation while a new exhibit is being prepared. Considerable reorganization took place within the Department. Other educational and scientific institutions and fellow scientists were assisted. Loans of specimens were made to ten universities and specialist organizations.

Exchanges or gifts were arranged with ten organizations and both curators continued to serve as outside referees for scientific papers and research proposals for various international societies and organizations.

Many experts from other institutions worked in the Department and demands for information relating to fishes, amphibians, reptiles, conservation and related fields continue to increase. This created much extra work but served also to emphasize one of the important functions of this institution.

A total of 115 accessions were received during the year, varying greatly in size from one specimen to 1,500 specimens.

The collections increased substantially during the period May 6, 1966, to May 23, 1967. A total of 29,330 specimens (1,434 lots) were added to the permanent collections, almost twice the previous peak. The major reason for the increase was the need to eliminate the backlog of uncatalogued specimens so that they could be used in "The Freshwater Fishes of Canada."

The Curators continue to discharge their numerous professional responsibilities, Dr. W. B. Scott as committee member, director or member of executive of nine professional societies and organizations.

The Curators were jointly awarded a Fisheries Research Board contract in the amount of \$55,000, terminating in 1969. Dr. Scott was awarded a \$23,000 contract which terminates in 1971. Dr. Crossman was awarded a grant of \$500 by the Quetico Foundation to conduct field studies in the Lake Superior region of Ontario.

Members of the Department published six scholarly papers and a number for more popular consumption.

Department of Invertebrate Palaeontology

Dr. R. R. H. Lemon, Associate Curator-in-charge, reports that the major research project in the Department continues to be concerned with marine molluscs of the Late Tertiary and Pleistocene Age from both the Atlantic and Pacific sides of the Panamanian Isthmus. The demands made by the final stages in the preparation of the new Hall of Fossil Invertebrates, which opened on January 24, 1967, meant that virtually no research was possible during the first half of the year but since February work has recommenced and two papers have been completed, one dealing with the geology of the Santa Elena Peninsula, Ecuador, and the other concerned with ash bands within the succession, the latter requiring updating in the light of new data. Work on the plates to illustrate a paper describing the Pleistocene gastropods of the Santa Elena region has continued.

Field work and collecting was concentrated for a six-week period in northern

Colombia and covered the coastal region from Cartagena, including the offshore island of Tierra Bomba, to Riohacha on the Peninsula de Guajira. In the area between Santa Marta and Cartagena two previously undescribed erosion surfaces and associated deposits were examined and from these a molluscan fauna was collected. A preliminary examination suggests a possible Pliocene Age for the upper of the two surfaces. All but the lowest and youngest marine terraces are for the most part now represented only by erosional remnants and, since there has been differential warping of the coastal region, correlation from one area to another will only be possible after further detailed study.

Work in the Riohacha area proved the existence of a Pleistocene surface which probably can be correlated with the lowest of a series of surfaces previously mapped in the Peninsula de Paraguana, Venezuela, to the east, but more work is required in this region which is rather difficult of access.

For the first time extensive coral reefs have been found at these higher levels along the Caribbean coast of Colombia and, since they are entirely absent in the Recent, the indications are that fundamental alterations in oceanic circulation, probably reflecting changes in the Panamanian land barrier, have occurred in this region since Pleistocene time.

It is gratifying to record that the Operating Grant given by the National Research Council was again renewed for 1967-68.

As in previous years, the Associate Curator delivered four lectures as part of University Extension Evening Lectures in the Museum. The course this year was entitled "Geology in the Museum" and, unlike previous years, the lectures were given in the galleries concerned. These proved most popular.

The Associate Curator was responsible for the University course in Pleistocene Geology (Geology 429) in the Department of Geology, and for Geology 101 in the Department of Extension, Scarborough College.

It was most gratifying that beginning in September, with a positive and properly balanced programme and particular stimulus from the Director, work on all aspects of the new Hall of Fossil Invertebrates went ahead with marked vigour. The deadline for the official opening of the gallery had been set at January 23, and this was successfully met.

Throughout the planning and construction of the gallery very close co-operation was maintained between the Associate Curator and Mr. Harley Parker and his design staff. Without this team-work from all concerned, the completion of the gallery would have been impossible. The same cordial relations existed with Mr. Sinclair and the carpenters, with Mr. Lindsay and the preparators, and with Mr. Warren, to all of whom must go their fair proportion of credit for the success of the new Hall of Fossil Invertebrates.

Lieutenant General Guy Simmons graciously accepted the Director's invitation to officiate at the opening of the Hall of Fossil Invertebrates, which proved to be a notable occasion.

Since the opening much experience has been gained in the working of the electronic equipment which plays such a large role in the gallery, and many of the

Easter Week crowds enjoy the new Hall of Fossil Invertebrates.



early teething troubles have now been eliminated. The four aquaria in the gallery require the most maintenance. While the freshwater tanks give little trouble, the two sea-water tanks need constant supervision if the correct temperature and salinity are to be maintained. Feeding of the various creatures, the removal of uneaten food, and the cleaning of algae from the tank walls and bottom sediment are all time-consuming and tedious tasks, and without the interest and hard work of Mrs. Thompson, the maintenance of these extremely popular exhibits would have been impossible. In addition to her secretarial duties and her work in preparing the illustrations for the new guidebook, painting new signs for the rotunda and other tasks, Mrs. Thompson has given unsparingly of her time and energy in maintaining the aquaria and in seeing to it that all the electronic equipment has been in working order at all times.

The aquaria form part of a trend within the Museum as a whole towards the increase of living exhibits, a trend which would merit the appointment of a full-time preparator or technician whose duties would be concerned solely with living animals.

The Associate Curator resigned in June in order to take up a position in exploration geology in South America, and Mrs. K. Thompson, Junior Technician, resigned her position at the end of June.

Department of Mammalogy

Dr. R. L. Peterson, Curator, reports an accelerated pace in the research activities of the Department. The bat research programme resulted in the acquisition of 3,368 specimens, compared with 2,224 in 1965-66. The countries and number of bats obtained from each were as follows:

Bechuanaland, 31; British Honduras, 31; Cameroons, 249; Canada, 373; Colombia, 81; Cuba, 90; England, 13; Ghana, 92; Guyana, 769; Ireland, 23; Kenya, 484; Malaysia, 455; Mexico, 3; Philippines, 342; Puerto Rico, 1; Singapore, 12; Surinam, 34; Tanzania, 7; Uganda, 241; U.S.A., 21; Vietnam, 16.

Even more impressive than the quantity of specimens has been the quality. Many very rare and hitherto little-known species continue to enter the collection. Bat specimens for the year included 14 families, 95 genera, and 182 species. In addition, a programme of bat research in Madagascar was initiated with preparatory research carried out by the Curator at the U.S. National Museum, Washington, D.C., The American Museum of Natural History, New York, The Museum of Comparative Zoology at Harvard University, as well as The British Museum of Natural History. A highly successful expedition to East Africa and Madagascar was carried out in April and May, thanks to the very generous sponsorship of Mrs. Noreen Curry of Winnipeg and the Royal Ontario Museum, with timely and welcome additional support from the President's Fund. The results of this notable expedition are not yet fully evaluated and will be included in the next Annual Report.

A study of bat biology in southeastern Ontario was pursued by Mr. Brock Fenton. A part of the study concerned growth, parturition and milk dentition in the little brown bat, and this work was submitted in partial fulfilment of the degree of Master of Science at the University of Toronto. Additional work concerns the ecology of bats in this area, and includes weight studies, microclimate of roosts (both winter and summer), migration of bats and swarming of bats around hibernacula in the summer. Part of this study includes an extensive banding programme, and to date over 16,000 bats have been banded, making it one of the most active bat-banding operations in North America. This research was supported by a grant to the Curator from the National Research Council of Canada. Efforts have been made to publicize this bat research programme to increase the return of bands by the general public. The publicity work has included to date a display at the Canadian National Sportsmen's Show, and a display in the main rotunda of the Royal Ontario Museum.

Mr. Stan van Zyll de Jong began a taxonomic study of the genus *Lutra* and has made considerable progress in his analysis of cranial and other characteristics

of the otter of both North and South America. Support for this research was provided by the Canadian National Sportsmen's Show.

The publication of *The Mammals of Eastern Canada* in October, 1966, by Oxford University Press was a significant event for the Curator and the Department. In June, 1966, the Curator was elected president of the American Society of Mammalogists at its annual meeting at Long Beach State University, California, making him the first non-American to hold that post. He also served as a member of the Council of the Society of Systematic Zoology and attended its annual meeting at Washington, D.C. He was also elected member of the Executive Council, Academy of Zoology, Agra, India.

The Curator conducted the graduate course in Mammalogy for the Department of Zoology, School of Graduate Studies, University of Toronto, Services for other institutions and individuals continues at a satisfactory level, which included lectures, appearances on television and radio, editorial assistance, manuscript appraisal and a wide range of identification services, as well as loans of specimens to research workers in other institutions.

A total of 3,568 mammal specimens were added to the collection during the year, 3,023 by purchase, 57 by donation, and 488 collected by staff.

Department of Ornithology

Dr. Jon C. Barlow, Curator, reports that he and his staff examined critically a collection of approximately 450 birds obtained in British Honduras, including several that constitute first records of occurrence for that country. They also studied several aberrantly plumaged warblers that have been collected recently in Ontario. The Curator continued his study of the European tree sparrow, and the Department prepared and examined critically throughout the course of the year over 100 specimens of red-eyed and Philadelphia vireos obtained as part of a study of the biosystematics of the Asian family *Vireonidae*. Manuscripts are in course of preparation on these projects.

The Department's able research associates continued their work on the systematics of the amethyst starling (*Cinnyricinclus leucogaster*), the occurrence of the black-legged kittiwake (*Rissa tridactyla*) in Ontario, our African material, the identification of skeletal remains of vertebrates (including many birds) from pre-historic and historic Indian middens in southern Ontario and the Saginaw Bay region of neighbouring Michigan.

A number of enthusiastic volunteers have throughout the year contributed to departmental projects such as the Ontario Nest Records Scheme, the records of which are maintained in the Bird Room, updating the card file, circularizing the public for support and preparing a detailed report concerning data from the previous breeding season.

In the field, 86 specimens of birds including several important records were obtained, the ecology and behaviour of red-eyed, warbling and yellow-throated vireos were studied in the vicinity of Toronto.

Work on European tree sparrows and their ecology in Illinois formed part of a five-year project supported by grants from the Chapman Memorial Fund of the American Museum of Natural History and the Canadian National Sportsmen's Show.

The Curator again investigated the ecology and taped the vocalizations of the European tree sparrow in Illinois.

The Department studied the behaviour and ecology of the gray vireo (*Vireo vicinior*) and collected scientific specimens in the Trans-Pecos of west Texas and in the Organ Mountains of southern New Mexico. This work is supported by an operating grant from the National Research Council of Canada. The Curator took movies of the nest-building and courtship activities of the gray vireo and obtained high fidelity tape-recordings of the associated vocalizations in the Chisos Mountains in Big Bend National Park. Virtually all the observations of the activities of this species contributed new information. During this work in Big Bend, the Curator held a collaboratorship in the Park and the research was officially designated as part of

the U.S. National Park Service Research Programme for 1966–67. One hundred and forty-two bird specimens, over 400 insects and other invertebrates, 13 mammals and 4 snakes and lizards were taken in the Trans-Pecos for the Museum's collections. The National Research Council approved a major equipment grant for the purchase of a large spectrophotometer for analysis of colour differences in plumage of vireos collected on this and other field trips.

The Department's staff studied the Philadelphia and red-eyed vireos in north-east Ontario and collected samples of each at four localities between Winnipeg and Fort St. John, B.C.

Specimens on loan from this Department were displayed in several local schools, stores and museums.

Dr. Barlow presented a paper entitled "Morphostasis in the North American Population of the European Tree Sparrow" at the International Ornithological Congress at Oxford, England, in July of 1966. He also was interviewed on radio and gave several lectures to local naturalist groups. At the annual meeting of the American Ornithologists' Union in early September, Mr. Baillie presented a paper entitled "Ontario's Newest Birds," and he also spoke before the Province of Quebec Society for the Protection of Birds (in Montreal), and to several nature clubs in Ontario.

Dr. Barlow, in his capacity as Assistant Professor of Zoology, supervised the research of two graduate students, taught a graduate course in Ornithology, and served on the Graduate Student Committee of the Department of Zoology of the University of Toronto. For the tenth year, Mr. Baillie presented a series of eight lectures (plus two field trips and two visits to the R.O.M. Bird Room) on the study of birds in the Natural Science Course of the Evening Tutorial Classes, University of Toronto Extension Courses.

As in previous years, rearrangement of the bird collection continued and 14 cabinets were finished, raising the total to 118 cabinets completed since the rearrangement was undertaken. Approximately 2,780 specimens were collected by, donated to, or purchased by the Department during the year. Two thousand nine hundred and thirty-four skins were labelled and catalogued during this period.

The single most important accession was a bequest of 571 sets of eggs from the estate of the late Cyril Peake of Toronto. Once again the public used the varied facilities of the Department and researchers in other museums, universities and government agencies and visiting classes from the University of Guelph, the Ontario College of Optometry and the Conservation Officer Training Group of the Ontario Department of Lands and Forests called upon its services.

The collections of specimens preserved in spirits and as skeletons continued to grow—approximately five hundred additional items being added to each.

Department of Vertebrate Palaeontology

Dr. A. G. Edmund reports that the Department continued its field work in Montana, Saskatchewan and elsewhere. The specimens collected, mainly mammals, range from Cretaceous to Miocene in age, and help to fill gaps in our research collections. Of special note is the large quantity and variety of Lance Age (Upper Cretaceous) mammals and other fossils from the Bug Creek locality of Montana. Over 2,000 teeth representing several orders of mammals have been prepared for study.

A change in editorial policy caused the manuscript for the section on "Dentition" for the *Biology of the Reptiles* (Academic Press, London), to be greatly enlarged and new illustrations made.

The modern osteological collection has been greatly expanded through collection, purchase and exchange and is proving valuable for research, teaching and for the identification of bones collected by laymen and archaeologists.

Aside from the materials obtained by the Museum's field parties, significant smaller collections were added from a variety of sources. A total of 434 specimens or lots of specimens was catalogued.

Dr. C. S. Churcher, research associate, continued work on the revision of his manuscript on the sabre-tooth cats. It is now essentially complete and photos and drawings are being prepared. Working with the Geological Survey of Canada, he continued his research on pre and early Wisconsin faunas of Alberta and Saskatchewan. Of special note was the discovery of artifacts indicating the presence of man near Medicine Hat approximately 30,000 years ago.

Members of the staff attended the annual meeting of the Society of Vertebrate Palaeontology in Berkeley, California. Field trips and ensuing discussions have already resulted in exchanges of specimens and plans for future field work.

The greatest advance in exhibition facilities resulted from the hiring of a technician whose training and experience in design and display quickly demonstrated their value. Preliminary plans for the complete rebuilding of the exhibits in this Department have been drawn up and schemes developed for potentially interesting, yet at the present neglected, areas, such as the second floor rotunda.

Several specimens of low exhibition value were removed from the galleries, resulting in better traffic flow and in better visibility of the remaining exhibits. Possibly the most obvious change resulted from the removal of the glass cases from two dinosaur skeletons. Combined with neat railings and improved lighting, these suddenly become exciting and dramatic. Since the cost of this was negligible, we plan also to expose the remaining panel-mounted hadrosaurs.

Mr. Gyrmov spent two weeks in the Texas Memorial Museum in Austin, where he produced latex moulds of the striking skeleton of *Typothorax*, a spike-armoured Triassic reptile. The cast of this unique specimen, about ten feet long, has now been mounted, providing the third representative from this early age of reptiles to be installed in as many years. During his stay in Texas Mr. Gyrmov made casts of a large number of bones and teeth for our research collections.

This activity forms part of a continuing programme by which we can secure duplicates of the finest available specimens at little cost and reap the benefit of generations of expeditions to all parts of the continent and beyond. For research purposes, these materials are equal to the originals, and enable us to build up a reference collection which we could never hope to obtain by countless field trips. Furthermore, by trading our casts to other museums it is often possible further to diversify our collections. The use of high-fidelity casts in teaching also eliminates the danger to delicate and irreplaceable originals.

In an exchange with the University of Texas, the Department obtained a good skeleton of the rare reptile *Trilophosaurus* and a skull of a crocodile-like phytosaur.

An experiment of a year ago in which a live iguana was put on display proved so popular that recently three old exhibition cases were converted into terraria. These display monitor lizards, tegus, turtles and other hardy reptiles. Showing these in the same gallery as the skeletons of their giant fossil relatives adds to the understanding of the remainder of the displays, and the lizard cases always receive enthusiastic attention.

Thanks to an arrangement with the Department of Geology, the Department was able to install a series of 44 cabinets made by the museum carpenters. Now, for the first time, all of the systematic fossil mammal collection can be stored in one place. Space was also provided for the growing collection of modern skulls and skeletons. As a result, comparison of recent and fossil forms can be made in the same rooms.

A two-stage vacuum pump now permits us to make high-density bubble-free plaster and plastic casts. The same equipment is also used to impregnate fossils and plaster casts with plastic solutions, greatly improving their strength and surface appearance. The preparation laboratory has received a major portion of the equipment budget for several years, but is still in need of much additional equipment before it can be considered adequate for the tasks imposed on it by the research and field work of three scientists and also the rejuvenated exhibition programme.

Plans are being drawn up for a new section of Mezzanine floor which could add almost 700 square feet of office and laboratory space.

New recruits to the staff have greatly increased the efficiency of the Department, and the assistance of several volunteers resulted in the re-housing and cataloguing of the scelidothera fossils (about sixty drawers), as well as the rearranging of much of the file of photographs of fossil edentates.

The Department wishes to express its appreciation to all of these, who have given so generously and enthusiastically of their time and talent.

Department of Display (Biology)

Mr. T. M. Shortt reports that the major project of this Department has been for the past three years the continuation of work on a series of large dioramas. These are designed to recreate in natural settings the fauna and flora of selected zoogeographical regions of the earth. The first of these, a representation of the monsoon forest of South India, was opened to the public in March, 1965. The second in the series was completed during the period covered by this report. This exhibit recreated a scene of the vegetation and wildlife of the Galapagos Islands. To collect the plants and animals for these and to obtain field sketches and photographs as reference aids in painting the 400 square foot backgrounds, R.O.M. expeditions travelled to these localities.

Owing to lack of funds it was not possible to conduct field work to gather material for the third in the series, but by choosing to construct a winter scene in the high arctic in winter it was possible to proceed with the programme. Specimens were already available and previous experience could be called upon. This exhibit is now nearing completion and will be opened to the public sometime this summer. It presents a scene on Ellesmere Island in the Canadian arctic archipelago, 600 miles from the North Pole, during the polar night. Among the animals displayed are the white Peary's caribou, arctic fox, arctic hare, rock ptarmigan, ermine, lemming, raven, snowy owl and white gyrfalcon. Some of these were mounted from fresh specimens and some remounted from old material.

It is proposed to add other exhibits depicting such subjects as grasslands, desert and hardwood forest, and such series of supporting exhibits dealing with the natural phenomena of astronomical zonation, prevailing winds, ocean currents, topography, etc., which produce our climates and shape the land, its vegetation and animal life.

Several special temporary exhibits were prepared during the year.

The Departmental Chief addressed the biological classes of Guelph University and the Kiwanis Club of Oshawa, and a number of groups within the Museum.

Display General

During the year the Display Department took a major part in the production of three exhibitions: the Cypriote Antiquities, the Modesty to Mod Costumes and the major undertaking of the design of the new ethnology galleries. It also worked on a number of others. It has helped curatorial departments and public information.

An allocation of money made it possible for members of the Department to visit Expo and examine new display techniques, many of which are far in advance of our own.

The Department does not yet function in a manner fitting a large and active museum, and much thought must be given to its staff, organization, responsibilities and authority. However, Mr. Parker states that "the year has passed in a reasonably intelligent fashion."

Education Department

The responsibilities of and demands on the Education Department are extremely heavy and continue to mount. The attraction of the Royal Ontario Museum lies in the multiplicity and variety of its departments. The science departments, with their objective and rational approach, draw those who are interested in investigating the physical world. The art and archaeological departments involve their visitors in a more personal and subjective way by appealing to their senses and sensibilities.

The Department utilizes the assets of all other departments in its teaching of elementary and secondary school classes. Ninety per cent of the requests for lessons are closely related to the curricula of schools. It is worth noting that 40 per cent of the classes and 45 per cent of the pupils are from Grades 6 to 11. There is a noticeable increase in the number of secondary school classes visiting the Museum. The Royal Ontario Museum is unique in this area of museum education, and the Province is fortunate to have such an institution.

With respect to elementary schools, owing to pressure of numbers, a policy whereby only Grades 5 and up are taught has had to be inaugurated. These pupils, it is felt, gain more from a museum visit than do those from primary classes. However, the latter are encouraged to visit under the supervision of their own teachers.

Learning through discussion and observation of museum artifacts is not the prerogative of those who can come to the Museum. During January and February two teaching teams, with material suitable for elementary schools, travelled in Renfrew County and Thunder Bay District. A total of 9,987 pupils, in the course of 196 lessons, studied specific objects and learned about the Museum generally. It is most rewarding to experience the appreciation of the areas to which the Department travels.

The fifteen travelling cases illustrating particular topics continue to be used for classroom study or general display purposes in schools beyond a radius of 150 miles of Toronto. According to evaluation sheets returned by classroom teachers, many exciting projects have been developed after contacts with one or both of the above services. Museum material is being used most profitably in schools which are employing the team-teaching method.

On the suggestion of the Director, much time has been spent planning for an expansion of school services in 1967-68. The various school boards have generously guaranteed more finance to enable the Department to hire more teachers and have started a system of each year seconding two teachers from schools to work in the Museum. The Department looks forward to special monthly programmes for both elementary and secondary schools.

Contacts with hospitals have expanded. The recreational programme, shared with the Members' Committee, at the Crippled Children's Hospital continued. The Ontario Hospital for the mentally ill has had speakers on an occasional basis, and the school at the Sick Children's Hospital was visited on a monthly basis.

Two post-secondary school groups again requested the assistance of the Education Department. The history specialists from The College of Education were introduced to Museum collections and Museum teaching methods. The fourth year Physical and Health Education students were given two series of six lectures, emphasizing the place of athletics in other civilizations.

It would be impractical to list all the occasional groups using services of the Department, sometimes for a specific programme, sometimes to assist the energetic Members' Committee with groups—one as large as seven hundred!

The Saturday Morning Club, under the able supervision of Miss E. Berlin, continues to be popular. It is rewarding to hear from parents of the children's increased interest and their new freedom of expression.

The general public was invited to attend well-chosen documentary films on ten Sunday afternoons during the winter and twice a week during the summer. The summer programme was followed by gallery tours related to the films. A total of 6,069 people attended.

The evening extension courses, given in collaboration with the University Extension Department, again offered diversified series. "Digging into the Past" and "Geology in the Museum" were given before Christmas. The latter series was given in the galleries, where ideally all Museum courses should be held. This was also repeated after the New Year. Registration was restricted to the capacity of the gallery. "The Arts as Communication" and "In Search of the Maritimes" were continuations of series started in previous years. The thirty eminent speakers, from home and afar, made all courses stimulating and in some cases provocative.

This is the twenty-first year of evening extension courses and the attendance reached a record high of 3,450 people, well over 1,000 higher than the average attendance of the last ten years. Miss E. N. Martin, responsible for arranging the courses, is to be warmly congratulated on their continuing success.

“The Arts as Communication” series was particularly popular with a total of 1,207. This figure is partly due to the record 460 persons who welcomed the opportunity to hear Professor Marshall McLuhan speak on February 9. This total record, moreover, was achieved in spite of the fact that the series “Geology in the Museum,” so popular that it had to be repeated after Christmas, was given in the galleries and consequently registration was limited to forty. The two other courses were “Digging into the Past” with total attendance of 957, and “In Search of the Maritimes,” 692.

Such higher numbers could not have been achieved without a greater measure of publicity, and the Department received the most effective assistance in the matter of publicity from the Museum’s Department of Information Services.

A reputation for the high calibre of museum courses has been gradually established over the past few years. This is not only due to the excellent co-operation of members of the Museum staff, but also to the fact that the Museum is in a position to develop what is an important office of this institution: to bring together speakers of distinction in many disciplines.

Over the last few years, too, there has been not only an increasing interest in adult education, but also a healthy adult awareness of what education might well be about. “I take the non-credit extension courses for pure enjoyment, but unlike most entertainment, I actually learn something worthwhile—learning is now a pleasure instead of a form of torture culminating in an examination.” “I take it the R.O.M. lectures are ‘fringe benefits’ in the Extension Division programme courses. They are excellent fringes and their provision shows a recognition of the fact that many people have solid curiosities which they will go to some trouble to satisfy.” (Statements made in answer to a questionnaire issued by the University of Toronto Extension Division in the fall term, 1966.)

That “solid curiosity” is a factor was demonstrated in the necessity to close registration in the archaeology series, “Digging into the Past,” a series that will be repeated with some variation this coming fall. That interest in the subject and the Museum’s unique contribution to learning should override the matter of cost was demonstrated by offering “Geology in the Museum” in the galleries of the Museum. If the Museum were open one evening a week, we should be able to offer more of such unique museum courses. Lastly, in an attempt to assess what makes museum courses attractive, it appears that the Museum is in tune with new thinking about education and that this is recognized. In such courses as those on the arts and society given the last four years, we are, as a student writes, providing “a type of course that is less remarkable for the learning of a particular subject but rather sets the mood for learning, establishes relationships between the different fields of learning, may give a serious student a glimpse at the unity of all things and states, and last but not least, provides the exuberance which comes from partaking in spirited exchanges and expressions.” Not only are people asking questions more freely at the end of a lecture and asking extremely knowledgeable and “sharp” questions, but many are demanding more and more discussion and less lecturing. As leisure becomes more widespread there are potent signs in every aspect of museum life that the services the Museum offers will be increasingly used.

In closing, may we take this opportunity to thank all the curatorial staff of the Museum. Without their co-operation, knowledge and materials, the Education Department could not function. I wish to thank personally the teachers on the permanent staff, Miss A. Chrysler, Miss M. Cumming, Miss M. Fitz-Gibbon, Mrs. P. Isetta and Miss E. N. Martin for their contribution and loyalty to the programme; Miss E. Berlin, Supervisor of the Saturday Morning Club, for her imaginative administration, the supporting office staff and the occasional teaching staff for their capable assistance.

Information Services

This key service is very much overworked and understaffed. The demands made on it are very heavy and the pressures are great. Mr. Bruce Easson, recently appointed Information Officer, reports that it has performed splendidly during the year, an opinion with which the Director concurs.

Publicity programmes operated on two levels during the year. On one level were comprehensive campaigns for major events, such as the opening of the *Hall of Fossil Invertebrates* and the *Modesty to Mod* centennial exhibition of costumes. On another level was the sustained programme of public information about the Museum, its problems and the continuing activities of both the institution and its staff.

These two aspects of publicity resulted in the appearance in Canadian daily newspapers, weekly newspapers, weekend supplements and magazines a total of *more than five hundred articles* on more than twenty topics. Many of the stories were distributed by the Canadian Press national news service. *More than fifty television and radio broadcasts* featured information about the Museum or interviews with its staff.

Although the *Hall of Fossil Invertebrates* and *Modesty to Mod* were widely covered by the communications media, other exhibitions also were brought to public attention by newspapers, radio and television. These included the *Loch Collection of Cypriote Antiquities*, *Photography in the Fine Arts IV* and, at the Canadiana Building, *An Old Canadian Winter*, *Sculptures Anciennes du Canada Français* and *Discovery and Mapping of Upper Canada*.

Promotion for many of these special features included direct mailings, posters and paid advertising.

During the year promotional material and assistance were provided for the Ten-to-One Weekly Tours, the R.O.M.'s special free lectures successfully organized by the Members' Committee, the evening extension course lectures in the Museum, free Sunday films, and other activities.

The Department underwrote the cost and assisted with the preparation of a bat research exhibit organized by Mr. Brock Fenton of the Mammalogy Department at the Canadian National Sportsmen's Show.

The publications activities of the Department were equally varied. Catalogues for the *Loch Collection of Cypriote Antiquities*, *Modesty to Mod* and *Discovery and Mapping of Upper Canada* were supervised through production at the University of Toronto Press. For the *Modesty to Mod* catalogue a direct mail campaign resulted in almost 400 pre-publication orders from individuals and public libraries across Canada. *Meeting Place* was issued three times as a separate section in the *Varsity Graduate*. Editorial and production advice was provided for such scholarly works as *The Crayfishes of Ontario*, *A Handbook of the Far Eastern Collection*, and *The Archaeology of the Serpent Mounds Site* (all scheduled to be published next year). A quarterly Museum bulletin called *Rotunda* is now in an advanced planning stage.

An agreement was reached with an outside distributor of educational material to take ten titles totalling 20,000 copies in the popular *Who, What, When, Where, How, Why* series of booklets.

The Department activities were complicated by a period of reorientation. Mr. Bruce Easson joined the Department in mid-September as Information Officer, succeeding Mr. Ian Montagnes who, in his three years as head of the Department, developed a successful publications programme and was responsible for many of its basic publicity and public relations procedures. Mrs. Christa Singer, a valued consultant and assistant on special projects, regrettably decided she must concentrate on her outside television and radio commitments. Miss Beverley Slopen joined the Department in mid-November as Information Assistant.

The thanks of the Department also must be extended to all other departments, particularly Photography, Display General, and the Preparators. Without the co-operation and assistance of all staff members, Information Services would be unable to carry out its functions.

Library

Miss E. Feely, the Museum's young and able Librarian, reports that library statistics for 1966-67 illustrate an increase in library activity over the preceding year. Library staff undertook 1,990 reference searches for Museum staff, who also borrowed 4,894 titles for use outside the Library. Broadening of library policy governing curatorial use of specialized titles has resulted in the location of over 1,200 titles in Museum departments as core reference collections. To further Museum research programmes, 825 titles were borrowed for staff use (692 volumes from the University of Toronto Library).

Students and Museum visitors made increasing use of Library resources: 1,519 requests for reference assistance were successfully handled. In addition, other libraries borrowed 201 titles from the collection.

Cataloguing remained an important operation; by May 31, 973 titles were added, and 163 titles from the older collections were recatalogued. As a result of cataloguing, 14,500 cards were added to Library records (filling the present catalogue to capacity and making replacement of the catalogue an urgent necessity).

An institutional exchange programme continued to bring many gifts of books and journals to the Library; eight Museum publications were mailed to participating institutions throughout the world.

The professional staff has been active in professional work during the year. In June, 1966, Miss Feely represented the Museum at the Calgary conference of the Canadian Library Association, and, in 1967, was appointed to the Membership Committee of the Institute of Professional Librarians of Ontario. She attended two graduate courses (Bibliography and Reference Collections; Canadiana Research Collections) at the School of Library Science, University of Toronto.

During the year, the Library Committee was reconvened, under the chairmanship of the Director, and was expanded to include four representatives of the curatorial staff (in addition to the Secretary-Treasurer and Head Librarian). The Committee resumed its former role as an advisory body for Museum Library policies.

During the joint meeting of the American Museum Association and the Canadian Museum Association, the Library staff were pressed into service to prepare an exhibition of publications by R.O.M. staff. It was a stimulating and most illuminating experience to be able to see the prodigious output of the curatorial staff over the years.

As in 1965-66, the year saw greater recognition and use of the Library's resources by staff and public. Although welcome, the demands occupied the Library's staff and facilities to such an extent that little opportunity remained to introduce new services or to expand present services. The Departmental statistics most strongly underline the need for additional staff, new equipment, a larger library area, and increased financial support if the Museum's Library is to meet its obligations. These include construction of a working research literature collection, satisfaction of curatorial library needs, participation in Museum programmes of research and education and active reference assistance to Museum visitors. With its present resources, the Library barely meets current demands, and cannot provide the first-rate library services expected not only by the curators, but also by the growing numbers of visitors and students at all levels, layman through specialist, who turn to the Museum Library for information.

The Museum is justifiably proud of its Library services. They bring a considerable measure of goodwill to the Museum and contribute in no small measure to the academic resources of the University. However, without considerably more support than at present they will inevitably fall behind in the vital struggle to provide the basic reference and research tools for the whole organization.

Photography Department

Mr. L. Warren and his staff, cramped for space and inadequately financed, met the increasing demands made on them with unfailing good humour and unflagging energy. They produced by the end of April this year a truly staggering output of

17,521 prints; 8,093 negatives; 5,262 slides and 387 large colour transparencies without any loss of the quality for which they are greatly respected by all departments. *This more than doubles last year's production*—a remarkable achievement.

In many museums the photographic services are a weak link. That this is not so in the R.O.M. is due entirely to their dedication, enthusiasm and artistic sensibility.

Programme Secretary

This has been an exceptionally busy year for Mrs. Helen Downie and her small, hard-working staff. Part of their duties lies in the field of membership, and the year has seen an appreciable increase from 1,050 to over 1,500 members of the Museum. This increase, thoroughly desirable as it is, also brings problems. These will increase as membership grows and will require rethinking of the arrangements for those occasions, such as openings, which are designed particularly for members.

Exhibitions continued at a high rate and included: *Six Danish Graphic Artists and Posters from Denmark*; *La Belle Province*; *Photographs by William Notman of Montreal: Canadian Profile*; *Comic Strips from the Museum's Collection*; *The Art Student Uses the Museum*; *The Loch Collection of Cypriote Antiquities*; *Ships and the Sea*; *Gentle Wilderness: The Sierra Nevada*; *Saturday Morning Club's Annual Christmas Exhibition*; *An Old Canadian Winter*; *Photography in the Fine Arts IV*; *Sculptures Anciennes du Canada Français*; *Hans Christian Andersen*; *Saturday Morning Club's Annual Easter Exhibition*; *Photographs by Henry Kalen*; *Discovery and Mapping of Upper Canada*; *Modesty to Mod—Dress and Underdress in Canada 1780–1967*; *A Special Exhibition of ROM Publications*; *Colours and Patterns in the Animal Kingdom*; *The University as Publisher*; *A Canadian Imprint*; and also the changing stamp exhibitions arranged by our indefatigable Honorary Curator of Philately.

A total of 21 exhibitions, large and small, successfully staged is a tribute to the Programme Secretary's staff and also to the carpenters and preparators, who cheerfully met the many demands made on them. Their duties require the co-ordination of many services, often with tight schedules which add to the strain. Without willing help from all concerned this extensive and varied programme could never be achieved.

Four lectures were given in the *Art and Archaeology* and three in the *Centennial Science Series*. One special lecture on "English Watercolours" was arranged. The total attendance for them was 1,028. These are all free lectures and it is evident that, as so often in other spheres, what is offered free receives scant appreciation. Other arrangements are being made for the fall whereby Members will enjoy free entrance and the public will be required to pay a small fee. This, it is hoped, may also stimulate membership.

It is planned in the summer to redecorate the Theatre which is in a shamefully dilapidated condition. It is extremely difficult to arrange comfortable conditions with one theatre holding 450 and one lecture room holding 114. Many lectures require a theatre holding comfortably 200 to 250 people.

Eleven special events were arranged including an Open Night for teachers and an evening reception for 800 delegates and wives of the first joint meeting of the American Association of Museums and the Canadian Museums Association—a most successful evening. A Fashion Show for the House of Molyneux raised \$2,670 for the redecoration of the Armour Court. The Members' Committee and the Education Department were as helpful as always in the past, yet another illustration of the help and co-operation necessary for efficient operation of important services.

As usual the lecture rooms were in great demand for the Walker Mineralogical Club, the Toronto Field Naturalists' Club, the Toronto Junior Field Naturalists' Club, extension courses, Sunday films and the Archaeological Institute of America.

In addition to their heavy normal duties, Mrs. Downie, Secretary-Treasurer of the Canadian Museums Association, Mr. Brook, and part-time recruits were called on to carry out much of the organization for the joint American Association of Museums and the Canadian Museum Association meetings. This was an extremely

demanding task, especially just before and during the meeting, which they performed with an enthusiasm and efficiency which earned the praise of all. To them is due much of the success of the meeting, while to the Director went the commiseration of the officials for his being from time to time deprived of some of his key staff!

Mrs. Downie reports that she surrendered her position as Secretary-Treasurer of the Association on June 2, and looks forward to devoting the efforts of her staff to the improvement and expansion of the Museum's own programme which already contributes so much to the cultural life of Toronto.

Registration, Art and Archaeology Departments

Miss Dorothea Hecken reports that the number of acquisitions by the Art and Archaeology Departments has varied only slightly over the last few years, although it reached an unprecedented 294 in the calendar year 1966 as compared with 275 in 1965 and 263 in 1964. Acquisitions for the year 1966-67 (to the end of April) comprised 196 donations, 68 purchases, and 4 bequests.

The donations were mostly in the field of textiles and, with the exception of about a dozen, the purchases were minor.

The above acquisitions amounted to over a thousand individual items which were checked, recorded and numbered. Perhaps the most difficult and interesting task in itemizing and recording was presented by the more than 300 pieces received from the R.O.M. excavations at Altun Ha, British Honduras.

The revision of the old records has continued with improved speed, thanks to the many active young technicians and curatorial assistants whom the Art and Archaeology Departments have added to their staff during the last years. They made considerable progress in reviewing the collections and sorting the material. As a result of this, demands for entering objects with old numbers into the new accession system have flooded in—adding an extra burden to a busy year. Twenty-two thousand catalogue cards were rolled off our duplicating machine in 1966-67.

The curatorial card records have also made good progress with gaps gradually being filled. The European Department has added a subject catalogue with proper references and cross-references to its record files.

The loan activity has been larger than in previous years owing to the many centennial exhibitions which are taking place all over the country, and to the fact that so many people look to the R.O.M. as the country's major repository. To the end of April, 49 loans were dispatched as compared with 30 loans for 1965-66. Incoming loans amounted to 41, nearly all of them on a temporary basis for our centennial textile exhibition.

A considerable number of the outgoing loans were large shipments. The fact that we were able to send them out promptly and at the same time take care of all other aspects of the loan procedure, such as lists, shipping and customs papers, condition reports, loan forms, packing, crating and transportation, was a result of good teamwork. In this connection, Registration expresses its appreciation of the work done by Mrs. Elisabeth Phillimore of the Conservation Department and Mr. Ivan Lindsay, the Chief Preparator. We are also indebted to Mr. Tom Nippak, the new Customs Clerk at the University of Toronto, whose efficiency in his work and interest in the Museum have helped us to solve many involved and complicated customs transactions. The Museum has greatly benefited from his valuable and free services. The personal contacts he has established at the various points of entry in and around the City of Toronto have served us very well. Customs brokers tend to be very expensive, not always knowledgeable in the type of material we import and export, and ignorant of a museum's special requirements. It would be sad to think that, in a separation, we might lose the many benefits of this arrangement with the University of Toronto.

Experience with shipping problems suggests that it might be well to consider at some future date a centralization of all shipping and customs responsibilities. It would greatly facilitate control over all incoming and outgoing material. At present any department, outside of Art and Archaeology, can make its own shipping arrange-

ments. This autonomy has led to a certain amount of disorder and confusion, most of which finds its way back to this Department, as the only shipping department in the Museum. Such an arrangement could, of course, only be made with completely different facilities from those we now enjoy. A central shipping door is a vital necessity

Finally, on a personal note, Miss Hecken comments that, as she goes through old records which include so much of Dr. Currelly's correspondence on individual items, she is constantly impressed by his devotion to the ideal of creating this great museum. It was a dedication which amounted almost to an obsession and his comments very often are saddened by his feeling that he was unable to "shake the mountains."

Sales Desk

Despite the inadequate site and facilities of the Sales Desk, sales have increased over the year to approximately \$55,000 by the end of the year (compared with only \$5,000 twelve years ago). A study was made for expansion but this proved so expensive that the Director felt it would be wise to wait until the future of the new wing was settled. Given a good position, sales could with ease rise quickly to about \$300,000 per annum, provide a valuable source of income for the Museum and thereby a support for the publications programme.

The Information Desk handles a great deal of work in its relation to the general public and on behalf of visitors to the various departments. Mailing has increased considerably over the year.

The Sales Desk has done its best in what is little more than a hole in the wall, and new quarters for it are long overdue.

Members' Committee

The energetic and enthusiastic ladies, who take such an active interest in the Museum's affairs, have worked hard in many areas. They have often accepted with great willingness the new Director's suggestions, unfamiliar though they may have appeared and, even when they did not accept them, they showed a welcome open-mind. They initiated a series of "Ten-to-One Talks" designed to last half an hour during lunch hours. These have proved most successful and the curators are thanked for their academic instruction which enabled the Members to speak with authority. The Committee has willingly met requests to act as guides for many tours, sold programmes, were gracious hostesses on special occasions such as the Open Night for Teachers, organized a most successful Children's Party, and helped with flower arrangements in the rotunda.

In June the Committee devised a most imaginative Centennial Project for Ontario Children whereby the youngsters contribute toward the purchase at \$1,500 of a skeleton of a *protoceratops* for the Department of Vertebrate Palaeontology. The Museum erected in the Rotunda a case with a living reptile and a collecting box

Youngsters from Toronto's Huron Street School brought along their painting of a dinosaur with their contribution to the fund to buy a *Protoceratops* dinosaur for the R.O.M. At right, a boy feeds a nickel into the mouth of the model *Protoceratops* head, in the Main Rotunda.



below which is filling with contributions from one penny to ten dollars given to a child by his grandmother as a contribution. The interest this has aroused far outweighs the monetary gain—though this too is welcome in an institution as hard-pressed as the R.O.M. In the first ten days over \$160 was contributed.

The Members' Committee has shown a most welcome flexibility in approaching the problems and opportunities presented by a rapidly changing society. It has increased its membership to help, among other things, with a membership drive, and the Director is grateful for both their devoted work and for the reception they have given to his ideas. Whether the Committee agreed or not with his aspirations it has always been a pleasure to discuss them freely with the members.

The role of the Museum is changing and expanding—the demands made on it are growing. Its opportunities are inexhaustible. As Mrs. Southey, Chairman, states in her report, "As long as we retain the enthusiasm and originality of thought, and love of the Museum shown in the past ten years, the next ten will prove just as rewarding for the Members' Committee and I hope, through them, the Royal Ontario Museum." The Director echoes their hopes and looks forward to the increased potential provided by the addition of new blood.

It is a genuine pleasure to have the support of a group of such gifted, imaginative and educated women.

PETER SWANN

MUSEUM ATTENDANCE, 1966-67

	No. of Visitors	Total
I. MAIN BUILDING		
A. <i>Visitors</i>	500,762	500,762
B. <i>School Classes</i>		
1. From Metropolitan Toronto	37,839	
2. Provincial classes	28,171	
3. Unconducted classes	29,446	95,456
C. <i>Other Groups</i>		
1. Ontario College of Art	20,583	
2. University of Toronto	61,410	
3. Extension Courses	3,532	
4. Miscellaneous	18,043	103,568
D. <i>Other Uses</i>		
Lectures, Openings, etc.	6,353	6,353
E. <i>Rentals</i>	8,931	8,931
Total Main Building		715,070
II. SIGMUND SAMUEL CANADIANA GALLERY		
A. <i>Visitors</i>		18,607
B. <i>School Classes</i>		7,212
C. <i>Other Groups & Other Uses</i>		2,211
Total Canadiana Gallery		28,030
GRAND TOTAL		743,100

Publications

- BAILLIE, J. L. "The 41st Christmas Bird Count, Toronto, 1965" (*Ontario Field Biologist*, no. 20, Dec., 1966, pp. 4-5).
- BARLOW, J. C. "Edentates and Pholidotes"; in *Recent Mammals of the World*, ed. Sydney Anderson and J. K. Jones, Jr., pp. 178-91. New York: Ronald Press. 1967.
- "Extralimital Occurrences of the House Sparrow in Northern Ontario" (*Ontario Field Biologist*, no. 20, Dec., 1966, pp. 1-3).
- "On the Nesting Trail" (*Meeting Place*, vol. 1, no. 8, 1966; in *Varsity Graduate*, vol. 13, no. 1, 1966, pp. 112-14).
- "Rufous Hummingbird in Ontario" (*Canadian Field-Naturalist*, vol. 81, no. 2, April-June, 1967, pp. 148-9).
- "Status of the Wood Ibis, the Fulvous Tree Duck and the Wheatear in Ontario" (*Canadian Field-Naturalist*, vol. 80, no. 40, Oct.-Dec., 1966, pp. 183-6).
- "Successful Import—the House Sparrow" (*Young Naturalist*, vol. 8, no. 10, Dec., 1966, pp. 1, 5).
- BRETT, GERARD. "Furniture Designs; the Three Masters" (*Canadian Collector*, vol. 2, no. 4, April, 1967, pp. 14-15).
- BRETT, K. B. "From Modesty to Mod" (*Canadian Collector*, vol. 2, no. 5, May, 1967, pp. 18-20).
- *Modesty to Mod; Dress and Underdress in Canada, 1780-1967*. Catalogue of 100 Items in the Exhibition, May 17 to September 4, 1967. Toronto: Royal Ontario Museum. 1967.
- BUERSCHAPER, P. "Notes on an Oceanographic Research Cruise" (*Ontario Field Biologist*, no. 20, Dec., 1966, pp. 35-9).
- BURNHAM, D. K. *Costumes for Canada's Birthday; the Styles of 1867*. Toronto: Royal Ontario Museum. 1966. Pp. 32.
- BURNHAM, H. B. "In Search of the Maritimes" (*Meeting Place*, vol. 1, no. 8, 1966; in *Varsity Graduate*, vol. 13, no. 1, 1966, pp. 107-9).
- "Niagara Coverlets" (*Canadian Collector*, vol. 1, no. 3, 1966, pp. 10-11).
- "A Quest for Coverlets" (*Scotland's Magazine*, May, 1967, p. 8).
- CROCKER, D. W. *Handbook of the Crayfishes of Ontario*. Life Sciences Miscellaneous Publications. Toronto: Royal Ontario Museum.
- CROSSMAN, E. J. and BUSS, KEEN. "Artificial Hybrid between Kokanee (*Oncorhynchus nerka*) and Brook Trout (*Salvelinus fontinalis*)" (*Copeia*, 1966, no. 2, pp. 357-9).
- FENTON, M. B. "Myotis sodalis in Caves near Watertown, New York" (*Journal of Mammalogy*, vol. 47, no. 3, Aug., 1966, p. 526).
- GARDINER, B. G. *Catalogue of Canadian Fishes*. Life Sciences Contribution no. 68. Toronto: Royal Ontario Museum. 1966. Pp. 154.
- HARRIS, D. C. "Some Observations on Pharmacolite" (*Canadian Mineralogist*, vol. 8, part 4, 1966, pp. 530-1).
- HARRIS, D. C. and BROOKER, E. J. "X-ray Spectrographic Analysis of Minute Mineral Samples" (*Canadian Mineralogist*, vol. 8, part 4, 1966, pp. 471-80).
- HICKL-SZABO, H. "Arms and Armour" (*Canadian Collector*, vol. 2, no. 3, 1967, pp. 24-6).
- "Vienna Porcelain" (*ibid.*, vol. 1, no. 5, Oct., 1966, pp. 7-10).
- KENYON, W. A. "A Bibliography of Ontario Archaeology" (*Ontario Archaeological Society*, Publication no. 9, June, 1966, pp. 35-62).
- "Some Notes on Fishing" (*Meeting Place*, vol. 1, no. 8, 1966; in *Varsity Graduate*, vol. 13, no. 1, 1966, pp. 115-16).
- LEIPEN, NEDA. *The Loch Collection of Cypriote Antiquities: Lionel Massey Memorial Exhibition*. Toronto: Royal Ontario Museum. 1966. Pp. 69.
- "Small Finds from the Athenian Agora—Pottery, Jewellery, Coins, Lamps and other Modest Objects Provide Details of Everyday Life in Ancient Athens" (*Meeting Place*, vol. 1, no. 10, 1967; in *Varsity Graduate*, vol. 13, no. 4, 1967, pp. 106-9).
- MEEN, V. B. "The Royal Ontario Museum Studies the Crown Jewels of Iran" (*Lapidary Journal*, vol. 20, July, 1966, pp. 529-35).
- "Studying Iran's Crown Jewels" (*Meeting Place*, vol. 1, no. 7, 1966; in *Varsity Graduate*, vol. 12, no. 4, 1966, pp. 91-6).
- "Synthetic Ruby Beads in Teheran" (*Lapidary Journal*, vol. 20, no. 10, 1967, p. 1241).
- NEEDLER, WINIFRED. "Methethy, Gentilhomme de l'Ancien Empire" (*Vie des Arts*, no. 43, summer, 1966, pp. 14-19).
- Reviews, *Archaeology*, vol. 20, no. 1, Jan., 1967, pp. 73-4; no. 2, April, 1967, p. 144; *Bibliotheca Orientalis*, vol. 23, no. 1/2, 1966, p. 45.
- ORGAN, R. M. "Reclamation of Silver from the Wholly Mineralized Ur Lyre" (*Boston Museum of Fine Arts, Proceedings of the Boston Seminar*, 1965).
- "Scientific Report on an Enamelled Brooch" (*Transactions of the Lichfield and South Staffordshire Archaeological and Historical Society*, vol. 5, 1963-64, pp. 46-7).
- PENDERGAST, D. M. "The ROM British Honduras Expedition; Excavation of a Mayan Civilization at Altun Ha" (*Meeting Place*, vol. 1, no. 9, spring, 1967; in *Varsity Graduate*, vol. 13, no. 3, May, 1967, pp. 99-112).
- PETERSON, R. L. *The Mammals of Eastern Canada*. Toronto: Oxford University Press. 1966. Pp. xxxii, 465.

- "Notes on the Yucatan Vesper Rat, *Otonyctomys hatti*, with a New Record, the First from British Honduras" (*Canadian Journal of Zoology*, vol. 44, 1966, pp. 281-4).
- "Recent Mammal Records from the Galapagos Islands" (*Mammalia*, tome 30, no. 3, 1966, pp. 441-5).
- RIOTTE, J. C. E. "Ammerkungen zur Nomenklatur einiger Europaeischer und Nordamerikanischer Arten der Gattung *Orgyia* (Lepidoptera, Lymantriidae)" (*Deutsche Entomologische Zeitschrift*, n.f. 14, no. 1/2, 1967, pp. 163-8).
- "Notes on Uncommon Moths in Central and Southern Ontario" (*Journal of the Lepidopterists' Society*, vol. 21, no. 1, 1967, pp. 33-9).
- "Synonymy of *Leucophlebria lineata brunnea* (Sphingidae)" (*ibid.*, p. 8).
- ROGERS, E. S. "The Indian Concept of Property" (*Ontario Fish and Wildlife Review*, vol. 5, no. 1, 1966, pp. 21-4).
- RUSSELL, L. S. "The Changing Environment of the Dinosaurs in North America" (*Advancement of Science*, vol. 23, no. 110, Aug., 1966, pp. 197-204).
- "Confederation Lamps" (*Canadian Collector*, vol. 2, no. 3, 1967, pp. 9-11).
- *Dinosaur Hunting in Western Canada*. Life Sciences Contribution no. 70. Toronto: Royal Ontario Museum. 1966. Pp. 37.
- "Exploring the 'New Red Sandstone'" (*Meeting Place*, vol. 1, no. 8, 1966; in *Varsity Graduate*, vol. 13, no. 1, 1966, pp. 105-7).
- Review, *Journal of Palaeontology*, vol. 41, no. 3, May, 1967, pp. 813-14.
- SCOTT, W. B. "Comparison of Cod (*Gadus morhua*) and Haddock (*Melanogrammus aeglefinus*) with Particular Reference to Axial Skeleton, especially Transverse Processes and Ribs" (*Fisheries Research Board of Canada, Manuscript Report Series (Biological)*, no. 878, 1966).
- "Toronto: A Glimpse into the Past" (*Outdoor Crest*, vol. 2, no. 1, 1966, pp. 4-7).
- SCOTT, W. B. (with C. G. GRUNCHY) "*Lepomis megalotis*, the Longear Sunfish in Western Ontario" (*Journal of the Fisheries Research Board of Canada*, vol. 23, no. 9, Sept., 1966, pp. 1457-9).
- SCOTT, W. B. (with A. H. LEIM) "Fishes of the Atlantic Coast of Canada" (*Bulletin of the Fisheries Research Board of Canada*, no. 155, 1966, p. 485).
- STEPHEN, BARBARA. Review, *The Asian Student*, vol. 15, no. 27, March, 1967, p. 8.
- SWANN, P. C. "Connoisseurship and His Majesty King Gustav VI Adolph of Sweden" (*Connoisseur*, vol. 164, no. 659, Jan., 1967, pp. 2-7).
- *Japan: from the Jōsman to the Tokugawa Period*. London: Methuen. 1966. Pp. 238.
- "The Sorry Plight of the ROM" (*Toronto Life*, vol. 1, no. 7, May, 1967, pp. 19-22, 52).
- "Vacation '66" (*Meeting Place*, vol. 1, no. 8, 1966; in *Varsity Graduate*, vol. 13, no. 1, 1966, pp. 102-3).
- TOVELL, W. M. "From TV to the Great Lakes" (*Meeting Place*, vol. 1, no. 8, 1966; in *Varsity Graduate*, vol. 13, no. 1, 1966, pp. 109-11).
- "A Geologist Looks at the Niagara Escarpment" (*Ontario Naturalist*, vol. 4, no. 4, Dec., 1966, pp. 4-6).
- "Geology"; in *To Every Thing There is a Season*, by Roloff Beny, pp. 52-3. Toronto: Longmans. 1967.
- "Grizzly Bear Skull: Site of a Find near Lake Simcoe" (*Science*, vol. 154, no. 3745, Oct., 1966, p. 158).
- TOVELL, W. M. and DEANE, R. E. "Ancestral Lake Superior Shorelines, Montreal River Harbour Area, Ontario" (*Proceedings of the Geological Association of Canada*, vol. 17, 1966, pp. 53-63).
- TRUBNER, H. "Chinese Art from a Royal Collection" (*Antiques*, vol. 91, no. 5, May, 1967, pp. 644-6).
- TUSHINGHAM, A. D. "Jerusalem; the Big 'Dig' at the Old City" (*Meeting Place*, vol. 1, no. 8, 1966; in *Varsity Graduate*, vol. 13, no. 1, 1966, pp. 103-5).
- WEBSTER, D. B. "Stop Scalping our Heritage!" (*Canadian Collector*, vol. 2, no. 2, 1966, pp. 16-17).
- WHITE, W. C. *Chinese Jews*. 2nd. ed., with an introduction by Cecil Roth. Toronto: University of Toronto Press. [c.1966] 3 vols. in 1.
- WIGGINS, G. B. *Centennial of Entomology in Canada, 1863-1963. A Tribute to Edmund M. Walker*. Life Sciences Contribution no. 69. Toronto: Royal Ontario Museum. 1966. Pp. 94.
- YOUNG, T. C. "Excavations in Western Iran" (*Archaeology*, vol. 20, no. 1, 1967, pp. 63-4).
- "Surveys in Western Iran, 1961" (*Journal of Near Eastern Studies*, vol. 25, no. 4, 1966, pp. 228-39).
- Reviews, *American Anthropologist*, vol. 68, no. 6, 1966, pp. 1573-4; *Journal of the American Oriental Society*, vol. 86, no. 3, 1966, pp. 341-3.
- YOUNG, T. C. (ed.) *Near Eastern Culture and Society*. New Haven: Princeton University Press. 1966. Pp. 250.
- YOUNG, T. C. and SMITH, P. E. L. "Research in the Prehistory of Central Western Iran" (*Science*, vol. 153, no. 3734, 1966, pp. 386-91).
- YOUNG, T. C. (with D. STRONACH) "Three Seljuk Tomb Towers" (*Iran*, vol. 4, 1966, pp. 1-20).

Museum Board

Harold M. Turner, M.S., *Chairman*
A. D. Allen, B.Sc., Ph.D.
W. M. Vacy Ash, M.A.
L. G. Berry, M.A., Ph.D., F.R.S.C., F.G.S.A.
Claude T. Bissell, M.A., Ph.D., D.Litt., LL.D., F.R.S.C.
Henry Borden, C.M.G., Q.C., B.A., LL.D.
Mrs. W. H. Clarke, M.A.
J. H. Crang
The Hon. Leslie M. Frost, P.C., Q.C., LL.D., D.C.L.
R. A. Laidlaw, B.A., LL.D.
Richard G. Meech, B.A., Q.C.
O. M. Solandt, O.B.E., M.A., M.D., Ph.D., LL.D.
Mrs. Edgar Stone, M.A.
Mrs. O. D. Vaughan, M.A.
Arthur G. Walwyn, B.A., J.P.

Museum Officers

Peter C. Swann, M.A., *Director*
J. F. Brook, *Secretary-Treasurer*
V. B. Meen, M.A., Ph.D., *Chief Mineralogist*
L. S. Russell, B.Sc., M.A., Ph.D., LL.D., F.R.S.C., *Chief Biologist*
A. D. Tushingham, B.A., B.D., Ph.D., *Chief Archaeologist*

June 30, 1967

