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Chicago, Illinois, November 9, 1905.

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To Members of the Museum Commission:-

The range of the discussion at the meeting of the Commission on November 1st suggests that a fuller statement of the Museum plans inherited from previous bodies, and a synopsis of the considerations that weighed with those bodies in favoring them, may be helpful in the further study of our problem by furnishing a more definite basis of discussion and action. While I am reluctant to occupy your valuable time, I hope you may find a way to read this statement in the interest of a reduction of the time occupied by our future sessions.

The officials of the University Museums have studied the problem of their most effective development, under existing and prospective conditions, more or less continuously from the founding of the University. Because of the uncertainty respecting the final location and policy of the Field Columbian Museum, they have been compelled to look at the subject alternately from the presumption of different kinds of union with that Museum on the one hand, and the presumption of an independent development under various phases of affiliation with it, on the other. This study of the problem from many points of view, with conclusions necessarily held in abeyance, has had its obvious advantages; but it has involved a regrettable delay in maturing final plans for presentation.

When the location and relations of the Field Columbian Museum seemed to be finally settled, the subject of a permanent policy for the University Museums was referred to a special committee of the Board of Libraries, Laboratories, and Museums, who reported a comprehensive plan together with the recommendation that a separate

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Board of Museums be established. Both the plan and the proposed Board met with favor, and the Board of Museums was established. The general plan was further considered by the new Board, and found acceptable. This prepared the way for the establishment of this Commission.

The essential features of the plan matured by the Board of Museums were presented at the first meeting of the Commission; but as the attendance was small, and as the discussion of the last meeting disclosed some misapprehensions, I venture to submit a further statement, and to review certain features of the plan which are thought to offer a better solution of our problem, than the more familiar policies of university museums.

The general scheme of the Board of Museums contemplates the following classes of Museums:

I. Department Museums to be developed in the quarters of the several departments, and to be given such forms as the departments themselves may deem best suited to their purposes. It is assumed that these will include the immediate working collections needed for class, lecture and laboratory service.

II. A Synoptic Exhibit Museum for the education of the whole student body in the systematic features of the several realms susceptible of museum representation.

III. A Group of Research Collections made with special reference to scientific investigation, and aggregated into a composite Museum so as to facilitate coördinate work and the common use of standard material.

IV. Such Special Museums as may be found advisable, as the Haskell Oriental Museum, the proposed Railway Museum, etc.

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IV. Such Special Museums as may be found advisable, as the

Haskell Oriental Museum, the proposed Railway Museum, etc.

Classes I and IV perhaps do not need special comment, since their places and functions are self-definitive, and since each particular museum presents a problem by itself, since it is to be developed to meet a particular purpose. In Class I, each problem is to be solved by the particular department interested, which should enjoy as great liberty as space and resources will permit, consistently with the general scheme and the equities of apportionment which rest with the general administration of the University. The museums falling under Class IV will always be subjects of special consideration, and doubtless usually dependent on special financial provisions. It will without question be the policy of the University to accept special gifts for particular kinds of museums, even if they do not fall readily into the systematic scheme it has adopted for the best utilization of its own resources.

Classes II and III have been specially devised to meet the situation in which the University now finds itself by virtue of dispositions of space made or foreshadowed, and by the final settlement of the location and general policy of the Field Columbian Museum.

It seems to be the unanimous conviction of all who have carefully considered the matter, that the University cannot wisely attempt to establish and maintain a general exhibit museum of the Field Columbian type, or of the type maintained by some of the older universities. Such a museum, if it is to take high rank in its class, calls for millions for installation, and millions for endowment, besides making heavy drafts on the staff of the university for relatively unprofitable service, such as the selection, purchase, identification, mounting, labeling and installation of great quantities of familiar material, without appreciable scientific returns. Experience has shown that

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omnibus exhibit museums of this class are very likely to so exhaust available resources in plant and maintenance, that little is left for effective research work, or even for instructional work in the fields represented by the museum material. This is the regrettable condition in which some large university museums now find themselves. This calamity we have endeavored to foresee and avoid, while providing in a very effective way for the important function of an exhibit museum specially adapted to the education of the whole student body, and incidentally the University public, by the proposed Synoptic Museum.

Classes II and III also have regard to the congestion on the central University Campus which is predetermined by the dispositions already made, particularly by the recent introduction of the Departments of Law and, in part, of Medicine. It has thus been adjudged that the advantages of concentration outweigh the disadvantages of congestion, and future plans must be accommodated to this decision. If the principle holds good for the professional schools named, much more does it hold for the colleges of Arts, Literature and Science, the work of whose several departments is inextricably intermingled.

In working out the scheme for the Synoptic Exhibit Museum, it was necessary, therefore, to seek assiduously for the maximum of educational productiveness, with the minimum of space. It was also important so to limit original expenditure and cost of maintenance as to reserve as large a part of prospective resources as consistent, for original research, which the Board of Museums, with great unanimity, regards as the most important function of a university museum.

It may be here remarked, parenthetically, that in giving concrete form to the plans for the Synoptic Museum, only a readjustment of space assigned by the Registers of 1902-3 and 1903-4 to the Museum,

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and to several spacially related departments, was involved even in the most favored plan known as No. 3, and no reduction of the floor space assigned to any of the several departments was involved, but rather some little expansion, or possibility of expansion, if found necessary to the development of the departmental work. The plan consists merely of a rearrangement of available space, to give better coördination and more effective results. To this I will return.

I request your very special attention to the specific features of accommodation and of utility and to the precise purposes of the Synoptic Museum, as best expressed in plan No. 3.

1. The difference between a synoptic exhibit of the kind proposed, and an omnibus exhibit, is radical. The synoptic exhibit is intended to show only the great types in their characteristic and significant expressions and relations; the omnibus exhibit endeavors to show all it can. The great types are not likely to be extended very much by developments of the future, though the increase in individual objects will be almost immeasurable. The great types of the human, animal, vegetal, and inorganic kingdoms are already essentially known, and are available whenever we can command the means. Only very small additions to great types are to be anticipated, and the new interpretations and classifications that will be developed in the future, are perhaps as likely to tend toward greater unity as toward greater diversity. This is a vital point in our problem, and gives to it an aspect wholly different from the problem of an omnibus exhibit, which must provide for a future increase of individual objects, the extent of which is quite beyond close estimate. Our main care is the avoidance of too low an estimate of the number of great types, and of the space required for their effective exhibition. The consensus

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of judgment of the curators of largest experience is that the space assigned in plan No. 3 is the minimum for a permanently satisfactory exhibit.

2. There is a pedagogic consideration that also favors a limitation of the exhibit. The purpose of the proposed Synoptic Museum being to impress typical ideas, rather than to show the full range of things suited to exhibition, too great multiplicity of objects may defeat this purpose, for the students' minds may be confused by a distracting multitude of variations and gradations. There is also danger of giving a distorted impression by the undue importance that is almost inevitably given to forms of minor import. Given two species whose significances are as 100 and 1,000,000, respectively, if the first be represented by 1 specimen, the absolute minimum, due proportion requires that the second should be represented by 10,000 specimens, which is impracticable. In a synoptic museum proportionate values may be fairly preserved by the omission of the less significant, and representative ideas may thus be inculcated without confusion.

Furthermore there is a limit to the students' power of grasping and assimilating, in the early stages of study, and it is unprofitable to carry the representation of types to degrees of refinement that transgress this limit, particularly when students have occasional access to omnibus exhibits, like that of the Field Columbian Museum, which duly convey the idea of multiplicity, intergradation, and almost limitless variation.

In view of these considerations, it has seemed that we ought to be able, even in the light of present data, to solve permanently and with approximate success, the question of the proper magnitude of the synoptic exhibit. And it would seem further that, if the idea

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is consistently maintained in the future, such readjustments and re-selections of material as may be needed, can be made within the dimensions determined upon, if these are wisely chosen. Future changes will undoubtedly be needed to modify the character of the exhibit to conform to the progress of science, and to utilize the choicer material that may be acquired, but these may be made by replacements rather than indefinite additions.

The effectiveness of an exhibit collection is closely dependent on the amount of contact of the students with it. It is said that, with qualifications, the price of real estate is approximately measured by the number of persons who pass it daily. With like qualifications, the value of an exhibit collection is dependent on the number of students who see it per diem. An exhibit collection is not designed primarily for intensive study, but for transitory observation. The intensive study is provided for in the laboratory and class-room collections (Class I), and in the Research Museum (Class III). To secure the highest returns from an investment in a representative exhibit for students, it should be so placed that they will come into contact with it with maximum frequency. Even if most of the contact be exceedingly casual and transitory, in the great majority of cases, such contact in a certain percentage of these cases leads to more serious studies that would never be made otherwise. It also prepares for such studies. In other cases, it serves to perpetuate, develop and fix impressions previously gained from class-room, laboratory and other systematic work.

I have had working relations, as head of department, with three exhibit museums, one located on the campus at some distance from the class-room, one on the same floor with the class-rooms but in an ell

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by itself, at the end of a blind corridor, and the one in Walker Museum, where the students pass through the museum and are in daily contact with it. Neglecting other differences than those of accessibility and contact, I think that the respective working values may be put at 10% to 15% of the ideal utility in the first case, 30% to 40% in the second, and 80% to 90% in the third, recognizing that ideal utilities were not reached in any case. A colleague who has had almost identical experience, puts the values farther apart.

A feature of plan No. 3 that is expected to secure a high percentage of productiveness thru exceptional contact, has not been set forth specifically in the discussions. It is contemplated that the regular classes of seven departments will meet in rooms on the floors above the Synoptic Museum. In addition there will be special students engaged in research, from three or four other departments. It is thought that the inevitable result will be a very large amount of student contact with the museum. Besides this, the location and the arrangement of the museum, if the contemplated scheme be carried out, will be such as to invite the frequent passage of other students thru it with its inevitable incidental sequences. The value of even the most transitory contact of this kind is quite analogous to that sought by the successful merchant, at no small expense, in the exhibit he presents to those who merely pass by his store on the outside. To move our Synoptic Museum off the central campus, and limit its influence to those who specially sought it, would not be unlike the removal of Marshall Field's store to some less congested quarter, where those who particularly wanted to do business with Marshall Field could find him in uncrowded quarters.

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In the judgment of many, if not all, members of the faculty, the most important feature of the plan is that which contemplates the concentration of the maximum of available resources on museum research. To compass this end, it is almost as important to plan for the avoidance of overtaxing the resources of the University in other museumistic lines, as it is to lay plans directly for this supreme work, for, as experience proves, an undue consumption of resources in exhibits, and in other museumistic lines, leaves no adequate means for supporting investigation even when the requisite material has been gathered. This consideration gives importance to the economy of our Synoptic Exhibit, which, at the same time, by its selective nature, its exceptionally favorable location, and its effective contact with the student body, will be more efficient, educationally, than most other university museums.

A special economy and effectiveness may be secured to the Research Museum under the proposed plan by the use of a storage system closely analogous to the stack system of the modern library. It is proposed to store in drawers of interchangeable dimensions as much of the material of the museum as practicable, and to put the rest into as compact and portable forms as its nature will permit. It goes without saying that the collections of this museum will be made with a view to their investigative, not their show, value. The floor space of this museum is to be divided between work-room and stack-space. The walls of each work-room will be available for much storage in the form of banks of drawers, and these may be supplemented, as the museum grows, by special stack provisions. The basement will afford large facilities for the storage of such material as is not

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injuriously affected by moisture. The interchangeable system of drawers will permit the easy shifting and re-aggregation of material to suit the needs of investigations in progress. Great economy and, at the same time, great working convenience can thus be secured.

The Research Museum should be close to the Synoptic Museum, because the standard representative material of the latter is an important auxiliary in the investigative work. So, too, the basement under the Synoptic Museum should be an important adjunct of the Research Museum, as, besides the storage above referred to, it should furnish space for the reception of collections from the field, for the packing and unpacking of exchanges, for much of the work of the preparators, and for various other rough work.

The plan under consideration proposes to place the Research Museum on the upper floors of Walker and of the adjacent buildings, so far as the latter are not required for the regular class work of the departments which, because of our state of congestion, must divide with the Research Museum the floors above the Synoptic Museum. Consideration will show that the provisions for the Research Museum are very plastic, and can be accommodated to the varying developments of investigation, on the one hand, and of class work on the other, and the two will often be combined in the same room. In this respect it is quite in contrast with the Synoptic Exhibit Museum which requires a fixed systematic arrangement with proper contiguity of parts, and will therefore be devoid of plasticity.

It is these necessary features of a good Synoptic Museum that have developed the only serious difficulty in giving concrete form and detail to the plan; at least in the minds of those who have

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maturely considered the problem. It is very important that the Synoptic Museum should have as much continuity throughout as possible, that it should be on the first floor, to secure the maximum contact with students, that it should have more such space than the present assignment (Register for 1903-4) provides, and that it should be connected with the biological departments as intimately as practicable. On the other hand, by the compact methods of handling and storage contemplated for the Research Museum, space on the upper floors now assigned to the Museum may be surrendered in exchange for first-floor space. As this upper-floor space is thought to be nearly or quite as serviceable for departmental work, or at least much of it, those who were charged with planning the scheme hoped that a reasonably satisfactory exchange of floor space might be effected, by which each department might have at least as much space as is now assigned it (Register 1903-4) and the whole combination of Museum and Departments occupy no more space on the Campus than is now assigned them (Register 1903-4).

This needs to be qualified in only one particular. Plan 3 contemplates, tho it does not specifically provide, that the biological group of departments will ultimately be extended, over a space not now assigned, eastward from near the southeast corner of the Botany building to the vicinity of the southwest corner of Mandel Hall, and thus (perhaps by means of open corridors or colonnades) come into close working relations with the north or biological end of the proposed Synoptic Museum. Perhaps the lower floor of this building also might ultimately be occupied by an extension of the biological part of the Synoptic Museum, if the space assigned in plan 3 should

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prove to be inadequate and other needs be not too pressing. Perhaps it would be wise for the Commission to take action relative to the reservation of this space which is not now assigned. The Board of Museums has taken no action relative to this, further than that implied in favoring plan 3, as indicated above, and its jurisdiction would not entitle it to take action beyond suggestion, if this space is to be assigned for class and laboratory work. With this qualification, the proposed plan transmitted from the Board of Museums merely proposes a readjustment in the assignment of space without the reduction of that of any department and without increasing the total assignment.

The nature of the proposed readjustments and the reasons therefor are a vital part of this communication.

1. It was found that the assignment of space to the departments of Philosophy and Psychology between the assigned Museum space west of Walker and the Law building (Register 1903-4) was inadequate, and hence it is proposed that the Museum yield to these departments the three upper floors of the proposed extension west of Walker, or so much thereof as they may need.

2. To give first-floor space for the northern or biological wing of the Synoptic Museum, it is proposed to vacate the assignment of the space north of the 58th street entrance to Geology and Geography (Register 1903-4), and to assign these departments equal space on the upper floors between Beecher and the 58th street entrance. There is perhaps here the greatest difference in convenience between first-floor space and upper-floor space, as Geology has the greatest tonnage to lift and lower.

prove to be inadequate and other needs be not too pressing. Perhaps it would be wise for the Commission to take action relative to the reservation of this space which is not now assigned. The Board of Museums has taken no action relative to this, further than that implied in favoring plan 3, as indicated above, and its jurisdiction would not entitle it to take action beyond suggestion, if this space is to be assigned for class and laboratory work. With this qualification, the proposed plan transmitted from the Board of Museums merely proposes a readjustment in the assignment of space without the reduction of that of any department and without increasing the total assignment.

The nature of the proposed readjustments and the reasons therefor are a vital part of this communication.

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3. To carry out that important part of the plan which provides for biological continuity, it is proposed that a similar exchange of floor-space be made with the department of Mathematics, by which the first-floor space assigned that department (Register 1903-4) be exchanged for equivalent room, or more if needed, on the upper floors next adjoining on the south, vacated by the proposed transfer of Geology and Geography. This would leave the first-floor space now assigned to Mathematics available for the Synoptic Museum, thus completing the desired biological connection and providing for the systematic deployment of this important collection.

While those to whom the task of maturing the Museum plans was committed were reluctant to propose these changes of departmental assignments, they saw no other way to accomplish the important ends desired without much greater sacrifices. For myself this conviction is much strengthened by further consideration and discussion. As the head of one of the departments asked to surrender ground-floor assignment for upper-floor space, I am not without appreciation of the natural preference for having the departmental feet on the ground, but on reflection I am not able to convince myself that second and third floor space is not really the more serviceable for intellectual work by reason of its greater quiet and freedom from intrusion, and hence the reluctance I at first felt to accept an exclusive assignment on upper floors has passed away.

The Committee that formulated the foregoing plans felt that the approval of Mr. Walker was a vital matter and hence submitted to him a copy of their report before its presentation to the Board of Libraries, Laboratories and Museums. In response to this, under date of

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April 8, 1904, Mr. Walker wrote that he had read the report carefully and was "very much pleased with the final judgment of the Committee as regards the scope of the Museum." Referring to the specific plans he wrote "Considering the long future, the third one will be best. * * * * * The nearness to Biology is a very desirable feature of No. 3." With other expressions of appreciation, he added that he had returned the report to Dr. Harper with his approval.

I regret to have occupied so much of your valuable time in this long statement but I trust that it will save time in the end by facilitating discussion and action at the sessions of the Commission.

Very respectfully yours,

A handwritten signature in cursive script, appearing to read "H. C. Connelley". The signature is written in dark ink and is positioned below the typed name.

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Copy of Mr. Burling's letter
The University of Chicago

to President Johnson
January 31, 1921.

Museum
My dear Mr. President:

In reference to the museum on the fourth floor of the Classics Building and the recent letters from Mr. Prescott in reference to museum material, may I, after careful consideration of the matter, recommend that this museum be placed under the general care of Mr. Breasted, and that recommendations respecting cataloguing and other kindred matters come to you from him rather than from the Libraries? My reasons for making this recommendation are:

1. As indicated in the extracts from Mr. Hanson's letter which I sent you with my previous letter of the 17th, experience has shown in general that the Library and Museums are not well administered together.

2. In this particular case we have no one who is really competent to undertake museum cataloguing. There is danger that whatever we should do would afterward have to be done over again. Museum cataloguing is really a very different thing from book cataloguing.

3. The museum in the Classics Building is really rather closely related in respect to most of its material to the museum in Haskell. They are, to say the least, tangent in period of time and character of the civilization which they represent.

4. Mr. Breasted has a staff already trained for work of this kind, and could handle the matter more

The University of Chicago

competently than could we of the Libraries.

With no disposition to shirk any responsibility that properly belongs to me, I beg leave to make the above recommendation.

The Library staff, as you well know, has a very serious task of its own. Mr. Hanson and I are very desirous of bringing up arrears within the next three or four years, that the future may have to deal only with current work. We are reluctant to become involved in the care of Museums.

May I add that the above recommendation is concurred in by Mr. Hanson and Mr. Merrill. I have not conferred with other members of the Classical faculty than Mr. Merrill.

Very truly yours,

Ernest D. Burton.

President H. P. Judson,

The University of Chicago.

EDB-LN

STATEMENT CONCERNING WALKER MUSEUM.

I. Outline of the history of the Museum.

The building known as Walker Museum was presented to The University by Mr. George C. Walker in 1893, with the idea that it would become a general University Museum, and that it would secure important collections from the World's Fair. About this time, however, the Field Museum was established and took over the bulk of the material which might otherwise have come here. Because of this situation The University ^{had} little or nothing in the way of museum material to place in the building when it was completed, and Mr. Walker consented to the temporary use of the building for housing the Department of Geology and a number of other departments for which no other space was at that time available. The building was so used for more than twenty years, much to the annoyance of Mr. Walker who wished it to be used for museum purposes. After the possibility of securing World's Fair collections had to be abandoned, it was hoped to make of Walker a general Natural History Museum for The University, but as the years passed such a plan was found to be impracticable, and it gradually came to be recognized that it was to be developed as a museum of Paleontology, a plan with which Mr. Walker was wholly in sympathy before his death.

Prior to the Summer of 1895 a few small collections of fossils had been secured. I was employed in August 1895 to give my attention to the organization of such collections as were then possessed by the Museum, and my time was given wholly to that work for a year, after which I also gave instruction in Invertebrate Paleontology.

The first large accession to the paleontological collections was the Gurley Collection in 1900, which was accepted by The University as a gift of \$50,000.00, the donor to receive a certain annuity

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The first large accession to the paleontological collections was the Gurley Collection in 1900, which was accepted by The University as a gift of \$50,000.00, the donor to receive a certain annuity

during his lifetime. These conditions were accepted by Mr. Rockefeller and this sum was duplicated by him in the gift which he made to the University at that time. With the accession of the Gurley Collection we possessed an exceedingly valuable mass of material, but with no adequate facilities to care for it, and much of it still remains packed to this day. One of the conditions agreed to verbally by President Harper when this collection came to the University, was that a sum of no less than \$500.00 should be available annually for making additions to the collection. This agreement was lived up to during the life of President Harper, and in some years we had as much as \$1,000.00 for this purpose, and we secured a number of very choice small collections during these years. In 1906 the great James Hall Collection from Albany, New York was purchased and presented to the University by Mr. Rockefeller. The size of this collection can be estimated from the fact that it made six freight car loads when it was transported to Chicago. The major portion of this collection is still lying in the basement of Walker as it was received nearly eighteen years ago.

The development of the Vertebrate collections did not begin until several years after Professor Williston came to the University in 1902, but during his lifetime we secured, through the wonderful ability of Mr. Miller as a collector, the greatest collection of the oldest land vertebrates that has been gathered together in any museum in the world.

The University is in possession today of one of the great paleontological collections of the world. The value of fossil collections is to be reckoned largely by the amount of type material which they contain, that is, the specimens which have been used for the description and illustration of new forms. Such specimens are almost

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worth their weight in gold. They can never be replaced or duplicated and they must be consulted by all who do anything in the way of monographic work. Our collections contain more than 5,000 types of species, and no important large work upon Paleozoic invertebrates has appeared during the past decade, or can appear in the future, without making use of our collections. Many specialists have visited the Museum to study such material, and in some cases it has been loaned to be taken away for study. Upon the explanations of plates illustrating many large monographs the words "Specimen No.---- from the Collections of Walker Museum, The University of Chicago" may be seen over and over again. This has made our collections widely known throughout the world.

With all this great collection we have far less facilities for caring for it and making use of it than do many small museums with comparatively insignificant collections. Because of its apparent lack of appreciation on the part of the University of its wealth of paleontological materials, I have failed to secure as gifts, a number of private collections of much value. It is as if the University library possessed a library of hundreds of thousands of most valuable books and provided shelf room for only 10,000.

After waiting more than twenty years, until after the death of Mr. Walker, provision was made for caring for the Department of Geology in a new building, and then we believed that something was really to be done for Walker Museum. The Trustees did appropriate \$10,000.00 which was confessadly considered as a starter towards making Walker Museum what its donor intended it to be. Part of this sum had to be used for structural changes in the building, and a part was used for the purchase of much needed cases. We were led to believe that further appropriations would be provided to complete the plan inaugurated, but in fact the needs of the Museum have been almost

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entirely forgotten since that time. During my appointment as Director of Walker Museum I have never been asked for any statement concerning the Museum, nor have I been given an opportunity to recommend anything for carrying out our plans for Museum development. I have no word in the preparation of the Museum budget, for there is none apart from that of the Department of Geology.

II. Research in Progress.

Walker Museum is an active research unit of the University. At the present time there are approximately 35 graduate students in the Department of Geology, perhaps 12 of these are engaged upon research work leading to their Ph. D. degree, and of this number no less than 7 are conducting their work under my direction in Walker Museum and with the collections there housed. Besides these there are three or four other students doing research work of an important character, ~~but~~ but not yet started on their Ph. D. work. I think it is safe to say that a larger volume of research work is in progress in Walker Museum than in any other division of the Department of Geology, and probably than in the whole of the Department outside of this division. All of this work is greatly handicapped by our lack of facilities of various sorts, and if we could have only a moderate appropriation the effectiveness of all this work would be greatly increased.

III. Pressing Needs of the Museum.

There are two most pressing needs for the proper development of our work, and of these it is difficult to determine which is the most important. We desperately need additional Museum furniture to properly care for the collections. The furnishing of the first floor of the Museum is less than one-half completed. The cases needed to complete the plan are necessarily expensive, but with a moderate

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appropriation continued over a term of years, the plan adopted in 1915 could be carried out gradually.

The other need is some means of publishing the results of our work in the Museum. A series of "Contributions from Walker Museum" was started many years ago and the parts have appeared irregularly at long intervals. Means should be provided for the continuation of these "Contributions" with some degree of regularity. A continuing appropriation equivalent to one professorial salary in the University would place the Museum on its feet and permit it to make progress, slowly but surely in both of the channels mentioned.

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