

PROCEEDINGS

OF THE

BOARD OF EDUCATION

OF THE

STATE OF ILLINOIS.

SEMI-ANNUAL MEETING,
HELD AT NORMAL, DECEMBER 18, 1878.

SPRINGFIELD:
STATE REGISTER PRINTING HOUSE,
1878.

STATE BOARD OF EDUCATION.

NAME.	EXPIRATION OF TERM.	RESIDENCE.
HON. WM. H. GREEN.....	1869.....	Cairo
THOMAS R. LEAL.....	1879.....	Urbana
E. A. GASTMAN.....	1879.....	Decatur
JOSEPH CARTER.....	1879.....	Peru
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 OF THE SEMI-ANNUAL MEETING

HELD DECEMBER 18, 1878.

NORMAL UNIVERSITY,
NORMAL, ILLINOIS, DEC. 18, 1878. }

The Board of Education of the State of Illinois met in their rooms in the University Building, on Wednesday, the 18th day of December, 1878, at 10 o'clock, and was called to order by the President, Hon. WILLIAM H. GREEN.

MEMBERS PRESENT.—Messrs. Wm. H. Green, T. R. Leal, E. A. Gastman, Jos. Carter, E. L. Wells, B. G. Roots and S. M. Etter.

On motion, the minutes of the meeting held June 19, 1878, as printed, were approved.

On motion of Mr. Etter, Jos. Carter was appointed to notify E. C. Hewett that the Board was in session and ready to receive his report.

REPORT OF PRESIDENT HEWETT.

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

GENTLEMEN: The attendance in the several departments, for the present term, has been as follows:

NORMAL DEPARTMENT.

Ladies	155
Gentlemen	87—242

HIGH SCHOOL.

Ladies	26
Gentlemen	37— 63

GRAMMAR SCHOOL.

Females	40
Males	48— 88

PRIMARY SCHOOL.

Girls	19
Boys	13— 32

Total enrollment:

Females	240
Males	185—425

Our attendance this term is not so great as it often has been at this season of the year; the falling off, however, is almost entirely in the Normal Department. I suppose the "hard times" is the cause for our diminished attendance, and I think I see two reasons why the Normal Department should be most affected by the money pressure. First—The great majority of those who enter this department are persons whose pecuniary circumstances are somewhat straitened; many are decidedly poor, a large number being wholly dependent upon themselves. Secondly—The general reduction of teachers' wages naturally discourages many who would otherwise seek the employment, from an outlay in preparing for a work which promises such poor returns. Every pupil who enters the Normal Department is required to take the pledge declaring

that it is his intention to become a teacher; no offer to pay tuition fees as an exemption is accepted. And, only in very rare cases, is any pupil allowed to depart from the printed course of study—this order of study requires elementary and professional work from the start. I know that these strict requirements diminish our numbers largely. If we would establish a "Commercial Department," a "Classical Department," a "Literary Department," a "Musical Department," etc., allow students to elect their studies, to pass from one study to another without any question as to the work done in the first, and to escape all responsibility for teaching by paying a small fee for tuition, we should adopt the course of many so-called "Normals," and I have no doubt we should be over-run with students. But, I conceive that by so doing we should cease to be a Normal School in any proper sense of the term.

REPRESENTATION.

Fifty nine counties of our own State, and five States besides Illinois, have been represented, as is shown below:

Boone.....	3	Macon.....	4
Brown.....	1	Macoupin.....	1
Bureau.....	1	Madison.....	5
Calhoun.....	1	Marion.....	1
Carroll.....	4	Marshall.....	2
Cass.....	3	Menard.....	1
Champaign.....	8	Montgomery.....	1
Clark.....	2	Morgan.....	6
Clay.....	1	Moultrie.....	1
Coles.....	2	Ogle.....	5
Cook.....	2	Perry.....	1
DeKalb.....	3	Piatt.....	3
DeWitt.....	5	Pike.....	4
DuPage.....	1	Putnam.....	3
Fayette.....	1	Randolph.....	1
Ford.....	2	Rock Island.....	5
Fulton.....	1	Shelby.....	2
Grundy.....	1	St. Clair.....	1
Hancock.....	1	Stark.....	1
Henry.....	2	Stephenson.....	1
Iroquois.....	1	Tazewell.....	13
Jefferson.....	1	Vermillion.....	1
Jersey.....	1	Warren.....	1
Jo Daviess.....	10	Whiteside.....	2
Kankakee.....	3	Will.....	4
Knox.....	1	Winnebago.....	5
Lake.....	1	Woodford.....	14
LaSalle.....	8	Connecticut.....	1
Livingston.....	4	Ohio.....	1
Logan.....	3	Iowa.....	3
McDonough.....	1	Minnesota.....	1
McLean.....	66	Nebraska.....	2

THE NEW CLASS.

During this term, one hundred and thirty-four (134) persons have presented themselves as candidates for admission to the Normal Department. Twenty-one of the number were rejected on examination, most of whom entered the Preparatory Class in the Grammar Department. The number and sex of the candidates are shown in the following table:

	Ladies.	Gentlemen.	Total
Applied.....	86	48	134
Received.....	75	38	113
Rejected.....	11	10	21

Six of those received left before the end of four weeks; hence, they are not counted in our enrollment. Those received represent forty-five counties of our own State, and four States other than Illinois, as is shown below:

Adams.....	1	Madison.....	2
Boone.....	1	Marion.....	1
Carroll.....	1	Marshall.....	1
Cass.....	3	Mercer.....	2
Champaign.....	7	Montgomery.....	1
Clay.....	1	Morgan.....	5
Coles.....	2	Ogle.....	1
Cook.....	1	Perry.....	1
DeKalb.....	1	Piatt.....	1
DeWitt.....	5	Pike.....	2
Douglas.....	1	Putnam.....	2
Fayette.....	1	Schuyler.....	1
Hancock.....	1	Stark.....	1
Iroquois.....	1	Stephenson.....	1
Jefferson.....	1	Tazewell.....	3
Jo Daviess.....	6	Vermilion.....	1
Kankakee.....	1	Warren.....	1
Knox.....	1	Whiteside.....	2
Lake.....	1	Winnebago.....	1
LaSalle.....	4	Woodford.....	9
Livingston.....	2	Iowa.....	1
Logan.....	2	Missouri.....	1
McDonough.....	1	Nebraska.....	1
McLean.....	22	Ohio.....	1
Macon.....	2		

DO OUR PUPILS TEACH?

We have collected quite a body of statistics bearing upon this vexed question. The total number of graduates from the Normal Department is 321; the class of 1863 was the smallest, containing but 7 members; the class of 1872 was the largest, numbering 34; the average number in each graduating class has been slightly below 17.

Three hundred and two of our graduates are known to have taught since graduating; we have no knowledge in respect to four. Two had engaged schools, but died before the term began; another, who had engaged a school, fell sick and has not recovered. Some have paid their tuition, having decided to take up other business. Several who have not taught since graduating, taught from one to three years during their course. Seventeen of our graduates are not now living. One hundred and sixty-five (165), more than half of the whole number, are known to have taught during the past year.

Two hundred persons graduated in the first thirteen classes; these have taught an average of $6\frac{1}{4}$ years each; eighty-nine of them were teaching during the past year; and forty-eight have taught all the time since graduating. Thirty-eight persons have graduated from the High School Department. Most of these have taught; eleven of them are known to have taught during the past year. Many of our graduates, and some who have not completed the full course of study, have filled, and are now filling, places of great responsibility and influence. Among them are professors in Colleges and Normal Schools, superintendents of counties and cities, conductors of Institutes, etc.

But the efficient workers from the Normal University are not to be found among its graduates alone, nor in the office of professor or superintendent. In the country district, in the primary school, and in other humble but useful positions, are found earnest and successful workers who gained their inspiration and training here. Not all are truly successful, but the great majority are.

It is impossible to obtain complete statistics in respect to our pupils, but we have the name and post-office address of nine hundred and thirty (930) of our students who have taught since October 1, 1877. Eighty-six only of these were working outside the State; and

we believe that fully one thousand are now teaching in the State of Illinois. In view of all these facts, it does seem as though one who asserts that our students do not teach has but one way to escape the charge of willful falsehood; and that is, by pleading profound ignorance in respect to the very thing about which he makes the assertion.

SOME FIGURES.

I have been doing a little ciphering. My data are these, and they are drawn from official sources: The State spent \$7,802,525.24 for school purposes in 1877; the taxable property of the State is \$857,235,762; the tax levy for State purposes is "33 cents on \$100;" the annual appropriation to this Institution for the last four years has been \$24,700, but more than one-fourth of this was interest on borrowed funds at the rate of six per cent., and was in no sense a gift from the State. However, in my calculations, I have taken the appropriation at its full amount of \$24,700.

We know that nearly or quite 1,000 students from the Normal have been teaching in Illinois during the last fifteen months. But let us take the number at 750; this is more than one-thirtieth of all the teachers in the State. Of course, the only purpose for which the outlay for school purposes was made was to secure good instruction to the children of the State. One-thirtieth of the sum spent is \$260,084.13. Now, if the students from the Normal School teach only one-tenth better because of their training here, the annual gain to the State is more than \$26,000. Nor does this take into account the indirect value which a good school has for the schools and teachers of the neighborhood. Is it reasonable, then, to say that the Normal School pays for the money the State spends upon it?

Again, how great a burden does this Institution impose on the tax-payers of the State? One per cent. of the levy indicated above will give more than the entire sum appropriated to the Normal School. Or, to put it another way, the man who pays taxes on \$10,000 contributes about 30 cents a year to our Institution.

Take another view. What ratio does the amount of our appropriation bear to the taxable property of the State? A little calculation will show that it is less than 3-1000ths of a cent for every dollar. In other words, one cent upon every dollar of the taxable

property of the State will support the Normal University about 350 years. Again, the total expense of this Institution is less than one cent for each inhabitant of the State. Looking at these figures, let me ask how much the burden of taxation would be relieved were these appropriations to cease? And, looking at the work done here and the importance of that work, what shall we say of the man who seeks political capital by attempting to abolish or to cripple the Normal University? By what name ought we to call such a man?

PERMANENCE OF THE INSTITUTION.

In his Seventh Biennial Report, p. 149, Dr. Bateman says of this Institution: "It has settled down into the hearts of the people by a loving adoption, as a part of the inviolable heritage of themselves and their children forever. It has grown so gradually and yet so tenaciously into the educational frame-work of the State, that it could not now be destroyed without rending asunder, or convulsing the entire fabric of which it is a part."

Again, in his Ninth Biennial report, p. 157, he says: "The School, after encountering the usual vicissitudes incident to new and partly experimental enterprises, now rests firmly and quietly upon assured foundations, looking backward over an eventful but ever brightening history of over fifteen years, and forward to a long and still more useful future."

The fifteen prosperous years of which Dr. Bateman speaks have now become twenty-one. But, from the opposition we have encountered in successive General Assemblies, there has come to be, in some quarters, a question whether the future of the Institution is as quiet and assured as he seemed to think. Ought not this question to be set at rest? The Normal University is ever open to inspection by any one; its finances are so managed that not a cent is wasted or lost; its students are found in the school-rooms of the State, in all its length and breadth; laboriously, earnestly and successfully, it is pursuing the one aim for which it was created. And is it not fair to expect that in future its necessary expenses will be provided for, without subjecting its friends to the trouble of presenting for the twentieth time the same arguments, and answering objections that have been successfully met, again and again? It would seem, at least until some new discovery is made, that there ought to be no question as to the permanence of the Institution.

WORK OF EUROPEAN NORMAL SCHOOLS.

I have received from the Bureau of Education a circular giving an account of the Normal Schools in the German States. Some of the facts given are so interesting, as bearing upon some general questions of pedagogic training, that I beg to bring them to your attention. Normal Schools, or Teachers' Seminaries, have had an existence in Germany for one hundred and forty years. No person is allowed to teach in a public school who has not a diploma from one of them. There are ten such schools in Prussia. The course of study covers three years, and embraces much the same branches as our own course. During the first year, only two hours a week are given to professional work, while five hours are given to the study of the German language, and three to arithmetic. During the whole course, the proportion of professional to other studies is not greater than it is with us. This fact is very significant, in view of the claim often urged that our Normal Schools ought to do nothing but professional work; and it is quite remarkable, when we remember how much better the German schools prepare candidates to enter the Normal Schools than most of the schools do in our own country.

FINANCES AND ESTIMATES.

It will be seen from our financial report that, notwithstanding the reduced expense for salaries, our surplus is scarcely an appreciable quantity. I estimate that we shall need from the State \$24,500 per annum for the next two years, as will appear from the following table:

Salaries of teachers.....	\$19,980
Salary of janitor.....	480
Salary of engineer.....	500
Fuel.....	1,000
Incidental repairs.....	1,000
Increase of library.....	500
Apparatus, chemicals, etc.....	1,040
Total.....	\$24,500

It will be seen that even this makes no provision for the expenses of the Board, for postage and stationery, for book-keeping, for advertising, nor for emergencies such as may very possibly

arise. To be sure, I have counted among the salaries those of the teachers of the Model School. It seems to me, however, that no salaries except those of Professors Burrington and DeGarmo should be charged to the account of the Model School. Professor Metcalf and Miss Paddock are working for the training of the pupil teachers. Even Miss Paddock's work with the primary children has this object in view; and, by our present arrangement, no income arises from the instruction of those children.

Our school grounds would now present a very fine appearance, if they were properly cared for. They would attract strangers, and delight and instruct our pupils. If we could spend about \$800 or \$1,000 a year, for walks, drives, flower-beds, etc., we should have one of the finest and most attractive parks to be found anywhere in the West.

THE WORK OF THIS TERM

Has not been any less quiet, earnest, harmonious and successful than that of the terms which have preceded this. For teachers and pupils, I have no occasion to use language less commendatory than I have used before.

Considerable increase has been made in our apparatus, and in the facilities for studying Chemistry, Natural Philosophy and other branches of Natural Science. An inspection of our Laboratory and Lecture-room will show how much has been gained, and will also show that everything is in good working order. The addition of wash-basins, gas-escape and other permanent fixtures, together with the new apparatus, makes these rooms nearly as complete as could be desired. During the present term, the class in Chemistry under Prof. Seymour, and the class in Natural Philosophy under Prof. Cook, have spent much time in the Laboratory, performing the practical experiments belonging to their studies. This work has had a wonderful fascination, both for professors and students; and I am quite sure that the pupils have not only acquired a clearer and more complete knowledge of the topics studied, but they have gained the power to manipulate apparatus and to teach these and other kindred subjects experimentally in their schools. They have learned to study and to teach in ways that are harmonious with the modern methods of scientific investigation. There has been equal progress in the Zoological Laboratory, of which the Director,

Prof. Forbes, will inform you in his report. I am sure that we can now offer first-class facilities for the study of all the branches of Natural Science. I do not think these facilities are surpassed in any western Institution, if they are not equal to any in the whole country.

Our Library has not been enlarged to any extent during this term, for want of funds; but I believe its value to the pupils, in their investigations, is becoming more and more apparent. I hope we may be able to spend some money for new books, during the next half-year.

We have been obliged to make quite extensive repairs on the boiler that furnishes hot air to our rooms. It began to leak a few weeks ago, and we were obliged to take it to pieces for repairs. The condition of the tubes was found to be such that it did not seem to be safe to put them back again. After consulting Mr. Carter, I could see no course open but to order new tubes put in. This boiler gives us more trouble than the other, which has been in use more than ten years longer. This seems to me to indicate that it was, from the first, of an inferior character.

TRAINING WORK.

I have not asked the Principal of the Training Department to make any special report at this time. But I feel satisfied that the work of that department is gaining in vigor, system and efficiency, as I am sure it is gaining in the estimation of our most intelligent pupils. Many former students who took the work in "observation," under Miss Paddock, and have since gone out to teach, have given unequivocal testimony to the help which that work has given them. The general course in all departments of the professional work remains as heretofore.

HEALTH OF OUR PUPILS.

I am not certain that I understand precisely what the resolution adopted at your last meeting requires me to report under this head. If the items mentioned in your published "Proceedings," are asked for the previous years of the school, I can only say that we have no data now from which those items could be made up. We can preserve such data for the future, if it is desirable that we should do so.

The enrollment of the Normal Department for this term is 242. The whole number of days due from this number of pupils is 17,666. Of this number of days, 146 have been lost by sickness on the part of students who did not leave on account of sickness. Twenty-three persons have been sick for two days or more, who have recovered and resumed their places in the school. Five became so ill as to leave for home in consequence. One other student returned this term in ill health; but after remaining a few days, she left. She is not counted in the enrollment.

We have had no death among our number this term, in any department, nor has there been any very serious illness; such as we have had, has been chiefly in the form of colds, ague and fevers. And I believe the total has not been greater than would be found among an equal number of persons in any other place, or engaged in any other occupation.

All of which is respectfully submitted.

EDWIN C. HEWETT,

NORMAL, Dec. 17, 1878.

President.

On motion the report of the President was ordered to be printed in the proceedings of the Board.

Hon. Thos. F. Mitchell, the Treasurer of the Board, was present and read his semi-annual report.

REPORT.

BLOOMINGTON, ILL., Dec. 18, 1878.

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

GENTLEMEN—I herewith present my semi-annual report, as Treasurer of your honorable body, to date. For amount of receipts and expenditures you are referred to accompanying sheets and vouchers.

Respectfully yours,

THOS. F. MITCHELL, Treasurer.

STATEMENT.

1878.			
June 18,	To amount of balance on hand.....	\$	2,951 17
July 5,	“ “ received of State Treasurer.....		6,174 76
Aug. 6,	“ “ “ from Jos. Carter		19 00
Aug. 19,	“ “ “ for rent.....		8 75
Oct. 4,	“ “ “ of State Treasurer.....		6,174 76
Dec. 4,	“ “ “ E. C. Hewitt, tuition.....		300 00
Dec. 7,	“ “ “ “ “ “		211 00
Dec. 16,	“ “ “ “ “ “		610 26
Total receipts.....		\$	16,449 70
Total amount of expenditures as per vouchers herewith submitted....		\$	14,339 57
Balance on hand Dec. 18, 1878.....		\$	2,110 13

On motion the report of the Treasurer was referred to the Auditing Committee.

On motion the President of the Board and the President of the University were appointed a special committee to prepare and submit the biennial report of the University to the Governor, as required by law.

The Treasurer, Mr. Mitchell, presented a check given by W. S. Coy, June 19th, 1879, for rent of land.

The check was not paid, because Mr. Coy claimed that he had a bill against the Board for legal services.

Mr. Mitchell, by vote, was instructed to collect the check, and request Mr. Coy to present his bill to the Board for payment.

To the State Board of Education:

Your Auditing Committee beg leave to report that we have examined the semi-annual report of the Treasurer and find the same to be correct, and recommend that the same be approved by the Board.

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

Miss Sarah C. Brooks and others made application for permission to sell books and stationery in the University. The applications were referred to the Committee on Teachers, with power to act.

Prof. S. A. Forbes submitted the following report of the Laboratory of Natural History. On motion the report was received and ordered to be printed:

To the Board of Education of the State of Illinois:

GENTLEMEN:—Since my last report to you, the work of the State Laboratory of Natural History has been carried forward with such energy as the low state of the funds would permit. The Institution was charged by the last Legislature with new duties, for the performance of which no special appropriation was made; and the unusual drain on our resources has, of course, limited work in many directions.

NATURAL HISTORY SCHOOL.

Shortly after your last meeting, the Laboratory was opened, in accordance with previous announcements, for a session of a summer school of Natural Science, similar to the one held here three years ago. Thirty pupils responded to the invitation, from among the best teachers and most promising students in the State; a most agreeable and profitable session was held—notwithstanding the intense heat—the receipts of which very nearly covered the expenses; although, to bring about this result, most of the teaching was done gratuitously. The students pursued, in about equal numbers, the subjects of zoology, botany and chemistry; the latter branch being taught by Prof. Seymour in the Laboratory of the Normal University. At least four-fifths of the time was given to field and laboratory work in each of the branches, with the view of using our special facilities to supplement the work done by the students elsewhere. Measures have already been taken for a similar session next year.

WORK FOR THE STATE MUSEUM.

As early in the summer as the unusually long period of high water would permit, arrangements were made for the preparation of a series of painted casts of the fishes of the State, for the new State Museum, at Springfield. My assistant, Mr. W. H. Garman, and Prof. Peter Baumgras, of Champaign, were established on the Illinois river, at Henry, and afterwards at Peoria, where they worked during the whole summer vacation; the former preparing the molds and making a few casts, the latter painting sketches from life from which the casts could be colored at leisure and under more favorable circumstances than could be found in the field. A brief sojourn at South Chicago, on Lake Michigan, finished the field work for the summer. Since this time, the casts have been made at the Laboratory by Mr. Garman, and some progress has been made in painting them by Prof. Baumgras. Casts and sketches are now finished of forty species, and these will be ready for exhibition before the winter is over. The work has been admirably done, and the series will prove a most attractive and instructive addition to collections of the Museum.

Mr. C. K. Worthen has made good progress on his contract for the supply of a partial series of the birds of the State. Much more has been done than could possibly have been accomplished at the Laboratory, considering the delay which the re-organization of the institution would have compelled.

The opportunities which have arisen for making miscellaneous collections have been improved, and probably 5,000 zoological specimens have been received during the summer. Nearly as many cryptogamic plants have been added to the herbarium, chiefly through the activity of Mr. John Wolf, of Canton, Ill. These are being named by Eastern specialists. A full series of them will go to the State Museum as soon as they can be prepared.

Good progress has been made in selecting and mounting for the Museum a series of the flowering plants of the State, taken from the Illinois duplicates presented by Dr. George Vasey, of Washington. A thorough re-examination of the Laboratory herbarium is carried on with this work. A series of our fresh water shells has been presented to the State Museum, and those of the Laboratory have been systematically arranged and thoroughly or-

ganized. A good selection of corals, sponges and other marine specimens has also been presented to the Museum, in addition to the mounted birds mentioned in my last report.

WORK FOR THE STATE EDUCATIONAL INSTITUTIONS.

It was made a part of my duty by the act of the last Legislature establishing the Laboratory, to supply, as far as practicable, the biological material needed by the State Educational Institutions for the proper performance of their work; but, as no appropriations were made for that purpose, nothing could be done but to furnish sets of our duplicates; and even of these lack of assistance has prevented my preparing, as yet, any considerable number. A set of our fresh water shells is now ready for the Southern Normal University, and a large collection of plants will be transferred to the Industrial University as soon as the necessary help can be afforded.

DISTRIBUTIONS TO THE PUBLIC SCHOOLS.

Nine applications for our school collections of zoological specimens have been received since my last report, but for want of material, only four of these have been filled. How much such assistance is *needed*, I have shown by collating the replies received to date, to a circular of inquiry issued by the State Superintendent of Public Instruction. 2,233 students of zoology in sixty village and city schools (not including Chicago) were provided with only nineteen nominal cabinets of specimens, while 1,535 students of physics in sixty-five schools, were furnished with thirty sets of physical apparatus. Considering the fact that physical apparatus is both more costly and less essential than zoological collections, it is evident that this deficiency of the latter is due to the fact that no sufficient facilities are provided for their supply.

ORIGINAL WORK.

The results of several dissections of the youngest dog fishes (*Amia*) yet seen were reported in a paper read before the American Association for the Advancement of Science, at its St. Louis meeting. The work of the last two years on the Food of Birds was summed up in a paper for the State Horticultural Society, and read at its Springfield meeting. Good progress has been made in the further

study of the Food of Fishes. A list of the lepidoptera of the State, with field notes, etc., is nearly ready for the press, and a popular key to the birds of the farm and garden is also nearly finished.

SPECIAL STUDENTS.

While provisions for special instruction can scarcely be considered one of the leading purposes of the Laboratory, yet the facilities for special study here brought together may properly be offered to the public, as long as such use of them does not interfere with the regular work of the institution. I have therefore made provision for regular courses of special study in botany, zoology and physiology, and receive students in these studies at the nominal charge of \$3 a term, to pay the cost of the material used. Nine students have taken such courses during the past six months. Seven of these were members of the Normal School, who wished more work in zoology than that regularly provided, and two were outside students who came to the Laboratory for work in histology, microscopy, entomology and ornithology.

FINANCIAL.

Detailed statements of receipts and expenditures appear in my financial report. I have prepared, in addition to these, the following exhibit of the purposes to which the funds received through you during the last year, have been applied:

Repairs and permanent improvements.....	\$ 860 50
Tools, apparatus and materials, (including microscopes and materials, \$298 80).....	529 01
Books	170 92
Stationery and postage.....	93 49
Printing.....	250 00
Assistance.....	248 11
Transportation.....	118 39
Purchase of specimens.....	50 00
Field and miscellaneous expenses.....	51 95
Total.....	<u>\$2,372 37</u>

The principal single items in the above amount are extraordinary expenditures, viz: \$671 for new furniture, and \$298 80 for new microscopes and material.

WORK FOR THE FUTURE.

The changed relations of the Laboratory, and the enlargement of its field of work make it seem improper that its appropriations should be made hereafter merely as an item in the Normal University bill. It is unjust to the Normal University that its funds should be charged with the support of operations having little direct relation to Normal School work, and it is unjust to the Laboratory that its claims should be limited (as they have sometimes been) by the supposed advantage of its work to the students and teachers of the Normal School. I have therefore prepared a careful estimate of the sums required for specific purposes during the next two years. It will not be possible to conduct the work with fair success on any smaller amounts. A curtailing of this estimate would simply compel the omission of one or more of these lines of work. It is proposed to provide for the supply of material to the State Museum and to the schools and State Educational Institutions as now required by law, and to continue the investigation of the Food of Birds and the Food of Fishes.

A most indispensable requisite for thorough work in any direction is an increase of the Library. Much of the time and money already invested in the Laboratory collections and belongings must lie idle until this improvement is made. There is not anywhere within reach of our naturalists a scientific library sufficient to assist them to reliable original work in any department of natural history. Nothing which the State could do for science would so stimulate a productive activity among them as a moderate appropriation for a public scientific library; and there is evidently no place where this library may be so properly built up as in connection with the State Laboratory of Natural History. I have therefore included the sum of \$2,000 for this purpose in my estimates, and the further sum of \$200 for the services of a Librarian, to catalogue and thoroughly organize the accessions on the plan already in use. This plan of organization place the resources of the library at the ready command of the investigator, without requiring that complete previous acquaintance with the literature of his subject which he can gain only by long use of a large library. It is proposed to use the money which may be voted for library purposes, first of all to procure those books now actually needed by our Illinois naturalists for the successful prose-

cution of the original investigations upon which they are at present engaged, and to provide for the future only when these present pressing needs have been supplied.

The work on the Food of Illinois Birds, is one of great economical importance and of considerable scientific interest. For its regular prosecution, it will require much larger collections of insects, and their eggs and larvæ than I now have access to, and I have therefore included an item for these in my estimate of the expense. Microscope preparations of the structures of insects and plants will also be indispensable, and collections of seeds as well. Similar additional facilities are needed for the research upon the food and habits of our fishes—a subject taken up because of its relations to scientific fish-culture.

The estimated expense of these operations, including the publication of results in the Bulletins of the Laboratory, is as follows:

Increasing the Natural History collections of the State Museum, \$2,000—the present appropriation.

Supply of specimens to the State Educational Institutions, \$500, and to the Public Schools, \$500.

Collections, assistance and miscellaneous expenditures required for the investigation of the food of Illinois birds, \$450, and of fishes, \$300; improvement of the library, \$2,200; publications of bulletins of the Laboratory, \$500; pay of assistant, \$1,600. The total for the two years amounts to \$8,000.

This sum I respectfully request that the Legislature be recommended to appropriate for the two years to come, if in your judgment, these operations are necessary, and the estimated expense is fair and economical.

Respectfully submitted,

S. A. FORBES.

On motion the following resolution was unanimously adopted.

WHEREAS, The grounds of the Normal University need walks, improvements on fence, &c., in order to carry out the original plan, and to supplement the natural attractions of the grounds, and

WHEREAS, The appropriations made for current expenses are not sufficient to cover the necessary expenses of the Institution, and to provide for this need also, therefore,

Resolved, That we respectfully ask the General Assembly, at its next session, to make an appropriation of _____ dollars for the purpose above specified.

The following report submitted by Mr. Roots was adopted :

To the State Board of Education :

Your Committee on Teachers, &c., to whom was referred applications of different persons for appointment as keeper of the book and stationery store in Normal University building, respectfully advise that the President of the University appoint Miss Sarah C. Brooks to the position named.

B. G. ROOTS, Chairman.

The Auditing Committee made the following report:

To the Board of Education :

We, the undersigned your Auditing Committee, beg leave to report that we have examined the various bills presented for payment, amounting to the sum of \$288 10, and find the same to be correct. We recommend that the Secretary be authorized to draw orders on the Treasurer for their payment.

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

On motion the report was accepted and bill ordered to be paid.

The Auditing Committee submitted the following report:

Your Auditing Committee beg leave to report that we have examined the statement of J. W. Cook, for the physical apparatus fund with the vouchers numbered 1 to 20, inclusive, and find the same to be correct.

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

STATEMENT.

To amount appropriated.....\$200 00

CONTRA.

By amount paid as per vouchers.....\$161 18

Balance on hand.....\$ 38 82

The report was accepted and ordered to be placed on file.

CONTINGENT FUND.

STATEMENT.

To balance on hand, Jan. 19.....\$ 74 27
 appropriation..... 250 00

Total.....\$324 21

CONTRA.

By amount paid, as per vouchers.....\$350 86

To balance due.....\$ 26 65

The Auditing Committee made the following report:

Your Auditing Committee would respectfully beg leave to report that we have examined the report and vouchers, 1 to 44 inclusive, of President Hewett, for the expenditure of the contingent fund voted him by the Board, and find that \$250 was drawn by him, and that there was a balance on hand at last report of \$74.21, making in all \$324.21, and that he has paid on the several bills presented \$350.86, leaving a balance due Mr. Hewett of \$26.65.

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

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

The following resolution 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 and receipt for the same.

The following report was received and referred:

To the State Board of Education:

GENTLEMEN: In June last you appropriated \$350 for refitting and furnishing the Chemical Laboratory. The following is a report of the receipts and expenditures as shown by vouchers herewith submitted:

To amount of appropriation.....	\$350 00
To amount received from Butler.....	3 90
	<hr/>
Total receipts	\$353 90
Total amount of expenditures, as per vouchers	\$419 79
Leaving a balance due him of.....	\$ 65 89

The painting and varnishing of the Laboratory, not estimated in June, was \$29 50, which is more than the deficiency reported.

An appropriation of \$100 is respectfully solicited to cover the \$26 89, to purchase a mounted skeleton for class in physiology. for specimens for dissection and for furnishing specimens for classes in botany.

Respectfully submitted,

M. L. SEYMOUR.

The above report examined and found correct. Its approval is recommended.

T. R. LEAL,
 JOS. CARTER,
 Auditing Committee.

On motion the report was accepted, and the amount due Prof. Seymour was ordered to be paid.

The following recommendation of the Auditing Committee was adopted:

Your Committee recommends the following appropriations:

Contingent expenses.....	\$300 00
Physical apparatus.....	62 00

JOSEPH CARTER, }
 T. R. LEAL. } Auditing Committee.

The following resolutions were read and adopted:

Resolved, That this Board recommend the appropriation, by the State Legislature, of the sum of \$4,000 per annum for the next two years, for the purpose of carrying forward the work of the State Laboratory and the increase of its library.

Resolved, That this Board disapprove of all absences of the Professors of this Institution on their private business, and instructs the President of the University to withhold the salary of such absentees in future, until the matter has been adjusted by the Board.

On motion, the Board adjourned.

WILLIAM H. GREEN, *President*.

S. M. ETTER, *Secretary*.