

52D CONGRESS, }
1st Session. }

SENATE.

{ Mis. Doc.
No. 170.

REPORT

OF THE

NATIONAL ACADEMY OF SCIENCES

FOR

THE YEAR 1891.

WASHINGTON:

GOVERNMENT PRINTING OFFICE,

1892.

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4. MENDENHALL, T. C.: An Exhibition of the New Pendulum Apparatus of the U. S. Coast and Geodetic Survey, with some Results of its Use. Discussed by Messrs. Gould, Abbe, and Brewer.

5. MENDENHALL, T. C.: On the Use of a Free Pendulum as a Time Standard.

6. COPE, E. D.: On Degenerate Types of Scapula and Pelvic Arches in the Lacerilia. Discussed by Messrs. Morse and Brewer.

7. OSBORNE, T. B.; presented by S. W. Johnson: The Proteids or Albuminoids of the Oat Kernel. Second paper. (Read by Mr. Johnson.) Discussed by Mr. W. Gibbs.

8. PEIRCE, C. S.: Astronomical Methods of Determining the Curvature of Space. Discussed by Mr. Pickering.

9. ALLEN, J. A.: On Geographical Variation among North American Birds, considered in relation to the peculiar Intergradation of *Colaptes auratus* and *C. cafer*. Discussed by Messrs. Brewer, Morse, and Marsh.

10. CHANDLER, S. C.: On the Variation of Latitude. Discussed by Messrs. A. Hall, Gould, Pickering, and Young.

11. SCUDDER, S. H.: The Tertiary Rhynchitidae of the United States. (Read by title.)

12. ROOD, O. N.: On a Color System. Discussed by Mr. Peirce.

13. REES, J. K.; presented by E. C. Pickering: Preliminary notice of the Reduction of Rutherford's Photographs. Discussed by Mr. Gould.

14. ROWLAND, H. A.: On the Application of Spectrum Analysis to the Analysis of the Rare Earths, and a New Method for the Preparation of Pure Yttrium. (Read by title.)

15. GILL, THEO.: A Nomenclator of the Families of Fishes. (Read by title.)

16. MICHELSON, A. A.: Measurement of Jupiter's Satellites by Interference. Discussed by Messrs. Chandler, Young, and Hall.

17. BROOKS, W. K.: The Follicle Cells of Salpa. Discussed by Mr. Morse.

DEATH OF MEMBERS.

At the close of the scientific session the president announced the death of the following members of the Academy who have died since the last meeting: Prof. John LeConte, Prof. Joseph Leidy, Prof. Julius E. Hilgard, and Prof. William Ferrel.

The following members were appointed to prepare the biographical memoirs:

Of Prof. LeConte, Prof. Joseph LeConte.

Of Prof. Leidy, Dr. S. Weir Mitchell.

Of Prof. Hilgard, Prof. E. W. Hilgard.

Of Prof. Ferrel, Prof. Cleveland Abbe.

The Academy then adjourned to meet in Washington the third Tuesday in April, 1892.

SPECIAL SESSION.

HELD IN NEW YORK CITY, NOVEMBER 11, 1891.

A special session of the Academy having been called by the council, in accordance with Article III, section 1, of the constitution, the Academy convened at Columbia College, New York city, November 11, 1891, the president, Prof. O. C. Marsh, presiding.

The president submitted his annual report to Congress, as far as completed, and the recommendation from the council that he should include

in this report the proceedings of the present meeting was adopted by the Academy.

TREASURER'S STATEMENT.

A statement from the treasurer, Dr. J. S. Billings, dated November 9, 1891, and showing the following available balances, was read by the home secretary:

General fund	\$715.98
Bache fund	502.77
Watson fund	3,441.60
Draper fund	913.51
Smith fund	1,554.62

The home secretary also read letters from the treasurer relating to a portion of the funds of the Watson trust, and the following recommendation from the council was adopted by the Academy:

Resolved, That the treasurer, Dr. John S. Billings, is authorized to sell the 134 shares of stock of the Michigan Mutual Life Insurance Co. now held in the name of the Academy, for the price named in the offer of Mr. Dusenbury in his letter of the 9th inst., viz, 160 and accrued interest to date; and to invest the proceeds of this sale as proposed by the treasurer in his letter of the 9th inst.

In regard to the memoirs of the Academy, the home secretary reported that one hundred pages of volume v had been printed, but that some delay had been caused by the illustrations. This difficulty was now removed and the printing would soon be resumed.

THE BARNARD MEDAL.

The following documents from the trustees of Columbia College, concerning the proposed Barnard medal, were then read by the home secretary:

THE TRUSTEES OF COLUMBIA COLLEGE
IN THE CITY OF NEW YORK, NO. 67 WALL STREET,
New York, November 7, 1891.

GENTLEMEN: The trustees of Columbia College, as residuary legatees and devisees of the late President Barnard, have accepted and undertaken to perform the trusts created by his will and have instructed me to communicate with you for the purpose of ascertaining your willingness to charge yourselves with the duty of declaring to the trustees of Columbia College at the close of every term of five years the name of the person whom you judge worthy to receive the "Barnard Medal for Meritorious Service to Science."

I inclose herewith a copy of the portion of President Barnard's will relating to the medal referred to, together with a transcript from the minutes of the trustees.

Very respectfully,

JOHN B. PINE,

Clerk.

THE NATIONAL ACADEMY OF SCIENCES.

EXTRACT FROM THE WILL OF F. A. P. BARNARD.

2. All the remainder of my property invested as aforesaid to constitute a fund, under the name of the Barnard Fund for the Increase of the Library; the income from the same to be devoted to the purchase on account of the library of Columbia College

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