



THE

American Museum of Natural History.

CENTRAL PARK, NEW YORK,

(77th Street and 8th Avenue.)

ANNUAL REPORT OF THE TRUSTEES

CONSTITUTION, BY-LAWS, AND

LIST OF MEMBERS

FOR THE YEAR

1884-5.



L. S. Foster, Printer, New York.

1885.

BOARD OF TRUSTEES.

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MORRIS K. JESUP. ROBERT COLGATE. BENJAMIN H. FIELD. ADRIAN ISELIN. J. PIERPONT MORGAN. CHARLES LANIER. D. JACKSON STEWARD. HUGH AUCHINOLOSS. JOSEPH H. CHOATE. PERCY R. PYNE. JOHN B. TREVOR. JAMES M. CONSTABLE.

WILLIAM E. DODGE. JOSEPH W. DREXEL. ANDREW H. GREEN. ABRAM S. HEWITT. OLIVER HARRIMAN. C. VANDERBILT. D. O. MILLS. CHAS. G. LANDON.

H. R. BISHOP.

OFFICERS AND COMMITTEES

FOR 1885.

President.

MORRIS K. JESUP.

Vice-Presidents.

ROBERT COLGATE. D. JACKSON STEWARD.

Secretary.

HUGH AUCHINCLOSS.

Treasurer.

J. PIERPONT MORGAN.

Executive Committee.

JAMES M. CONSTABLE, CHAIRMAN.

ROBERT COLGATE. H. R. BISHOP.

D. JACKSON STEWARD. OLIVER HARRIMAN.

The President and Secretary, ex-officio.

Auditing Committee.

PERCY R. PYNE. CHARLES LANIER. CHARLES G. LANDON.

Finance Committee.

J. PIERPONT MORGAN. OLIVER HARRIMAN. D. O. MILLS.

Nominating Committee.

PERCY R. PYNE. JOSEPH W. DREXEL.

WILLIAM E. DODGE.

PROF. ALBERT S. BICKMORE,

Curator of the Ethnological Department, and in charge of the Department of Public Instruction.

PROF. R. P. WHITFIELD,

Curator of the Geological and Mineralogical Department.

J. A. ALLEN,

Curator of the Department of Ornithology and Mammalogy.

DR. J. B. HOLDER,

Curator of the Department of Marine Zoology.

J. J. BARGIN,

Assistant Secretary.

L. P. GRATACAP.

Assistant Curator of the Geological Department.

A. WOODWARD,

Librarian.

ANNUAL REPORT OF THE TRUSTEES

FOR THE YEAR 1884-5.

The Trustees of the AMERICAN MUSEUM OF NATURAL HISTORY present this their Sixteenth Annual Report to the Patrons, Fellows, and Members of the Museum.

The Treasurer's account shows the receipts of the year to have been \$35,770.21. This includes \$5,000.00 received from the estate of the late Wm. E. Dodge, contributed to found a permanent endowment fund; also \$7,601.60 contributed by the Trustees to make up the annual deficiency. The expenditures were \$26,667.49 for maintenance, and \$3,798.36 for improvements and additions.

These purchased additions were mostly new species, and comprise 44 specimens of North American birds, 29 specimens of North American mammals, and 20 monkeys; also specimens of minerals, fossils, and insects, and 17 volumes of needed books for the Library.

The large additions to the Museum by *donation* and *exchange* will be found in the list of accessions appended.

Much of the growth of the Library has been found to be due to the Museum Bulletins, prepared by the Curators, and sent to corresponding institutions and libraries all over the world in exchange for their publications.

A large increase in the number of visitors has been noticed during the year. This is a gratifying indication of the increasing popularity of the Museum.

The collection of American Forestry specimens, the preparation of which has been in progress during the past three years, is expected to be placed on public exhibition this spring. This collection, it is hoped, will prove another popular attraction to the Museum, and be the means of largely increasing the knowledge and information of the people on the subject of our forests, now demanding so large a share of public attention.

The collections of European and North American birds and mammals have recently been relabelled to conform to the latest scientific nomenclature.

Only one hundred and forty-five species of birds, and one hundred and seventeen species of mammals, remain to be supplied to make the American collections in these two departments complete, and it is expected that most of these will be furnished during the year.

In the geological and mineralogical department, the improvements on the exhibition cases have been finished, and the labelling and cataloguing of the collections is now going on rapidly.

The arranging and labelling of the Wolfe memorial gift of shells has also made satisfactory progress during the year.

The printed Guides to the different collections have proved to be very popular. The supply has lately become exhausted, and a new series to all the departments is now under preparation, and will soon be placed on sale at the Museum. These new Guides will be amply illustrated, and cover all the latest arrangements and improvements made in the collections and the halls during the past few years. The small price at which they are sold places them within the reach of everybody, and, in their use, the public will find an easy and popular method of studying the collections. V At the recent session of the Legislature, an appropriation was made as follows :

[Item for the Annual Appropriation Bill.]

"For the State Superintendent of Public Instruction, to enable him to establish and maintain in connection with the American Museum of Natural History in Central Park, in the city of New York, a course of free instruction, to be given by the Curators of said Museum, and to be illustrated by its collections, to the teachers of the common schools of said city, and through them to their pupils, and to the teachers of the common schools and of the normal schools throughout the State who may wish to avail themselves of this training, and to furnish the several State normal schools with such appliances and apparatus as may be hereby supplied to the schools of said city, and are necessary for the proper presentation to their teachers and pupils of this instruction on human and comparative anatomy, physiology, and zoology, and other subjects upon which the Board of Education of said city may require that oral instruction shall be given, the sum of eighteen thousand dollars, to be paid by the Treasurer on the warrant of the Superintendent of Public Instruction, countersigned by the Comptroller."

In accordance therewith, and with the kind co-operation of the Hon. Wm. B. Ruggles, State Superintendent of Public Instruction, and the Board of Education of this city, a new department has been created in the Museum called "The Department of Public Instruction," and a course of lectures to the teachers of the State and city schools is now in progress and meeting with great success.

They are given by Prof. Albert S. Bickmore, and are illustrated by the collections of the Museum and by means of the stereopticon.

Specimens and apparatus to aid in the reproduction of this instruction have been supplied to the New York city schools and the normal schools of the State, with very gratifying results.

These lectures, the subjects of which are given in the appendix, have been planned for four years, twenty in each year. Like those now in progress, *all* will be richly illustrated with original views and drawings specially prepared for the course.

Although the lecture hall of the Museum was recently enlarged to double its former capacity, the number of those desiring to avail themselves of this instruction again exceeds the dimensions of the hall, and many who come cannot gain admittance.

To provide a suitable place for this educational training, plans have been matured to enlarge the Museum by the addition of the rotunda as planned in the original designs for the entire building.

This addition, it is estimated, would give room for a lecture hall capable of seating twelve hundred persons, and afford a part of the extra space now so urgently wanted for new collections.

The public demand for access to the lectures is becoming so great that such a necessary measure for the public good cannot be long delayed, and it is hoped the Legislature will be willing to grant the necessary aid to carry out this laudable object.

To widen still further the benefits of this new department of the Museum, it is proposed, as soon as a suitable hall is provided, that these lectures, and especially those illustrating the physical features and the great natural resources of our country, shall be repeated to the working classes of the city.

In this way the rich collections of the Museum, such as that of woods, will become of direct utility to all those who labor or are in any way interested in these materials; and, hereafter, as the Museum acquires additional collections, it must become an increasingly important aid in the education of the artisan and laborer.

It must not be forgotten, however, that with all this increased usefulness comes also increased expenditures, and a larger deficiency to be made up at the close of the year.

The Trustees have, therefore, to appeal to all publicspirited citizens to aid them. One thousand additional annual members at ten dollars a year each would place the institution on a self-sustaining basis, and it is hoped this fact needs only to be made known to the public, who are so much benefited by the Museum, to secure for it the desired amount at the earliest day.

> MORRIS K. JESUP, President.

THE AMERICAN MUSEUM OF NATURAL HISTORY, in account

1884.	RECE	IPTS.		
Balance from 1883 account,				\$ 292 69
From the Estate of Wm. E. D	odge.			5,000 00
" Joseph W. Drexel,	•		•	801 60
" Morris K. Jesup,				500 00
" James M. Constable,	•	•		500 00
"H. R. Bishop, .				500 00
" D. O. Mills,				500 00
" Charles Lanier,				500 00
" Percy R Pyne, .	•			500 00
" Hugh Auchincloss, .		•		500 00
" Adrian Iselin, .				500 00
" C. Vanderbilt, .				500 00
" Robert Colgate, .				500 00
" J. Pierpont Morgan, .	•	•		500 00
" John B. Trevor,	•	•		300 00
" Oliver Harriman.	•	•	•	250 00
" Wm. E. Dodge, Jr.,		•	•	250 00
" Chas. G. Landon,	•	•	•	250 00
" Hon. Abram S. Hewitt.	•	•		250 00
" Albert Mathews,	•	•	•	100 00
" Frank G. Brown,	•	•	•	100 00
" Joseph Larocque,	•	•	•	100 00
" Francis P. Freeman,	• •	•	•	100 00
" Charles Moran, .	•	•	•	
,	•	•	•	100 00
Louis Stern,	•	•	•	100 00
Loomis L. White,	•	•	•	100 00
Frederick B. Wendt,	•	1•	•	100 00
Auson rheips Stokes, .	•	•	•	100 00
mis, mary J. morgan,	•	•	·	100 00
Dr. Henry F. Walker,	•	•	•	100 00
Samuel F. Avery, .	•	•	•	100 00
Benjamin Blewster,		•		100 00
" Isaac P. Chambers,	•	•	•	100 00
" John N. A. Griswold,	• • •	•		. 100 00
" The State Superintenden	it of f			0 760 70
Public Instruction,	,	•	•	2,160 50
" The sale of Guides, .	• •	•	•	170 00
" Interest on Permanent	-			
Endowment Funds,)		•	•	225 00
" The Department of Pub		s }		
and Annual M	embers,) .		. 18,823 42
				<u> </u>
Examined (PERCY	R PV	NF) Auditing
Examineu	IBRUI	N. I I	., <u>.,</u>	L'a munng

\$35,770 21

and approved. CHARLES LANIER, *Committee*.

with J. PIERPONT MORGAN, TREASURER.

1884.	EXPENDITURES.		
Paid for	Salaries,	\$14,170 00	
"	Labor.	4,836 65	
**	Altering cases and repairs on)	· • • • • • •	
	building, etc.,)	. 1,960 81	
	Coal,	1,515 12	
• •	Supplies,	. 289 96	
	Publishing Bulletin and Annual Report,	701 87	
**	Printing and Stationery,	. 963 47	
**	Reception,	. 490 81	
• •	Advertising,	. 108 15	
	Postage and Car Fare,	. 356 51	
**	Poisoning Materials,	· 77 32	
"	Expressage, Travelling, and		
	Custom House Expenses. §	. 81 03	
"	Lectures and Photographic Establishment,	829 90	
• •	Interest on debit balances, 1884, .	. 253 02	
**	Labels,	42 87	\$26,677 49
•	Improvements on the Collections, .	. \$ 1,954 88	
	Birds and Mammals purchased, .	1,566 00	
**	Minerals purchased,	. 178 50	0 -6
	Books and Periodicals purchased,	98 98	3,798 36
Purchase	d Bonds for the '' Permanent Endowment) Fund." ا		
	Fund, J		5,051 68 \$35,527 53
	Delence cominal to approximate		φ35,527 53 242 68
	Balance carried to 1885 account,		242 00
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4			
		-	\$35,770 21

[E. & O. E.] NEW YORK, January 27, 1885.

J. PIERPONT MORGAN, Treasurer.

CONSTITUTION

OF THE

American Museum of Natural History,

IN THE CITY OF NEW YORK.

ARTICLE I.

This Corporation shall be styled the AMERICAN MUSEUM OF NATURAL HISTORY.

ARTICLE II.

The several persons named in the charter, and such others as they may add to their number, which shall not exceed twenty-five in all at one time, shall be the Trustees to manage the affairs, property, and business of the Corporation, and in case of the death, accepted resignation, or removal from the State of any Trustee, a new Trustee shall be elected to fill his place by the remaining Trustees; but no election of a Trustee shall be held except at a quarterly meeting of the Trustees, on written notice of not less than one week, specifying that such election is to be held, and the vacancy which is to be filled; and every election of Trustees shall be by ballot, and no person shall be deemed to be elected a Trustee unless he shall receive the votes of of at least three-fourths of the Trustees present.

ÀRTICLE III.

The Trustees shall meet quarterly, on the second Monday of every February, May, August, and November, at an hour and place to be designated, on at least one week's written notice from the Secretary, and shall annually, at the quarterly meeting in February, elect the officers and committees for the ensuing year. They shall also meet at any other time to transact special business on a call of the Secretary, who shall issue such call whenever requested so to do, in writing, by five Trustees, or by the President, and give written notice to each Trustee of such special meeting, and of the object thereof, at least three days before the meeting is held.

ARTICLE IV.

The officers of the said Corporation shall be a President, a First and Second Vice-President, a Secretary, and a Treasurer, an Executive Committee, an Auditing Committee, and a Finance Committee, all to be elected from the Trustees. All these officers shall hold their offices for one year, and until their successors shall be elected.

The election of officers shall be by ballot, and the persons having a majority of the votes cast, shall be deemed duly elected.

ARTICLE V.

The President, and in his absence the First or Second Vice-President, shall preside at all the meetings of the Museum and of the Trustees.

The Secretary shall keep a record of the proceedings of the Trustees, of the Executive Committee, and of the Auditing Committee, and shall preserve the seal, archives, and correspondence of the Museum, shall issue notices for all the meetings of the Trustees, and attend the same.

The Treasurer shall receive and disburse the funds of the Museum. He shall keep the accounts of the Museum in books belonging to it, which shall be at all times open to the inspection of the Trustees. He shall report in writing, at each quarterly meeting of the Trustees, the balance of money on hand, and the outstanding obligations of the Museum, as far as practicable; and shall make a full report at the annual meeting of the receipts and disbursements of the past year, with such suggestions as to the financial management of the Museum as he may deem proper.

ARTICLE VI.

The Executive Committee shall consist of seven, of whom

the President and Secretary shall be two. They shall have the control and regulation of the Collections, Library, and other property of the Museum; and shall have power to purchase, sell, and exchange specimens and books, to employ agents, to regulate the manner and terms of exhibiting the Museum to the public, and generally to carry out in detail the directions of the Trustees; but the Executive Committee shall not incur any expense or liability for the Museum exceeding two thousand dollars at one time, or exceeding, in all, ten thousand dollars, in the interval between the quarterly meetings of the Trustees, without the express sanction of the Trustees.

ARTICLE VII.

The Auditing Committee shall consist of three, and it shall be their duty to examine and certify all bills presented against the Corporation; and no bills shall be paid unless first approved in writing by at least two members of this committee.

ARTICLE VIII.

The Finance Committee shall consist of three, including the Treasurer, and it shall be their duty to take charge of and invest the funds of the Museum in its name, and to take all proper measures to provide means for its support.

ARTICLE IX.

A majority of the Trustees for the time being shall constitute a quorum for the transaction of business, but five Trustees meeting may adjourn and transact current business, subject to the subsequent approval of a meeting at which a quorum shall be present.

ARTICLE X.

By-Laws may from time to time be made by the Trustees, providing for the care and management of the property of the Corporation; and for the government of its affairs.

Such By-Laws, when once adopted, may be amended at

any meeting of the Trustees, by a vote of a majority of those present, after a month's notice in writing of such proposed amendment.

ARTICLE XI.

The contribution of \$1000 or more to the funds of the Museum, at any one time, shall entitle the person giving the same to be a Patron of the Museum, who shall have the right in perpetuity to appoint the successor in such patronship.

The contribution of \$500, at one time, shall entitle the person giving the same to be a Fellow, who shall have the right to appoint one successor in such fellowship.

No appointment of a successor shall be valid, unless the same shall be in writing, endorsed on the certificate, or by last will and testament.

The contribution of 100, at one time, shall entitle the person giving the same to be a Life Member.

Any person may be elected by the Trustees to either of the above degrees, who shall have given to the Museum books or specimens, which shall have been accepted by the Executive Committee, to the value of twice the amount in money requisite to his admission to the same degree, and the President and Secretary shall issue diplomas accordingly under the seal of the Museum.

The Trustees may also elect Honorary Fellows of the Museum in their discretion.

ARTICLE XII.

No alterations shall be made in this Constitution, unless at a regular quarterly meeting of the Trustees; nor by the votes of less than two-thirds of all the Trustees; nor without notice in writing of the proposed alteration, embodying the amendment proposed to be made, having been given at a regular meeting. Patrons giving \$1000 are each entitled to 1 Subscriber's Ticket, 5 Complimentary Season Tickets, and 10 Tickets for a single admission.

Fellows, giving \$500, are each entitled to 1 Subscriber's Ticket, and 10 Tickets for a single admission.

Life Members, giving \$100, are each entitled to 1 Subscriber's Ticket, and 5 Tickets for a single admission.

Annual Members, paying \$10 yearly, are each entitled to I Subscriber's Ticket, and 2 Tickets for a single admission.

[Note.—A Subscriber's Ticket admits two persons to the Museum every day except Sunday, and to all Receptions and Special Exhibitions, and may be used by any member of the Subscriber's family.

The Single admission Tickets admit the bearers to the Museum on reserve days (Mondays and Tuesdays) and are issued to Subscribers for distribution among friends and visitors.]

II.

Any Trustee who shall fail to attend three consecutive Regular Quarterly Meetings of the Board, shall cease to be a Trustee, unless excused by the Board.

III.

No gentleman shall hereafter be eligible to the position of a Trustee who shall not be a "Patron" of the Museum, unless by a unanimous vote of a quorum of the Board—excepting Trustees *ex-officio*—nor be eligible unless his name shall be presented by the nominating committee at a Regular Quarterly Meeting prior to the meeting at which said election shall take place.

IV.

No indebtedness shall (except for current expenses) be incurred by the Trustees of the Museum, nor by any of its committees, officers, or employees, unless there are at the time sufficient moneys in the Treasury to pay the same.

LIST OF ACCESSIONS-1884.

DONATIONS.

LIBRARY.

MORRIS K. JESUP, New York City. Les Torrents.—De Batelica. Traité Pratique du Reboisement et du Gazonnement des Montagnes. By P. Demontzey. Reboisement des Montagnes, 1861-1878. Le Reboisement et le Regazonnement des Alpes, 1864. Mathieu. Les Torrents des Alpes et le Pâturage. Marchand. Monographies de Travaux exécutés dans les Alpes, les Cévennes et les Pyrénées. MRS. ROBERT L. STUART, New York City. Catalogue of the Library of the late R. L. Stuart. MISS ELLEN COLLINS, New York City. Episodes of Insect Life. REV. W. A. LEIGHTON, B. A. (the author), England. The Lichen-Flora. Third edition. A. B. EMMONS (the author), N. Y. "Notes on the Rhode Island and Massachusetts Coals." W. J. McGEE (the author), Washington, D. C. The drainage system and distribution of the Loess of Eastern Iowa. "Modifications proposées dans la nomenclature géologique." "On the Origin and Hade of Normal Faults." "Theory of Glacial Climate." I. C. RUSSELL (the author), Washington, D. C. "Sketch of the Geological History of Lake Lahontan." JOHN H. CASWELL, New York City. Report of the Pacific Railroad Survey. Vols. I.-XII., 1855-60. Report of the U. S. Coast Survey. 1866. WM. BEUTTENMÜLLER, New York City. Biography of Elisha Kent Kane -Elder. Commerce and Navigation of the United States. 1880. India and its People.—Read. Report of the Board of Commissioners on Irrigation, California. Census Bulletins. Nos. 6, 12, 27, 34, 36–40, 42, 43, 46–48, 50–54, 56– 58, 61–63, 64, 66, 70, 73, 74, 77, 78, 80, 81, 84–86, 89–93, 95– 120, 122–129, 132, 134–199, 200–244, 246–260, 262–272, 274, 275, 277, 279-290, 292-294, 296, 299, 300-303, 305. Statistics of the Fisheries of the Great Lakes. Nos. 261, 278, 291, 295, 298. Report of the Commissioner relating to the Condition of the Indians of Massachusetts. Statistical abstract of the United States. 1881. Annual Report on the Foreign Commerce. U. S. 1882. Commerce and Navigation of the United States. 1882. Cotton Goods Trade of the World. Specimen pages of the American Cyclopædia.

Mammals of the Adirondacks.

A Review of the Birds of Connecticut.

"Ravages of a rare Scolytid Beetle in the Sugar Maple of Northeastern New York."

"Breeding of the Harlequin Duck (Histrionicus minutus)."

"On a bird new to Northern North America."

"On Birds about Point de Monts, Canada.

"On Birds of the Adirondack Region."

"Gentry's Nests and Eggs of Birds of the United States."

"Remarks on some of the Birds of Lewis County, Northern N. Y.

PROF. A. S. BICKMORE, New York City.

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"On Pourtalesia, a genus of Echinoidea." By Sven Loven. Forestry Bulletin. No. 2.

May, 1884.

Circular No. 2, U. S. Entomological Commission.

American Meteorological Journal. Vol. I., 1.

"Uber Vogel der Sudsee." By Dr. O. Finsch. "Discovery of Mound Relics at Devil River, Lake Huron."—Mason.

"Languages of Africa."—Mason. "Ethnology of Vega."—Mason. "Geological relations of the Limestone Belts of Westchester Co." J. D. Dana.

"Extracts from the Will of William S. Vaux. Deceased."

Illustrated Guide and Catalogue of Woodward's Garden.

Programme of the Thirty-first Meeting Amer. Asso. Adv. Sci.

Second annual report American Taxidermists. 1881-82.

Notes on the Eastern Cities and Museums of the United States. By Agnes Crane.

Abridgment of the Nautical Almanac. 1883. The Tribune Almanac. 1883.

The Evening Journal Almanac. 1883. Report of the Director-General, International Cotton Exposition. Die Ebbe und fluth in der Rhede von Finme. By E. Stahlberger.

DR. A. v. KLIPSTEIN (the author), through Prof. A. S. Bickmore. Beiträge zur Geologischen und Topographischen Kenntniss der Ostlichen Alpen Band II. Abth. I. II. 11. 1871-83.

Beiträge zur Geolog. Kenntniss der Ostlichen Alpen. Band I. 1845. Hon. R. P. FLOWER, M. C., New York City. War of the Rebellion. Series I. Vols. X. XI.

Tenth Census of the United States. Vol. II. Manufactures, etc.

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••	•••		••	Vol. III. Statistics of Agriculture.
"	"	" "	" "	Vol. IV. Transportation.
"	"	"	" "	Vol. V. VI. Cotton Production.
"	"	"	"	Vol.VII. Valuation, Taxation, etc.
"	""	" "	" "	Vol. VIII. Newspapers and
		Daviadiaala	Alasha	
		Periodicais,	Alaska,	Fur-seal Islands, and Ship-building.

JARED MILLER, Brooklyn, N. Y.

Viaje de la Comission astronómica Mexicana al Japon.

By F. D. Covarrubias.

Old Streets of New York. By John J. Post.

- FRANK VINCENT, JR. (the author), New York City. Norsk, Lapp, and Finn. Through and through the Tropics. Land of the White Elephant.
- C. F. HOLDER (the author), New York City. Elements of Zoology.

GEO. N. LAWRENCE (the author), New York City. "New species of Pigeon of the genus Engyptila." PROF. JAMES HALL, Albany, N. Y. Natural History, State of New York. Palæontology, Vol. V. Part I. Lamellibranchiata Text. CHAS. E. BEECHER (the author), Albany, N. Y. "Ceratiocaridæ from the Chemung and Waverly Groups." SANDERSON SMITH, New Brighton, Staten Island, N. Y. An account of recent progress in Zoology. 1879-1881. "Notes on American Land Shells." By W. G. Binney. R. E. CALL and C. E. BEECHER (the authors). "Notes on Nevada Shells." PROF. T. C. CHAMBERLIN, State Geologist, Beloit, Wis. "Hillocks of Angular Gravel " "Correlation of Terminal Moraines." PROF. N. H. WINCHELL, State Geologist of Minnesota, Minneapolis. Tenth Annual Report. 1881. Eleventh Annual Report. 1882. Geological and Natural History Survey. 1872-1882. Vol. I. Geology. PROF. JOHN COLLETT, State Geologist, Indianapolis, Ind. Twelfth and Thirteenth Annual Report. 1882, 1883. PROF. A. H. WORTHEN, State Geologist, Springfield, Ill. Bulletin No. 2, Illinois State Museum of Natural History. W. T. HORNADAY (the author), Washington, D. C. "Directions for removing and preserving the skins of Mammals." PROF. E. C. PICKERING, Director, Cambridge, Mass. Thirty-eighth Annual Report. The Astronomical Observatory. "Recent Observations of Variable Stars." M. JULES MARCOU (the author), Cambridge, Mass. "Note sur la Géologie de la California." Second Geological Survey of Penn., Report, M. M. JED HOTCHKISS, Editor and Publisher, Staunton, Va. "The Virginias," a Mining and Scientific Journal. Vol. V. 1884. SOUTHWICK AND JENCKS, Publishers, Providence, R. I. Random Notes on Natural History. Vol. I. 1, 2, 3, 5, 6, 7. 1884. J. W. FEWKES (the author), Cambridge. Mass. "On the Developments of Certain Worm Larvæ." W. FAXON (the author), Cambridge, Mass. "Descriptions of Species of Cambarus." R. D. LACOE (the author), Pittston, Pa. "Catalogue of the Paleozoic Fossil Plants." THOS. L. CASEY (the author), Philadelphia, Pa. Contributions to the Descriptions and Systematic Coleopterology of North America. Part I. Revision of the Stenini of America north of Mexico. N. S. GOSS (the author), Topeka, Kansas. Catalogue of the Birds of Kansas. OTTO MEYER (the author), New Haven, Conn. Notes on Tertiary Shells.

S. KNEELAND (the author), Boston, Mass.

"The Subsidence Theory of Earthquakes."

CHAS. ALDRICH, Webster City, Iowa.

Thirteenth Biennial Report, State Historical Society. 1881. Iowa Historical and Comparative Census. 1836-1880. Biennial Report of the Treasurer of State. 1882 and 1883. First Biennial Report of the State Mine Inspector. 1882-83. Second Biennial Report of the Commissioners of Pharmacy. 1884. Seventh Biennial Report of the Board of Capitol Commissioners. 1882-83. **Report** of the Secretary of State.

- THEO. S. CASE, Editor and Publisher. Kansas City, Mo. Kansas City Review of Science and Industry. Vol. VII. 9-12. VIII. 1-8. 1883-84.
- U. P. JAMES (the author), Cincinnati, Ohio.
 - "Descriptions of Fossils from the Cincinnati Group."
 - "Descriptions of Three Species of Fossils."
 - "On the Conodonts and Fossil Annelid Jaws."
- PROF. LEO. LESQUEREUX (the author), Columbus, Ohio. "On Fossil Fruits of Brandon, Vt."

- "On the Origin and Formation of Prairies." "On the remains of Land Plants in the Lower Silurian."
- "On the Plants of the World before Man."
- "Coal Beds of the Rocky Mountain region."
- "Lignite Formations of the Rocky Mountains."
- "Report on the recent additions of Fossil Plants."
- "On some specimens of Permian Fossil Plant from Colorado."
- "A review of the Fossil Flora of North America."
- "New species of Fossil Plants of the Lignite and Cretaceous formation of Dakota group '
- "On a Branch of Cordaites, bearing fruit."
- "Land Plants recently discovered in the Silurian Rock, U. S."
- "On the Cordaites and their related generic divisions in the Carboniferous, U. S.
- "Remarks on the Cretaceous and Tertiary Flora of the Western Territories."
- "The Carboniferous Flora of Rhode Island."
- "On Species of Fossil Plants from the Tertiary Flora of the State of Mississippi."
- "Fossil Plants of the Auriferous Gravel Deposits of the Sierra Nev.
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SETH C. GOULD and Prof. SETH B. SPRAGUE, Milo, Me. 2 specimens *Betula prdyracea* from Piscataquis Co., Me.

HENRY JAMES. Baltimore, Md. 1 plank specimen white pine.

A. M. DODGE & CO., Jersey City, N J.

	cube specimen	
1		mahogany.
1	66	chestnut.
1	"	dogwood.
1	"	yellow poplar.

ETHNOLOGICAL DEPARTMENT.

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A carved cane from Masset, Queen Charlotte Island. HON. THEODORE ROOSEVELT, New York.

2 stone celts from Switzerland.

GEOLOGICAL DEPARTMENT.

G. WOLF HOLDSTEIN, Belvedere, N. J.

225 specimens of Carboniferous and Cretaceous fossils from Texas. 3 fine fossil shells from the Cretaceous of Texas, and a fragment of coal plant.

SANDERSON SMITH, Staten Island, N. Y.

4 fossil fish from the coal measures at Linton, Ohio.

- A. P. BICKMORE. 1 slab of Trenton limestone, St. Anthony's Falls, Minn.
- PROF. A A. WRIGHT, Oberlin College, Ohio. 11 specimens of fossils from various places.
- C. H. SNYDER, Freehold, N. Y. An atlas (first vertebra) of Mastodon giganteus.
- WILLIAM J. WALLACE, New York City. 9 slabs and blocks of fossils from Cobleskill, N. Y.
- From the CURATOR.

Marcellus and Hamilton group fossils from the Genesee Valley.

- D. C. JANSEN, Shanghai, China. 3 specimens of Orthoceras { probably from China. **Trocholites** 3 ..
- PROF. HENRY M. SEELEY, Middlebury, Vt. 30 specimens of Potsdam, Chazy, and Trenton group fossils from Lake Champlain.
- B. F. WOOD, New York City.

Section of concretion in banded aphanite, Ellenville, N. Y.

- UNITED STATES GEOLOGICAL SURVEY, through Arnold Hague, Esq. 4 photographs of the Geyser Region of the Yellowstone Park.
- J. W. SLEEPER, 1st officer, ship Addie E. Sleeper, through W. A. Conklin, Sup't Menagerie, Central Park.

1 block of pumice picked up in Straits of Sunda.

- F. A. CALKINS, New York City.
- A collection of rocks illustrating the Rosendale cement beds near Kingston, N. Y.
- PROF. E. W. CLAYPOLE, Akron, Ohio. 75 specimens of Hamilton and Chemung fossils from Perry Co., Pa.

CONCHOLOGICAL DEPARTMENT.

- J. B. DAVIS, New York City. 17 species of Achatinella from Sandwich Islands.
- J. GREEGOR, Cuyahoga Falls, Ohio. 37 specimens of sea shells from the coast of Florida, Bahama Islands, and West Indies.

MINERALOGICAL DEPARTMENT.

- ROUSEHORN, Canada.

1 specimen of apatite from Rousehorn's Mines, Ontario, Canada. G. F. KUNZ, Hoboken, N. J.

29 specimens of minerals from Stoneham, Maine.

H. BOOTH, Poughkeepsie, N. Y.

2 garnets from North Carolina MRS. S. L. M. BARLOW, New York City.

Specimens of copal, amber, and gums from Zanzibar, Africa. F. F. HUNT, Dacotah.

7 specimens of tin ore. Black Hills.

ZOOLOGICAL DEPARTMENT.

JENNESS RICHARDSON, Rutland, Vt.

Skin of Purple Finch.

" Snow Bunting. " 2 Pine Grosbeak.

Prepared for the

- American Goldfinch. " "
 - Study Collection. Hairy Woodpecker.
- " Tree Sparrow.

OSCAR FRASER, Calcutta Museum, East Indies.

Skeleton of a Tiger.

Skull of Rhinoceros sondiacus.

- " Felis leopardus. 66°
- Wild Donkey. "
- Emyda granosa.

Skeleton of Binturong.

Hylobates hoolock.

Skin of Ursus malayanus.

Cranium of Ursus malayanus.

Skeleton of Chelonia virgata. **

- Ceriornis satyra. ٤.
- Galloperdix.
- " several species of birds.

Can of alcoholic specimens.

WILLIAM KELLEY, New York.

Oustiti Monkey.

JOHN ROWLEY, Jr., Brooklyn. Purple Grakle, mounted.

Snow Bunting, mounted.

Yellow Warbler, mounted.

CAPTAIN JAMES HEDDEN, Police Department, New York. 1 glass sponge (euplectella).

exchanges.

MINERALOGICAL DEPARTMENT.

REV. W. T. CROSS, Denver, Col.

33 specimens of Colorado minerals.

B. F. WOOD, New York City.

3 specimens of minerals from Colorado.

A. HOLLICK, New York City.

1 piece of native gold in limestone, Mariposa, Cal. J. W. DEEMS, Brooklyn, N. Y.

28 specimens of minerals from various localities. W. W. JEFFERIS, Philadelphia, Pa.

Garnets from Italy.

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ZOOLOGICAL DEPARTMENT.

5 heads—Elk, Moose, Buffalo, Antelope. 29 specimens—Mammals. 44 '' Birds. 20 '' Monkeys.

LIBRARY.

Manual of Qualitative and Quantitative Analysis.—Plattner. Manual of Determinative Mineralogy.-Brush. Catalog der Conchylien-Sammlung.-Paetel. Nomenclator Heliceorum Viventium. --Pfeiffer and Clessin. Legislative Manual, New York State. 1884. Naturalists' Directory. 1884.-Cassino. Report of the H. M. S. Challenger. Vol. VIII. Zoology. Vol. IX. Zoology. 2 vols. ... " " " ... " Vol. I. Physics and Chemistry. American Naturalist. 1884. Science. 1884. The Auk. 1884. Annals and Magazine of Natural History. 1884. The Zoologist. 71884. The Ibis. 1884. Nature. 1884.

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TO THE

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FIRST COURSE, 1884 and 1885.

AUTUMN OF 1884.

HUMAN ANATOMY AND PHYSIOLOGY.

1. The Skeleton.

3.

- 2. The Muscular System.
- 4. Nervous System and Senses.
- Digestion and Respiration. 5.
- The Arteries and Veins.
- Hygiene. 6.

MINERAL KINGDOM.

Building and Ornamental Stones.

7. Granites and Sandstones. 8. Limestones and Marbles.

VEGETABLE KINGDOM.

Forestry.

- 9. Evergreens-the Pine, 10. Deciduous 'Trees -- the Oak, Spruce, and Cedar. Elm, and Maple.
 - SPRING OF 1885.

16.

ANIMAL KINGDOM.

- 11.
- Introductory—The Sea. Corals and Sea Fans. 12.
- Oysters and Clams. 13.
- 17. Flies and Mosquitos. 18. Butterflies and Moths.
- 19. Bees and Ants.

Crabs and Lobsters.

Marine Univalves and Snails. 14. 15. The Nautilus and Argonauta.

The Yellowstone National Park.

20. Beetles.

SECOND COURSE, 1885 and 1886.

AUTUMN OF 1885.

PHYSICAL GEOGRAPHY.

- The Alleghanies and Niagara. 1. The Mississippi Valley 2.
- 6. The Yosemite Valley.
 - Mexico and Central America.
- 4. Monument Park. 5

3.

- The Cañons of the Colorado.

SPRING OF 1886.

ZOOLOGY.

Fishes.

- 11. Herring and Shad. 12.
 - Salmon and Trout.
- Halibut and Flounder.
 Cod and Hake. 15. Sharks and Rays.

Reptiles. 17. Snakes and Lizards.

16. Salamanders and Frogs.

Birds.

18. Swimming Birds and Waders. | 19. Pheasants and Grouse. 20. Eagles and Owls.

- 7.
- 8. The West Indies.
- 9. The Andes.

- 10. The Amazon.

THIRD COURSE, 1886 and 1887.

AUTUMN OF 1886.

USEFUL MINERALS.

| 2. Iron and Lead. 1. Coal and Petroleum. 3. Silver and Gold

ARTICLES OF FOOD.

4. Wheat and Rice. 6. Tea and Coffee. 5. Sugar and Salt. 7. Indian Corn and Tobacco.

MATERIALS FOR CLOTHING.

8. Wool and Furs.

9. Cotton and Hemp. I 10. Silk and Flax.

SPRING OF 1887.

ZOOLOGY.

Birds

11. 12. Kingfishers and Hornbills. Woodpeckers and Toucans.
 Parrots and Cockatoos. Trogons and Humming Birds. | 14. Parrots a 15. Crows and Birds of Paradise.

Mammals.

16. 17.	Kangaroos and Opossums. Squirrels and Mice.		Elephants and Antelopes.	
11.	oquineis and mice.	19.	Sheep and Oxen.	
	20.	Swine and	Deer.	

FOURTH COURSE, 1887 and 1888.

AUTUMN OF 1887.

PHYSICAL GEOGRAPHY.

1.	The Atmosphere	3.	Scandinavia and the Alps.
2.	Rain, Ice, and Glaciers	4.	Thibet and the Himalayas.

RACES OF MANKIND.

5.	The Nile and its Peoples.	8. China and the Chinese.

б.	India	and its	Peoples.	19.

- 7. The Mediterranean and its Peoples.
- Japan and the Japanese.

10. The Arctic Regions and the Eskimos.

SPRING OF 1888.

ZOOLOGY.

Mammals.

11.	The Horse and Rhinoceros.	14.	Bats and Moles.
12	The Whales and Manatees.	15.	Monkeys of the New World.
13.	Dogs and Seals.		Monkeys of the Old World.

RACES OF MANKIND.

17. Peoples of the Pacific Islands. | 19. Indians of South America. 18. Indians of North America. 20. Early Inhabitants of Europe.

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