

Illinois State University

ISU ReD: Research and eData

Proceedings of the Board of Education of the
State of Illinois

Dr. Jo Ann Rayfield Archives

1878

Proceedings of the Board of Education of the State of Illinois, 1878

Illinois State Board of Education

Follow this and additional works at: <https://ir.library.illinoisstate.edu/univpubs>



Part of the [Higher Education Commons](#)

Recommended Citation

Illinois State Board of Education, "Proceedings of the Board of Education of the State of Illinois, 1878" (1878). *Proceedings of the Board of Education of the State of Illinois*. 22.

<https://ir.library.illinoisstate.edu/univpubs/22>

This Article is brought to you for free and open access by the Dr. Jo Ann Rayfield Archives at ISU ReD: Research and eData. It has been accepted for inclusion in Proceedings of the Board of Education of the State of Illinois by an authorized administrator of ISU ReD: Research and eData. For more information, please contact ISURed@ilstu.edu.

PROCEEDINGS

OF THE

BOARD OF EDUCATION

OF THE

STATE OF ILLINOIS.

ANNUAL MEETING:

HELD AT NORMAL, JUNE 19th, 1878.

SPRINGFIELD:
STATE REGISTER PRINTING HOUSE.

1878.

STATE BOARD OF EDUCATION.

NAME.	EXPIRATION OF TERM.	RESIDENCE.
HON. WM. H. GREEN.....	1879.....	Cairo
THOMAS R. LEAL.....	1879.....	Urbana.
E. A. GASTMAN.....	1879.....	Decatur.
JOSEPH CARTER.....	1879.....	Normal.
HON. MICHAEL DONAHUE.....	1879.....	Clinton.
HON. S. W. MOULTON.....	1881.....	Shelbyville:
HON. R. S. CANBY.....	1881.....	Olney.
H. H. HILL.....	1881.....	506 Mansfield av. Chicago
ISAAC LESEM.....	1881.....	Quincy.
H. L. BOLTWOOD.....	1881.....	Princeton.
HON. J. D. CATON.....	1883.....	Chicago.
B. G. ROOTS.....	1883.....	Tamaroa.
E. L. WELLS.....	1883.....	Oregon.
HON. J. C. KNICKERBOCKER.....	1883.....	160 La Salle St. Chicago.
S. M. ETTER, ex-officio.....		Springfield.

OFFICERS OF THE BOARD.

WM. H. GREEN.....	President
S. M. ETTER.....	Secretary
THOS. F. MITCHELL.....	Treasurer

STANDING COMMITTEES.

- Theory and Art of Teaching and Mental Science*—Moulton, Gastman, Hill.
Text Books and Course of Instruction—Etter, Boltwood, Knickerbocker.
Language, Including Reading and Elocution—Leal, Lesem, Donahue.
Buildings and Grounds—Carter, Caton, Etter, Moulton, Lesem.
Natural Science and Mathematics—Caton, Boltwood, Hill.
Auditing and Finance—Knickerbocker, Carter, Leal.
Teachers and Salaries—Roots, Wells, Carter.
Training School—Gastman, Wells, Etter.
Rules and Regulations—Donahue, Moulton, Hill.
-

ORDER OF BUSINESS.

1. Reading, Amending and Adopting Minutes.
2. Election of Officers.
3. Report of President of the Normal.
4. Treasurer's Report.
5. Reports of Standing Committees.
6. Reports of Special Committees.
7. Communications.
8. Motions and Resolutions.
9. Unfinished Business.
10. General Business.

STATE BOARD OF EDUCATION.

PROCEEDINGS ANNUAL MEETING,

HELD JUNE 19, 1878.

NORMAL UNIVERSITY, }
NORMAL, ILLINOIS, JUNE 19, 1878. }

THE BOARD OF EDUCATION OF THE STATE OF ILLINOIS met at their rooms, in the University building, on Wednesday, June 19, 1878, at 10 o'clock A. M., and was called to order by the President, HON. WM. H. GREEN.

MEMBERS PRESENT.—Messrs. Wm. H. Green, J. D. Caton, S. W. Moulton, Michael Donahue, E. A. Gastman, J. C. Knickerbocker, S. M. Etter, Jos. Carter, B. G. Roots and H. L. Boltwood.

On motion, the minutes of the proceedings of the semi-annual meeting of the Board, held December 12, 1877, were approved.

E. C. Hewett, President of the University, by vote of the Board, then read his annual report, which is as follows:

To the Honorable Board of Education of the State of Illinois:

GENTLEMEN: The attendance in the several departments of the Normal University for the two terms since your last meeting, is shown by the following tables:

NORMAL DEPARTMENT.

Winter Term—

Ladies.....	200
Gentlemen.....	104—304

Spring Term—

Ladies.....	146
Gentlemen.....	112—258

HIGH SCHOOL.

Winter Term—

Ladies.....	22
Gentlemen.....	32— 54

Spring Term—

Ladies.....	20
Gentlemen.....	24— 44

GRAMMAR SCHOOL.

Winter Term—

Girls.....	32
Boys.....	42— 74

Spring Term—

Girls.....	25
Boys.....	23— 48

PRIMARY SCHOOL.

Winter Term—

Girls.....	16
Boys.....	11— 27

Spring Term—

Girls.....	13
Boys.....	6— 19

Total enrollment in all departments:

Winter Term—

Females.....	270
Males.....	189—459

Spring Term—

Females.....	204
Males.....	165—369

This shows that our total number for the winter term is almost exactly the same as it was for the corresponding term of last year. But there has been a smaller attendance during the last term than there was in the spring term of last year. This is true of all the departments except the Grammar School.

Nearly all the students who were present in the Normal Department during the fall term returned for the winter session. But in the spring term a very large number of the ladies left us, to teach.

REPRESENTATION.

During the winter term fifty-nine counties of our State, and eight States besides our own, were represented in the Normal Department, as will appear from the following table:

Bond.....	1	Mason.....	1
Boone.....	4	Morgan.....	8
Brown.....	5	Moultrie.....	1
Bureau.....	1	Ogle.....	5
Carroll.....	1	Peoria.....	3
Cass.....	8	Perry.....	2
Champaign.....	7	Piatt.....	9
Christian.....	3	Pike.....	2
Cook.....	3	Putnam.....	5
Coles.....	1	Richland.....	1
Cumberland.....	3	Rock Island.....	3
De Kalb.....	2	St. Clair.....	1
Douglas.....	2	Schuyler.....	1
Efingham.....	2	Shelby.....	7
Fayette.....	1	Stephenson.....	3
Ford.....	5	Tazewell.....	15
Fulton.....	3	Vermilion.....	1
Greene.....	1	Wabash.....	1
Grundy.....	2	Warren.....	5
Henry.....	2	Washington.....	1
Iroquois.....	2	White.....	1
Jo Diviess.....	5	Whiteside.....	5
Kane.....	1	Will.....	8
Kankakee.....	2	Winnebago.....	6
Knox.....	3	Woodford.....	5
La Salle.....	6	Colorado.....	1
Lee.....	6	Iowa.....	2
Livingston.....	13	Kansas.....	1
Logan.....	7	Michigan.....	1
McHenry.....	1	Ohio.....	3
McLean.....	67	Missouri.....	1
Macon.....	8	Nebraska.....	1
Macoupin.....	3	Pennsylvania.....	2
Madison.....	11		

In the spring term, fifty-six counties and eight States were represented, is shown below:

Adams	1	Ford	2
Bond	1	Grundy	1
Boone	3	Hancock	1
Brown	2	Henry	3
Bureau	1	Iroquois	3
Carroll	3	Jo Daviess	5
Cass	4	Kane	2
Champaign	7	Kankakee	2
Christian	3	Knox	3
Clark	2	La Salle	5
Cook	2	Lee	4
Cumberland	2	Livingston	11
De Kalb	1	Logan	4
De Witt	3	McLean	58
Douglas	1	Macon	4
Effingham	4	Macoupin	2
Fayette	3	Madison	7
Marion	3	Stephenson	3
Mason	1	Tazewell	14
Marshall	1	Warren	4
Morgan	5	Washington	1
Ogle	6	Whiteside	4
Peoria	4	Will	3
Perry	1	Winnebago	4
Piatt	4	Woodford	10
Pike	4	Conn.	1
Richland	1	Iowa	3
Rock Island	4	Kansas	2
St. Clair	2	Michigan	1
Sangamon	2	Minnesota	1
Shelby	5	Nebraska	1
		Ohio	2
		Penn.	1

APPLICANTS.

Seventy-two candidates applied for admission during the winter term; of these, thirty-five were ladies, and thirty-seven were gentlemen. We rejected, on examination, eight ladies and eleven gentlemen. Three of the ladies who were admitted left before they had been with us four weeks, consequently their names do not appear on our roll. The fifty who were enrolled represented twenty-two counties, and one state, as is shown below:

Effingham	1	Pike.....	1
Ford	3	Putnam.....	3
Grundy.....	1	Richland.....	1
JoDaviss.....	1	Stephenson.....	1
Iroquois	1	Tazewell.....	3
Knox	1	Vermilion.....	1
Lee.....	1	Whiteside	1
McLean	13	Will	3
Macoupin.....	2	Winnebago	1
Madison.....	2	Woodford.....	2
Morgan.....	2	Iowa.....	1
Piatt.....	4		

The average age of this class was twenty and one-half years.

Fifty candidates presented themselves during the spring term; of these, seventeen were ladies, and thirty-three gentlemen. We rejected three ladies and five gentlemen. The forty-two whom we received represented twenty-two counties, and three states, as is shown below:

Adams.....	1	Marshall.....	1
Champaign	3	Morgan.....	2
Clark.....	2	Ogle.....	1
DeWitt	2	Peoria.....	1
Effingham	2	Pike.....	1
Henry	1	Rock Island.....	1
JoDaviss	1	St. Clair.....	1
LaSalle	1	Tazewell.....	3
Livingston	1	Woodford	3
McLean	6	Iowa.....	1
Macon.....	1	Kansas.....	1
Madison	1	Penn.....	1
Marion	3		

GENERAL PROGRESS.

It is sometimes said that a time of general peace and prosperity furnishes few materials for history. If this be true, there is perhaps a good reason why this report may be very short. For the last two terms have been filled with earnest faithful work; but absolutely nothing of an exciting or troublesome character has taken place, so far as I know. There has been no necessity for a single case of discipline worthy to be called serious; nor have we met with any interruption or misfortune worth mention.

The health of our pupils has been remarkably good, and they have pursued their work earnestly, faithfully, in a docile spirit, and on the whole, with good success. There has been but very little loss of time on the part of any teacher, from ill health, or from any other cause. All have worked faithfully and harmoniously.

Mr. Seymour, the only teacher of whom I have not spoken in former reports, has taken hold of his work with an earnestness, skill, tact and success, that have won the respect and good will of his pupils, and have *fully* met my expectations in all respects.

It seems to me that our work was never so well adjusted, in all its parts, as it is now; and I think we may confidently look for better results from term to term. We do not satisfy all our demands in everything; but we believe we are doing very well, and that we are in a good condition to take steps forward as we shall see the way clear to take them.

There has been no special change in our professional work; but I think the pupils are taking to it more kindly, and are deriving greater benefit from it, than at any previous time in our history.

Prof. Forbes will inform you in regard to his work in the Laboratory. But, of one thing I am fully persuaded; and that is that we are now offering better facilities for the study of Natural Science here than can be found any where else in the west, if indeed they can be found any where in the country. It seems desirable that these advantages should be more fully understood by the Community than they are.

FINANCES.

You will see from Mr. Carter's report that our finances seem to be in a very healthy condition. We are likely to close the year with a balance of about seven hundred dollars on hand. One year ago, you appropriated five hundred dollars to increase our library. I had drawn three hundred of this before your last meeting, all of which has now been spent for books, except three or four dollars. Our balance on hand was so small last December, that I have not called for the other two hundred dollars; but I shall be ready to do so, very soon. Our library at present, is serving a most excellent purpose, and its usefulness can be largely increased.

CANDIDATES FOR GRADUATION.

The faculty present, as candidates for graduation at this time, twenty-five persons; twelve young women and thirteen young men. Of this number, four are from the High School. I think I may truly say, that, although some of our former classes have exceeded this in number, no one has ever surpassed it in general ability, or in faithful preparation.

The names and residences of the candidates are as follows:

Osci J. Bainum.....	Richland	County.
Mary M. Baird	McLean	"
John T. Bowles	Logan	"
Oliver P. Burger.....	Woodford	"
Gilbert A. Burgess	Piatt	"
Arthur C. Butler	Morgan	"
Evangeline Caudy.....	Logan	"
Jessie A. Dexter.....	Lee	"
Andrew W. Elder.....	Cass	"
Eugenia Faulkner.....	Knox	"
Rachel M. Fell.....	McLean	"
Flora M. Fuller.....	McLean	"
Willis C. Glidden.....	DeKalb	"
Dorus R. Hatch.....	Pike	"
Charles G. Laybourn.....	Ohio	
Sarah C. Martin.....	McLean	County.
Theodore W. Peers	Madison	"
Ida L. Philbrick.....	Boone	"
Frances Preston.....	Lee	"
Florence A. Richardson.....	McLean	"
Edwin H. Rishel.....	Stephenson	"
William N. Spencer.....	Piatt	"
Annie I. Sudduth.....	McLean	"
George I. Talbot	LaSalle	"
Helen L. Wyckoff.....	Ford	"

DATA CONCERNING THE SCHOOL.

We have done considerable during the past year, in collecting facts concerning the former graduates and pupils of the school. In the first thirteen classes, 201 persons graduated; of that number, only two failed to teach; and the average teaching of whole number is more than six years. Of those who have graduated since 1873, fourteen have not yet taught; however, several of these will teach the coming year, two have paid their tuition, and one has been an invalid since graduating. *Sixty per cent of all our graduates have taught during the last year.*

It appears, from actual information received, that nine hundred and sixty of our students have been teaching since last October. We think we shall be prepared to make an answer when it is charged that the pupils of the Normal School do not teach.

A VISIT.

Last February, I spent three weeks in visiting among the Normal Schools of the country. I visited Ypsilanti, Toronto, Oswego, Albany, Trenton, Millersville and Terre Haute. On comparing our work with what I saw in these schools, I am satisfied that we have no reason to feel ashamed of what we are doing here. I saw many things to commend in the schools I visited; in some points, I thought some of them were surpassing us. But, on the whole, I believe the Illinois Normal University is doing as good work as any of them.

All of which is respectfully submitted,

EDWIN C. HEWETT, *President.*

THE ILLINOIS STATE LABORATORY OF NATURAL HISTORY.

Prof. S. A. Forbes, Curator of the Laboratory, by vote of the Board, read his annual report, as follows:

To the State Board of Education:

This is an institution whose chief objects are the prosecution and aid of original work on the natural history of the State, (preference being given to subjects having special educational or economical value,) the publication of the results of such work for the information of the people, the training and instruction of teachers of botany and zoology for the public schools, and the supply of the necessary scientific material to these schools, to the State Museum, and to the State educational institutions. It affords a place to which any specialist or scientific student may come, with the assurance that he will find everything necessary for special study or original work on the natural history of Illinois, to which any teacher may come for preparation to teach these subjects intelligently, and upon which the officers of any school may draw for material to illustrate the scientific work of their school.

Its operations are guided by the conviction that the spread of the knowledge and discipline of science among the people is essential to their highest prosperity; that this is a matter of public rather than of personal concern, and that it must be provided for by public rather than by private measures.

To encourage the spontaneous and gratuitous labors of our scientific men, to assist them at least to the extent of supplying them with such facilities for work as are beyond the reach of individuals, and to furnish them a means of adding the results of their labors to the common stock of human knowledge, is obviously sound public policy. Without this class of workers, devoted to science for its own sake, no solid and valuable progress in science is possible.

From them comes the initiative, the incitement. They are the root of the tree by which the raw elements of the natural world have been in all ages drawn together and made ready for the nourishment of the organism.

It is also of great importance to the public welfare that the methods of work and habits of thought by which the achievements of modern science have been made, should be brought to bear as far as possible upon the daily life of all. For this, trained and intelligent teachers of science are necessary, able to comprehend the work of specialists, and to assimilate and adapt it to the needs of the community at large,—able also to translate the spirit and methods of science into the work of the school, and through the school into the pursuits of business and labor.

But a practical knowledge of nature cannot be imparted by books or by word of mouth alone. The distinctive discipline of science can only be got by the immediate exercise of the mind upon objects and upon ideas directly derived from objects. Materials for study, and named cabinets as the standards of reference, are the *sine qua non* of work worth doing. To incite and reward natural history work, nothing has been found more effective than *skeleton cabinets* of representative species, which can afterwards be filled up by the collections of teachers and pupils. The cost of these is slight, the value very great. An easily accessible medium of mutual exchanges,—a center of authority to which difficult questions can be referred for solution, are also indispensable to success.

The pressing needs of these three classes, specialists in science, the teachers and the pupils of the public schools, it is the principal function of the State Laboratory to supply.

It is also evident that the large collections needed by the State Museum, and in the work of the great State educational institutions, can be made more rapidly and much more economically by one thoroughly equipped central laboratory than by the separate institutions themselves, since one set of apparatus, materials and men can thus do the work which would otherwise require several. It is not intended to take from those institutions any work of special educational value, but to do for them in the least expensive way what each cannot do separately without considerable special outlay.

HISTORY.

The institution had its origin in the transfer to the State of the museum of the Illinois State Natural History Society, made in 1871.

This museum had been established at Normal, in rooms of the Normal University offered to the society by the State Board of Education, and it was therefore directed that the transfer be made to this board, "for the use and benefit of the State." The title of the institution was changed to "The Illinois Museum of Natural History," and its purposes were declared by a resolution of the Board to be "the prosecution of a natural history survey of the State, the encouragement and aid of original research and the diffusion of scientific knowledge and habits of thought among the people."

The rooms being furnished as a museum, full of exhibition cases crowded with material, it was impossible to provide properly for work even by the curators of the collections, and much less by specialists pursuing original investigations or students desiring a general knowledge of biology.

The embarrassments arising from want of room and other accommodations sufficient to provide at once for general laboratory work and study, and for the public exhibition of natural history material finally became so great as virtually to put a stop to further progress in either direction. It was consequently proposed to establish in rooms of ample size in the new State house at Springfield, a general exhibit of the natural history of the State in connection with the collections of the State Geological Survey, leaving to the institution at Normal the work of a biological laboratory, and an act was passed by the last General Assembly giving effect to this plan. By sections 8 and 9 of the act it was directed that the Illinois Museum of Natural History at Normal be converted into a State Laboratory of Natural History, at which, under the direction of the curator thereof, the collection, preservation and determination of all zoological and botanical material for said State Museum should be done. It was made a part of the duty of said curator to provide, as soon as possible, a series of specimens illustrating the zoology and botany of the State, to deposit them from time to time in the museum established by the act, and to furnish, as far as practicable, all zoological and botanical material needed by

the State educational institutions for the proper performance of their work. It was also directed that one set of the duplicate zoological and botanical specimens then on hand in the Illinois Museum of Natural History, at Normal, which were not needed to illustrate the natural history work of the State Normal University, should be deposited, as soon as practicable, in the museum established by the act.

At the next meeting of the State Board of Education, directions were given for the necessary refurnishing and reorganization of the rooms and collections, the title of the Museum was changed to the Illinois State Laboratory of Natural History, and sufficient appropriations were made to carry out the directions of the law in a liberal way. About two-thirds of the room was cleared of cases, those remaining were adapted to the systematic arrangement of specimens without reference to their display, and the space vacated was filled with the work tables and large cases of drawers to be hereafter described. Further details of the changes made will be found under their appropriate heads.

LOCATION.

The Laboratory occupies a room 98 feet long by 32 feet wide, on the third floor of the State Normal University, at Normal, Illinois. Fifteen feet of one end of this room is cut off by a half partition for a library and office. An abundance of light is given by sixteen windows, and the room is heated by steam, and thoroughly ventilated.

FURNITURE.

The west side of the room is occupied by wall-cases, the upper part of which contain 596 square feet of shelving, for alcoholic specimens, enclosed behind glass doors; the lower part 432 drawers, giving 750 square feet of surface, one-half dust-tight and provided with glass covers, for insects; the other open, for herbarium specimens.

Opposite these are 10 high alcove cases, one-half of which are left without shelving, for skeletons and mounted groups, while the other half, intended for duplicates, contains 965 square feet of shelving.

In the south half of the middle of the room are three twelve-foot cases, containing 440 drawers, closing dust-tight, affording 1,050 square feet of surface, and locked by fifteen locks. These drawers are of various depths, from one and a half to seven inches, but so constructed as to be entirely interchangeable, any drawer fitting anywhere in the case. Between these cases are five tables for work in botany and conchology.

The remainder of the room is occupied by an aquarium table (with sink and running water) 12 feet by three, two microscope tables, each six feet by three, one low, for work while sitting, the other high, for standing work, and eighteen tables four feet by two, arranged in sets of three, one set each for entomology, alcoholic specimens, plaster casting, taxidermy, osteology and dissecting. The high microscope table contains 48 drawers of different depths, affording 98 square feet of surface. The tables are of various kinds in each set, and each is provided with the tools and materials proper to the work for which it is intended. Small tables (with drawers) for the laboratory microscopes, are placed before the windows. The shelf-room in the laboratory consequently amounts to 1561 square feet, and the drawer-room, exclusive of the work-tables, to 1898 square feet.

The Library contains the usual book-cases and tables with drawers for cards, catalogues, stationery, &c.

At the ends of the room are diagram cases and cupboards for tools and materials. Two closets afford storage room for collecting apparatus, packing-boxes, and the like.

APPARATUS, TOOLS AND EQUIPAGE.

These include a large Smith & Beck's binocular microscope, with four oculars and seven objectives, ranging from a three-inch glass to a one-thirteenth-inch, and six laboratory microscopes, from Verrick, of Paris, with powers from 18 to 880 diameters. The microscopes are provided with all the accessories necessary to first-class work in the preparation, mounting and study of specimens. Besides these are one large and several small aquaria, breeding cages for insects, guns, seines, dredges, towing nets, a wall tent and complete camping equipage, and full collecting apparatus generally, for botanical and zoological field work.

COLLECTIONS.

The botanical collection, thanks to the indefatigable labors of DR. GEORGE VASEY while here, and to his munificent generosity since his transfer to the National Department of Agriculture, and thanks to the like qualities of MR. JOHN WOLF, of Canton, Ill., is unusually rich in Illinois specimens, the collections of named cryptogams being, in the present state of botanical science, especially worthy of notice. The private herbarium of DR. VASEY, containing large numbers of duplicates, has nearly all been given to the institution. The collections of birds, fishes, insects and crustaceans are also very large. The following table will convey a correct general idea of their size and scope:

TABLE OF ILLINOIS SPECIES IN LABORATORY.

CLASSES.	Species occurring in the State.	Illinois species in the collection.
PLANTS:—		
Phænogams.....	1,376	1,367
CRYPTOGAMS:—		
Ferns.....	36	31
Mosses.....	170	110
Liverworts.....	48	41
Lichens.....	217	175
Fungi.....	.....	148
Miscellaneous.....	14	8
ANIMALS:—		
Mammals.....	.....	34
Birds.....	310	279
REPTILES:—		
Turtles.....	13	12
Lizards.....	6	4
Serpents.....	47	26
Amphibians.....	29	8
Fishes.....	159	140
Mollusks.....	.....	176
INSECTS:—		
Mymenoptera.....	.....	175
Lepidoptera.....	.....	360
Diptera.....	.....	100
Coleoptera.....	.....	700
Hemiptera.....	.....	160
Orthoptera.....	.....	50
Neuroptera.....	.....	30
Myriapoda.....	25	17
Arachnida.....	.....	75
RECAPITULATION.		
Phænogams.....	1,367	.....
Cryptogams.....	513	.....
Total plants.....	.....	1,880
Vertebrates.....	513	.....
Invertebrates.....	1,657	.....
Total animals.....	.....	2,170
Grand total of Illinois species.....	.....	4,050

A considerable amount of marine material, nearly all in alcohol, amounting, as nearly as it can be estimated, to 3,000 specimens, a good collection of western birds, mammals and plants, and 1100 species of fossils and minerals, complete the general features of the collection.

For the general student, the following exhibit of the families of animals represented will be of interest:

TABLE OF FAMILIES OF ANIMALS REPRESENTED IN THE LABORATORY COLLECTION.

CLASSES.	Skeletons.	Skins and other dried specimens.	Alcoholic specimens.
Mammals.....	14	23	10
Birds.....	3	48	8
Amphibians.....			8
Reptiles.....			16
Fishes.....	4	7	80
Mollusks.....		26	37
Insects.....		122	45
Myriapods.....			6
Arachnids.....			5
Crustaceans.....		10	41
Worms.....			25
Echinoderms.....			16
Ceolenterates.....			7
Sponges.....		5	2
Total.....	21	304	298

A characteristic of the collections is indicated by the fact that all the material is prepared and arranged for study. Everything is preserved entire in alcohol where this method of preparation will serve. The birds are in the form of skins, in drawers. Nearly all of these specimens are named, labeled, catalogued, arranged and indexed. The catalogues are on cards, and show the position of each specimen in the cases, and give references to specific descriptions in the library.

LIBRARY.

Although the library of natural history is too small to allow of original work in more than two or three classes, it has been carefully selected, volume by volume, with reference to the collections, and answers therefore most of the purposes of the ordinary student.

It contains 475 bound volumes and 345 pamphlets, containing descriptions of about nine-tenths of the genera and species of Illinois plants and animals in the collections.

All the books and papers containing zoological matter are indexed upon cards as one volume, according to the following general plan:

Whenever matter of any value occurs relating to any species or other group of animals, reference to this matter is made upon a card bearing the name of the *family* to which the given group belongs according to certain standard authors. This reference gives, in compact form, a description of the paper, and cites to the work, volume and page on which it is to be found. The cards bearing these family names are then arranged alphabetically, in drawers made to contain them. In special cases the genera of a family are entered similarly on separate cards, but of another color. By the use of these indices everything in the library bearing upon any group of animals can be brought together with readiness and dispatch. This plan of indexing will soon be extended to the botanical literature also.

The most pressing need of the institution at present is a better library, without which many opportunities for work must be unimproved.

PUBLICATIONS OF THE LABORATORY.

In October, 1876, was commenced the publication of a series of papers embodying the results of new work on the natural history of the State. These it was determined to issue in the form of irregular bulletins, to be open to all naturalists working on the local fauna and flora.

The first of these bulletins was issued in December, 1876, and the second in June, 1878. Fourteen papers in all have been published to date, of which the following six were prepared at the Laboratory, and are based upon its collections:

List of Illinois Crustacea, by S. A. Forbes; (mentions, with its appendix, 25 species, of which 12 are described as new, and 2 are redescribed, and gives one plate with 31 figures.) A key to the species of the preceding paper, by S. A. Forbes. A Partial Catalogue of the Fishes of Illinois, by E. W. Nelson, 1876, (156 species, of which 9 are described as new.) A Catalogue of the Fishes of

Illinois, by D. S. Jordan, 1878, (177 species, of which 9 are new.) The Food of Illinois Fishes, by S. A. Forbes, (giving the details of food, determined by examining the stomachs of 149 specimens, belonging to 54 species), and on the Crustacea Eaten by Fishes, by S. A. Forbes (12 species, 6 new to the State). The remaining eight include important papers on Orthoptera and Plant Lice, by Prof. Cyrus Thomas; on Parasitic Fungi, by Prof. T. J. Burrill; on the Mosses, Liverworts and Lichens of Illinois, by John Wolf and Elihu Hall; and on the distinguishing characters of leafless trees (The Tree in Winter), by Dr. F. Brendel. The papers by Dr. Brendel and Prof. Burrill were profusely illustrated.

These bulletins are supplied free to all Illinois naturalists, and to all other applicants from this State. To those outside the State they are sent in exchange for other publications, or for a stated price. They will be continued at such intervals as the activity of our naturalists may determine.

ORIGINAL WORK.

Continuous work is now going forward upon the food of birds, the food of fishes, the copepoda of Illinois, the anatomy of Ophi-saurus, and a list of the lepidoptera of Illinois. Besides the articles published in the bulletins already mentioned, a paper prepared at the Laboratory, on the food of birds, giving the results of the examination of the stomachs of 225 specimens, was printed in the transactions of the State Horticultural Society for 1876.

DISTRIBUTIONS TO SCHOOLS, ETC.

From the duplicates of the collection, and also in part from material bought for the purpose, sets of representative specimens are issued to such public schools as need them in their school work, on condition that assurance is given that the material will be properly cared for. It is also requested that beneficiaries of the Laboratory shall collect from their separate localities such material as may be made useful in subsequent distributions, and shall send this to the Laboratory in exchange for the specimens received.

The material issued consists largely of alcoholic specimens of marine animals, the purpose being to supply to each school needing it, a small cabinet of the most essential animals which cannot be readily obtained otherwise by the school itself. Since January 1 1878, such sets have been sent to the schools of Oak Park, Cook

county; Shelbyville, Shelby county; Macomb, McDonough county; Carrollton, Jersey county, and Kankakee, Kankakee county. The total value of all the material thus supplied to the schools will reach some thousands of dollars.

Larger collections have been sent to the Southern Illinois Normal University, and to the Industrial University at Champaign (the latter paying the first cost of part of the material).

WORK FOR THE STATE MUSEUM.

Beside the supply of the series of duplicates to this institution directed by law, large collections of birds, fishes, reptiles, amphibians, insects, and cryptogamous plants of the State are now being made for this Museum, under the management of the Director of the Laboratory. All zoological and botanical material is sent from the Laboratory to the Museum ready for the shelves of the exhibition cases.

FACILITIES FOR STUDENTS.

The Laboratory is at all times open to students, who, for a small fee for incidentals, will be allowed to enter for special study of such subjects as each may select. Regular courses in general botany and zoology, and in comparative anatomy, histology and microscopy, are prepared for the especial benefit of teachers and of medical students who may wish a more liberal and thorough preparation for their professional studies than the ordinary institutions open to them are prepared to furnish. The satisfactory completion of one of these courses, or its equivalent in other work, will entitle the student to a certificate to that fact.

SUMMER SCHOOLS OF SCIENCE.

Vacation classes are organized each year for systematic field and laboratory work, and have thus far met with good success. They are intended chiefly for teachers and specialists, of which from twenty-five to fifty are convened at each session.

DESIDERATA.

Those disposed to help forward a work so successfully begun and carried so far towards completion, will be interested to know in which direction their assistance can be made to contribute most to the progress of science in this State. The library lacks nearly all standard European works except the Catalogue of Fishes of the

British Museum, and works on crustacea. It also lacks the Journal of the Philadelphia Academy, the Transactions of the American Philosophical Society, the publications of the Boston Society, (except the Boston Journal of Natural History,) the Proceedings of the American Association, and the American Journal of Science and Arts.

The chief gaps in the collections are among mammals, serpents and amphibians, mollusks (in alcohol), diptera, hymenoptera, arachnida, mosses and fungi. Skeletons and skulls of any vertebrates would also be of the greatest value. The distribution of cabinets to schools affords a means of utilizing large numbers of duplicates, even of the commonest species.

On motion of S. W. Moulton, the report of Prof. Forbes was referred to the Committee on Natural Science.

On motion, the report of President Hewett was ordered to be printed with the proceedings of the Board.

The Board having been notified that suit was about to be commenced by E. W. Bakewell, to recover a certain tract of land donated to the State for the use of the Normal University, and on motion of Mr. Etter, the following resolution was unanimously adopted:

Resolved, That the Hon. S. W. Moulton be retained by this Board in the case of Bakewell vs. Board of Education, and that he is hereby authorized to employ such assistance as he may deem necessary to defend the interests of the Board.

The following resolution, read by E. A. Gastman, was unanimously adopted:

Resolved, That the Committee on Teachers and Officers be requested to take into consideration the subject of salaries, and report to the Board at its present meeting any action that they may deem necessary.

The following resolution, read by H. L. Boltwood, was adopted:

Resolved, That in the absence of E. L. Wells, of the Committee on Teachers and Salaries, the President be authorized to appoint a member to fill the vacancy *pro tempore*.

The Chairman, J. C. Knickerbocker, of the Auditing Committee, made the following report:

To the State Board of Education:

We, the undersigned, your Auditing Committee, respectfully report that we have examined bills numbered 1 to 18, inclusive, amounting to \$384.63, and find the same correct. We recommend that orders be drawn for the payment of the several sums named in the bills.

All of which is respectfully submitted.

J. C. KNICKERBOCKER, }
JOSEPH CARTER, } *Committee.*

On motion, the report was accepted, and the Secretary was instructed to draw orders as recommended by the Committee.

The following resolution, offered by Mr. Knickerbocker, was adopted:

Resolved, That the President and Secretary of the Board be, and are hereby authorized to draw orders on the Auditor of Public Accounts for the fifth and sixth quarterly installments of the appropriation for the ordinary expenses of the Normal University at Normal, for the current year; each installment being the one-eighth part of the aggregate amount of the whole of the annual interest on the College and Seminary Fund, together with the one-fourth part of the sum of eighteen thousand, two hundred and five dollars and fifty cents (\$18,205.50), as said installments become due and payable, as provided by sections 1 and 2 of "An act making an appropriation for the ordinary expenses of the Normal University at Normal, and for repairs to the same, and for additions to the library, museum and apparatus thereof," approved May 18, 1877, and that the Treasurer of the Board is hereby authorized to receive and receipt for the same.

To the Board of Education:

Your Auditing Committee beg leave to report that we have examined the report and vouchers of President Hewett for the expenditure of Library Fund voted by the Board, and find the same correct.

J. C. KNICKERBOCKER, }
JOSEPH CARTER, } *Committee.*

STATEMENT.

To cash on hand, as per last report.....\$149.97

CONTRA.

By am't paid, as per vouchers.....\$146.46
Balance on hand..... 3.51

Total.....\$149.97

On motion the report was accepted, and ordered to be placed on file.

Your Auditing Committee would also respectfully beg leave to report that we have examined the vouchers, 1 to 38 inclusive, of President Hewett for the expenditure of the Contingent Fund voted him by the Board, and find that \$250 has been drawn since his last report, and that he has paid out on the several bills \$234.02, leaving a balance in his hands of \$74.21.

We find the report and vouchers correct, and recommend their approval.

J. C. KNICKERBOCKER, }
JOSEPH CARTER, } *Committee.*

June 19, 1878.

STATEMENT.

To balance on hand at last report.....	\$ 58.23
“ amount paid by Treasurer.....	250.00
Total.....	<u>\$308.23</u>

CONTRA.

By amount paid, as per vouchers.....	\$234.02
“ balance on hand June 19.....	74.21
Total.....	<u>\$308.23</u>

On motion the report was approved, and ordered to be placed on file.

On motion the following resolution was adopted:

Resolved, That the sum of \$250 be placed in the hands of the President, as a Contingent Fund, and that the Secretary be authorized to draw an order for the same.

On motion, Board adjourned to meet at 2 o'clock P. M.

Board re-assembled as per adjournment, and was called to order by the President.

Additional members present in the afternoon: Messrs. T. R. Leal and H. H. Hill.

The Hon. Thos. F. Mitchell, Treasurer of the Board, was present, and presented his semi-annual report, which is as follows:

BLOOMINGTON, June 19, 1878.

To the State Board of Education:

GENTLEMEN: I have the honor to herewith submit my semi-annual report as your Treasurer; also the vouchers verifying the statement herein made.

Respectfully yours,

THOS. F. MITCHELL,

Treasurer.

STATEMENT.

Dec. 11, 1877, balance on hand.....	\$2,657 54
Dec. 14, 1877, received from E. C. Hewett, rent for land.....	295 00
Feb. 23, 1878, " " " Tuition.....	200 00
Mar. 13, 1878, " " " ".....	500 00
Mar. 22, 1878, received from E. C. Hewett, Tuition and Books in Model School.....	544 50
Jan. 15, 1878, received from State Treasurer.....	6,174 76
Apr. 3, 1878, " " " ".....	6,174 76
June 1, 1878, " " E. C. Hewett, Tuition.....	300 00
June 17, 1878, " " Jos. Carter, Tuition.....	34 21
June 18, 1878, " " E. C. Hewett, Tuition.....	450 23
Total amount received to date.....	\$17,331 00
Amount paid out as per vouchers herewith submitted.....	\$14,379 83
Balance on hand June 18th, 1878.....	2,951 17
Total.....	\$17,331 00

On motion, the report of the Treasurer was received and referred to the auditing committee.

The following resolution, read by Hon. J. D. Caton, was un-animously adopted, and the Secretary was instructed to send a copy of the same to Dr. Vasey:

WHEREAS, We learn that DR. GEORGE VASEY, Botanist of the National Department of Agriculture, has recently given to the State Laboratory of Natural History nearly the whole of his large private herbarium, for some time stored in this building, consisting of many thousand specimens, and worth at least one thousand dollars,

Resolved, That we do hereby tender to DR. VASEY the warm thanks of this Board for his very generous gift, and

Resolved, That the entire collection of flowering plants and ferns now in the Laboratory shall hereafter be known as the VASEY HERBARIUM, and shall be kept separate under that name.

The following resolution was referred to the Auditing Committee, with instructions to report to this meeting.

Resolved, That there be and hereby is appropriated for the use of the Biological Department the sum of seventeen hundred dollars for the ensuing year.

The following report was read by J. C. Kinckerbocker.

To the Board of Education:

We, the undersigned, your Auditing Committee, beg leave to report that we have carefully examined the Report of the Treasurer with the accompanying Vouchers and find the same correct, and your Committee recommend that said Report be approved and placed on record.

J. C. KNICKERBOCKER, }
T. R. LEAL, } *Auditing Committee.*
JOSEPH CARTER, }

June 19, 1878.

On motion, the report of the Committee was received.

The following report was read by the Chairman, B. G. Roots, of the Committee on Teachers and Salaries.

To the Board of Education:

GENTLEMEN: Your Committee on Teachers and Salaries, to whom was referred the resolution, of E. A. Gastman, would respectfully report that they are unable to agree upon a reduction of salaries, for all the Teachers, but are unanimously in favor of the following changes:

Miss Wakefield's Salary to be \$600, is now \$700; Miss Pennell's Salary to be \$600, is now \$550; Miss Miller's Salary to be \$600, same as now; Principal of the High School to be \$1500, is now \$2000, and to be paid out of the income of the Model School, and as much more as the Tuition shall exceed that sum; but not to exceed \$2000. Principal of the Grammar School \$1100, at present \$1000. All of which is respectfully submitted.

B. G. ROOTS, }
H. L. BOLTWOOD, } *Committee.*
JOS. CARTER. }

The report of the Committee on Teachers and Salaries was adopted, except, so much as relates to the Salary of Principal of the High School, and the Salary of Miss Wakefield.

The following resolution was read and adopted.

Resolved, That the Principal of the High School shall receive a salary of fifteen hundred dollars per annum, to be paid out of the income of the Model Department; provided that when the Tuition of the High School exceeds the sum of \$1500, he shall receive the excess, to an amount not to exceed the Salaries of the Professors of the Normal Department, as shall be fixed hereafter.

The following resolution was read by Mr. Roots, which on motion of Mr. Etter, was referred to the Committee on Teachers and Salaries, with power to appoint.

Resolved, That Fred J. Wells be appointed to take charge of the Book Store of the University, for the ensuing year.

The following resolution was read, and after a long discussion was adopted.

Resolved, That the Salaries of the Officers, Professors and Teachers herein named be fixed at the following sums, for the succeeding year, which is a reduction of ten per cent.

Prest. E. C. Hewett	\$3150
Thos. Metcalf.....	1800
Albert Stetson	1800
John W. Cook.....	1800
Henry McCormick	1800
S. A. Forbes.....	1800
Mrs. M. D. L. Haynie.....	900
Miss A. G. Paddock.....	900
Miss Bandusia Wakefield	630
And that the Salary of Prof. Seymour remain as it is at present.....	1600

On motion of Mr. Carter, it was voted to place the sum of eight hundred dollars in the hands of President Hewett, for the purpose of purchasing fuel for the ensuing year.

The following resolution was read by Mr. Carter, and on motion was adopted.

Resolved, That a sum not exceeding \$150 00 be appropriated for the purpose of painting the roof of the Building, to be expended by the Committee on Buildings and Grounds.

The following report and resolution was read by Judge Caton, as Chairman of the Committee on Natural Science, and on motion was unanimously adopted.

The Committee on Natural Science and Mathematics to whom was referred the report of Prof. Forbes, beg leave to report that they have examined said report, and also the improvements mentioned therein, and express their entire approval thereof, and recommend the following resolution:

Resolved, That the report of Professor Forbes be accepted, and that two thousand copies thereof be printed for distribution.

The following resolution was voted:

Resolved, That a sum not exceeding \$300, be placed in the hands of the Committee on Buildings and Grounds, for the purpose of whitewashing the walls and ceilings.

On motion it was voted to expend, under the direction of Prof. Seymour, the sum of three hundred and fifty dollars, in purchasing philosophical apparatus, and in fitting up the Laboratory.

Judge Caton, Chairman of the Committee on Natural Science, made the following report:

The undersigned, your Committee, have carefully considered the resolution making an appropriation of seventeen hundred dollars, for the use of the Biological Department, which was referred to us, and would respectfully recommend that the sum named be appropriated.

On motion the report was received, and the sum appropriated to be paid to Prof. Forbes in quarterly payments, for the use of the Department.

Bill of Geo. McIntosh, amounting to \$—, was read and referred to the Auditing Committee, with power to settle, if found correct.

On motion, the Committee on Buildings were instructed to build screens around out-houses.

The Auditing Committee reported favorable on bill of Geo. McIntosh for the sum of \$102.04, but asked further time on balance of bill.

On motion the report was accepted, and the amount recommended by the Committee was ordered to be paid—\$102.04.

The Auditing Committee made the following report:

To the Board of Education:

We, the undersigned Auditing Committee, have examined the report of Prof. Forbes. The expenditures, as per vouchers, amounted to the sum of \$1,659.66, and this is greater than the sum he received by \$537.26; and we recommend that this sum be taken out of the appropriation for the next year.

Respectfully submitted,

T. R. LEAL,
JOS. CARTER, } *Committee.*

On motion of Judge Caton, it was voted to print the report of Prof. Forbes in the Proceedings of the Board, and the Secretary was authorized to have printed 2,000 additional copies of the report for distribution.

The following resolution was adopted:

Resolved, That a sum not exceeding \$200 be placed in the hands of the President, for the payment of printing Annual Catalogue for the years 1877-78.

Mr. Carter read the following resolution, which was adopted:

Resolved, That a sum not exceeding \$75.00 be appropriated and placed in the hands of the Secretary for printing the proceedings of this session.

It was voted to pay the Treasurer the sum of \$200 for services rendered the past year.

Mr. Carter reported for the Committee on Buildings and Grounds, that the farm had been leased to H. Augustine & Co., for a term of five years, at a rental of three hundred and fifty dollars per annum, with payments to be as per contract herewith submitted. He also reported that \$155.00 of back rent had been paid by the assignee of F. K. Phoenix.

On motion the report was received, and the Secretary was directed to place the contract on file.

On motion, it was voted that President Hewett be authorized to fix the rates of tuition in the Primary Department of the Model school.

On motion of Mr. Roots, President Hewett and Prof. Burrington were authorized to fix the rates of tuition in the High School: *provided* that such rates shall not be made less than they are at present.

The following resolution was offered by Judge Caton, and on motion was adopted:

Resolved, That the President of the institution report to this Board at its next meeting the average number of pupils of this institution each year, the number of deaths of said pupils in each year, and the number of pupils in each year that have left the institution on account of sickness.

On motion the Board adjourned.

WILLIAM H. GREEN, *President*.

S. M. ETTER. *Secretary*.