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REPORT

OF THE

STATE OF ILLINOIS

Historical Library *and* Natural History Museum

JOSUA LINDAHL, PH. D., CURATOR.

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REPORT
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STATE OF ILLINOIS HISTORICAL LIBRARY
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NATURAL HISTORY MUSEUM.

JOSUA LINDAHL, PH. D., CURATOR.

*To the Honorable Board of Trustees of the State of Illinois
Historical Library and Natural History Museum:*

GENTLEMEN:

I hereby submit to you the following report:—

The encouragement by the governments of the various States of the Union of scientific research for the purpose of aiding practical development, varies considerably in the different States. Appropriations for the geological survey, the care and development of the State Museum and the publication of reports and bulletins on subjects connected therewith, and the number of scientists connected with these institutions, are, in most other northern States, east of the Mississippi river, larger than at present in Illinois. The reports of the geological survey made by, or under the direction of my distinguished predecessor, of which reports the last volume has been ready for the printer more than two years, although for well known reasons its publication has been delayed until now, form a most valuable contribution to that science, which teaches how to discover and utilize the hidden treasures of the earth, and a contribution equally creditable to its learned authors and to the State of Illinois. But this, like all other branches of human knowledge can never be exhausted, and every discovery of importance only widens the field and opens to our view new fields of

research which promise constantly increasing blessings to mankind. I will therefore express the hope that this State will eventually follow the example of other States, and decide to have a second geological survey.

In the meantime no opportunity should be lost to make our people familiar with all that we at present know of our State's natural history, in the broadest sense of this term. *One* way of promoting this object would be by frequently publishing bulletins from the State Museum. Such bulletins would be preferable to large volumes, as they could be published immediately whenever needed, whilst the publication of large volumes generally involves difficulties, and sometimes serious loss of time. Geological discoveries are often apt to create a "fever"—whether it be gas, oil or gold fever, or still other species hitherto unknown. In such cases—and we have recently seen a case of this kind in Ohio—the people will not wait for the publication of big volumes on the subject, but rapidly waste fortunes in wild speculations.

If the means of publishing such bulletins be provided by the Legislature now in session, I would propose to commence the series with a dictionary of altitudes in Illinois, for which work I have already obtained considerable material, mainly through the courtesy of the various railroad companies in the State.

In a subsequent issue I would publish descriptive lists of all species of fossils hitherto found within the State. Such lists are much needed and would encourage students all over the State to add further contributions to our knowledge of its palaeontology.

Another way toward realizing the same object would be to richly furnish the State Museum not only with an abundant supply of all the different forms of natural products of the State but also with sufficiently ample collections of similar objects from other parts of the world, to illustrate the relation between our indigenous species and those outside of the State or this country. It would, however, not suffice to have these collections stored in the museum; they must be so arranged and labeled that an intelligent visitor shall be able to study the museum like a well written text book. A museum differs in this respect from a mere curiosity-shop, that the systematic arrangement of "labels

with specimens attached" is of still greater importance for the general usefulness of the museum than the abundance or excellence of the specimens themselves. Such an arrangement demands ample space, and I cannot too strongly emphasize the need of procuring additional show-cases, as a desideratum of paramount importance.

There is still a *third* way of making the State Museum a far-reaching source of knowledge of the natural history of the State, returning a maximum of utility to the people. I have but little doubt that in the near future it will be found necessary to introduce into the high schools a short and practical course of geology. Then will be the time when not only a complete geological museum will be more appreciated, but most likely the State Museum will be called upon to supply the schools with collections of such specimens as belong in the State, since it would prove altogether too expensive for the schools to procure such collections direct from the various parts of the State.

There is now in the basement of this building many tons of matter which is, so to say, in chaos and in its present state of no use to the public. Other collections filling 576 drawers in the museum are in but little better condition. While some of this material may prove of value to the permanent collection in the museum, most of it consists of duplicates which might be utilized, in the way above mentioned, for school collections. Thereby the further advantage would be gained that the now over-crowded drawers would be available for a better arrangement of the permanent collection.

I would also direct the attention of the Board to the fact that a most valuable collection of books and fossils is offered for sale by the heirs of the late Prof. Worthen. The acquisition of this collection for the State would be of immense advantage. Not only does it contain the greater part of those very specimens which served the authors of the geological reports of the State as "types" in describing and drawing figures of new species, but its general collection of Illinois fossils exceeds that in the State Museum both in number and perfection of its specimens. While all the "types" and the most perfect of the other specimens would be of immeasurable importance to the State

Museum, the remainder would be a most valuable addition to the collection of duplicates for distribution among the schools of the State.

The State Museum has, during the past year, been kept open to the public every week-day from 9 to 12 o'clock A. M., and from 1 to 5 o'clock P. M. The attendance has been very large. Frequent excursions from various parts of the State brought great crowds of people to the museum throughout the summer and fall of last year and the lively interest manifested by the numerous visitors has been highly encouraging.

My work since the commencement of my appointment—on the 9th of June last—has been divided between my writing desk, where I have had a considerable correspondence to attend to, the museum, and a few trips to the northern counties of the State, mainly with the view of increasing our collections of fossils of these regions. Numerous letters of inquiries have been received and answered, although in many instances I have been compelled to answer, that available documents do not furnish the information asked for, information which could only be obtained by new investigations at the place, and for such work I had neither the requisite appropriation nor have I considered it consistent with my duties as Curator to spend any considerable time in assisting individuals while so much important work remains undone in the State Museum.

Many samples of ores and rocks have been sent to me for determination. Finding no equipment here for such work I have bought a microscope and the most indispensable laboratory outfit and thereby been able to accommodate some applicants. Several parties have sent in specimens of fossils for identification. Such requests I have always attended to, and in many cases the applicants have been pleased to favor the museum with specimens of value.

I have for the present a lot of 2770 pounds of minerals and fossils, etc., from the State Normal Institution at Normal, and will determine the same during the spring, the agreement being that all duplicates shall be distributed to schools in the State, the incidental expenses, such as transportation, being paid by the said institution.

When the museum was moved from the third floor to its present location, it was done, I am told; partly during Prof. Worthen's absence, by a man who had no idea of the mischief he was doing in mixing up specimens and labels. They were never completely re-arranged by Prof. Worthen, and it will be a most delicate and time consuming task to do this, so as to avoid mistakes. I have commenced such work with the collection of recent shells, which are now being mounted on wooden tablets purchased for that purpose from the work-shops of the State University at Champaign.

The unclassified collection stored in alcohol and never before displayed has been partly arranged in glass jars and classified. By far the greater part, however, remains untouched for want of suitable glass jars, the purchase of which would require \$100.00, a sum far exceeding the balance on hand of the year's appropriation for the museum.

The eminent paleontologist, E. O. Ulrich, author of a valuable memoir on the fossil Bryozoa of Illinois, which will occupy the larger part of the eighth volume of reports of the geological survey of this State, offered the museum a set of 200 slides of thin sections of such fossils, prepared for the microscope, at the very moderate price of \$70.00. These sections being identical to those which served Mr. Ulrich as types in drawing the 50 plates which illustrate the above named memoir, I have regarded it important to accept this offer so far, that I have bought and paid for one-half of the set, hoping to secure the remaining half in the near future.

The botanical collection has hitherto been stored in a case in the small room adjacent to the State Library. It is not accessible to the public, and the case cannot be moved—being built into the wall of the room. This collection should be kept in the museum, where a suitable case ought to be provided for it.

The collection of larger mammals will soon be ruined by dust and moth and thoughtless visitors, from want of proper protection. Thus, for instance, the magnificent buffalo, perhaps the most splendid specimen of this species in existence in the world, exceedingly valuable and simply impossible to replace, is exposed to complete ruin because not placed in a glass

case. Another such example is the large and fine specimen of the grizzly bear, from which several of its big claws have been broken off and carried away.

The library of the museum has since June last received, as donations from various parties, 131 volumes and 12 pamphlets. These are at present the only books that are indisputably the property of the museum. I have hitherto had the use of the library claimed by the heirs of Prof. Worthen as their property. While most of this library consists of books that will always be needed, it does not contain by far enough for the classification of the specimens in the museum. A liberal annual appropriation for increasing the museum library is indispensable for the proper classification of the collections.

The State University at Champaign had, previous to my appointment as Curator, received from the State Museum a set of its duplicates, representing all the classes of fossil animals and plants from the various geological horizons in the State, with the exception of evertebrates of the coal measures. On application from Prof. Charles W. Rolfe of the geological department of the said University, I have completed this set by sending to the University a collection of 280 species—978 specimens—of evertebrates from the Illinois coal measures.

Besides his other duties the statute of May 25th, 1877, ["An Act to establish a State Historical Library and Natural History Museum"] imposes upon the Curator of the museum, the duty of collecting and preserving books, manuscripts and other matters illustrative of the early history of the State. For very ample reasons this enactment has so far never been observed. For its observation my predecessor would have needed, besides time, something more than two empty hands and a good will.

It has appeared to me as eminently proper that the posthumus volume of Prof. Worthen's reports on the geological survey of Illinois, should be adorned with a well executed portrait of the late Director of this survey, and with biographic sketches of his life and work. With the consent of members of the old Board I invited N. W. Bliss, Esq., of Chicago, and Prof. C. A. White, of the U. S. Geological Survey, Washington, to

honor the memory of the deceased veteran in science by presenting such sketches for the said purpose. Both of them have been pleased to accept the invitation, and I have already received their manuscripts, that of Mr. Bliss mainly sketching Prof. Worthen's private life, while that of Prof. White is exclusively devoted to his scientific work. The appropriation for the printing of Vol. VIII not allowing the introducing of any addition to the original manuscript, I beg to suggest that proper measures be taken for securing the funds necessary for this purpose. I would also suggest that a special edition of the biography, with portrait, be prepared for distribution among the late Professor's relatives and personal friends.

For above reasons I would submit to the Board the desirableness of recommending the following appropriations, besides salaries, viz:

1ST. A sum of \$200 as an addition to the appropriation *for the present year*, mainly for the purchase of glass jars for the collections in alcohol.

2D. A sum of \$1000 *annually* for the incidental expenses of the museum and its library.

3D. A sum of \$1000 *annually* for publishing bulletins on subjects relating to the geology of the State, and to the collections in the State Museum.

4TH. A sum of \$1500 for the purchase of additional show cases; and

5TH. An addition to the appropriation for the publication of the eighth volume of geological reports, so as to cover the expenses for the portrait and biography of the late Professor Worthen, including an extra edition of 200 copies of this biography.

I would also further submit to the Board to consider what should be done:

1ST. With regard to the Historical library, and

2D. With regard to the Worthen collection.

Yours respectfully,

JOSUA LINDAHL,

CURATOR.

January 26th, 1889.

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