tion, but the intricacies of the subject prevented the lecturer from entering into a discussion of them.

In reference to the applicability of evolution to man's origin, the evidences in favor of an affirmative answer have been growing. The discovery, in 1894, of remains of an intermediate type between the higher apes and man—*Pithecanthropus erectus*—bears upon the question. The intermediate character of that form was well brought out by the opinions expressed by competent anatomists, some declaring the remains to be of an ape-like form and others of primeval man.

But more suggestive evidences are found in the comparative study of animal intelligence and of the structure and physiology of the brain. There is a gradual increase in intelligence with increase in complexity of the brain, and the discovery of localized areas presiding over definite coordinated acts brings evidence of the close relation between brain structure and mentality. Clinical studies and criminal anthropology show that disorders of the will and mental derangements are dependent upon disorders of the nervous system. Man can not be separated in his development from other animals; he differs from them in the degree of his development, and his nobility depends, not on his origin, but on how far he is advanced beyond it.

The text of the lecture is followed by six appendices, made up largely of apt quotations which help to show the state of opinion and to illuminate some points of the lecture.

William A. Locy.

Oeuvres Complètes de J.-C. Galissard de Marignac: Hors-série des Mémoires de la Société de Physique et d'Histoire Naturelle de Genève. Geneva, Eggimann et Cie.; Paris, Masson et Cie, et al. Vol. I. 4to. Pp. lv + 701.

The collected publication of the scattered writings of a great scientific man forms one of the most adequate and fitting memorials of him, because it enables many otherwise ignorant to perceive the way in which he attained greatness. The present volume, which covers twenty years of the life of the eminent Swiss chemist, is no exception to this rule. It contains, in the first place, an interesting biography by E. Ador, filling the first fifty-five pages, and after this Marignac's papers on atomic weights, crystallography and other chemical and physicochemical subjects, arranged in chronological order, as far as 1860.

These papers form a notable record of unusual ability, enthusiasm and perseverance, of which any nation may well be proud. Only one lack is to be noticed in the present publication, in common with many other French books, namely, the lack of an index. This deficiency may well be supplied in the second installment; for it is to be hoped that this handsome volume will soon be followed by another, completing the record.

Theodore William Richards.

SOCIETIES AND ACADEMIES.

AMERICAN MATHEMATICAL SOCIETY.

During the Christmas holidays the American Mathematical Society held a series of three meetings, at New York, Chicago and San Francisco. The ninth annual meeting of the entire society was held at Columbia University, on Monday and Tuesday, December 29–30. The San Francisco Section held its second regular meeting at the University of California, December 23. The Chicago Section met at the University of Chicago, January. 2–3. The meetings were well attended. The several programs included some fifty papers, being about one third of the society's annual production. Ten years ago the United States hardly produced one sixth of this amount of mathematical material. The comparison fairly represents the recent great advances in mathematical interest in this country.

Reports of the sectional meetings will appear separately in Science. The annual meeting, at New York, was attended by sixty members of the society. Twenty-six papers were read at the four sessions. The council announced the election of the following persons to membership in the society: Dr. A. B. Coble, University of Missouri; Mr. W. R. Cornish, State Normal School, Cortland, N.

Y.; Dr. A. G. Hall, University of Michigan; Mr. E. L. Hancock, Purdue University; Professor L. M. Hoskins, Stanford University; Mr. W. D. A. Westfall, Yale University; Mr. W. F. White, State Normal School, New Paltz, N. Y. Sixteen applicants for admission to the society were received.

At the annual election the following officers and members of the council were chosen:

President, Thomas S. Fiske.

Vice-Presidents, W. F. Osgood, Alexander Ziwet.

Secretary, F. N. Cole.

Treasurer, W. S. Dennett.

Librarian, D. E. Smith.

Committee of Publication, F. N. Cole, Alexander Ziwet, D. E. Smith.

Members of the Council, to serve until December, 1905, James Harkness, Heinrich Maschke, Irving Stringham, H. W. Tyler.

The report of the librarian shows that the society's library, which was recently deposited in the charge of the Columbia University Library, is rapidly growing and already contains nearly one thousand bound volumes. The exchange lists of the *Bulletin* and the *Transactions* now include about one hundred and twenty mathematical journals, being nearly all that exist. Many gifts have also been received. It is hoped that the society's collection may ultimately become the most extensive one of the kind in the country. Besides the mathematical journals of the world, it is intended to include a full set of mathematical Americana, thus making the library a historical as well as mathematical repository.

A special feature of the annual meeting this year was the presidential address. Under the title: 'On the Foundations of Mathematics,' the retiring president, Professor Eliakim Hastings Moore, advocated the desirability of the society exercising a more effective influence on the teaching of elementary mathematics. The address will appear in SCIENCE. A committee was appointed by the council to consider the questions involved.

The following papers were read at the annual meeting:

E. V. HUNTINGTON: 'A complete set of postulates for the theory of real number' (second paper).

E. V. HUNTINGTON: 'On the definition of the elementary functions by means of definite integrals.'

C. J. KEYSER: 'On the axiom of infinity.'

G. H. DARWIN: 'The approximate determination of the form of Maclaurin's spheroid.'

HARRIS HANCOCK: 'Remarks on the sufficient conditions in the calculus of variations.'

L. E. DICKSON: 'The abstract group simply isomorphic with the alternating group on six letters.'

PRESIDENT E. H. MOORE: Presidential Address, 'On the foundations of mathematics.'

W. E. TAYLOR: 'On the product of an alternant and a symmetric function.'

E. D. ROE: 'On the coefficients in the product of an alternant and a symmetric function.'

E. D. ROE: 'On the coefficients in the quotient of two alternants (preliminary communication).'

E. O. LOVETT: 'A transformation group of $(2n-1)$ $(n-1)$ parameters, and its rôle in the problem of n bodies.'

I. E. RABINOVITCH: 'On solid lunes of conicoids, analogous to the circular lunes of Hippocrates of Chios.'

E. B. WILSON: 'The synthetic treatment of conics at the present time.'

A. B. COBLE: 'On the invariant theory of the connex (2, 2) of the ternary domain viewed as a connex (1, 1) in a five-dimensional space.'

EDWARD KASNER: 'The general quadratic systems of conics and quadrics.'

W. F. OSGOOD: 'On the transformation of the boundary in the case of conformal mapping.'

W. F. OSGOOD: 'A Jordan curve of positive area.'

MAXIME BÔCHER: 'Singular points of functions which satisfy partial differential equations of the elliptic type.'

J. W. YOUNG: 'On the automorphic functions associated with the group of character [0, 3; 2, 4, ∞]' (preliminary report).

R. W. H. T. HUDSON: 'The analytic theory of displacements.'

H. E. HAWKES: 'Enumeration of the non-quaternion number systems.'

H. F. STECKER: 'On the parameters in certain systems of geodesic lines.'

G. D. BIRKHOFF and H. S. VANDIVER: 'General theory of the integral divisors of $a^n - b^n$, and allied cyclotomic forms.'

F. MORLEY: 'On the determinant $|(x_i - a_j)^{-2}|$.'

G. A. Miller: 'A new proof of the generalized Wilson's theorem.'

A pleasant social feature of the meeting was an informal dinner on Monday evening at which about forty persons were present.

The next meeting of the society will be held in New York on Saturday, February 28. Arrangements are being made for the coming summer meeting and colloquium, to be held in August or September.

F. N. Cole,
Secretary.

THE NEW MEXICO ACADEMY OF SCIENCE.

A New Mexico Academy of Science was formed at Las Vegas, N. M., on December 22. The following officers were elected for the ensuing year:

President, Frank Springer.
Vice-President, Dr. Chas. R. Keyes.
Secretary and Treasurer, Dr. W. G. Tight.
Members of Executive Committee, T. D. A. Cockerell, J. D. Tinsley.

The following papers were read:

W. G. Tight: 'The Erosion Cycles of the Rio Grande at Albuquerque.'

E. L. Hewett: 'Notes on the Pecos Indian Tribe.'

H. N. Herrick: 'The Gypsum Deposits of New Mexico.'

J. D. Tinsley: 'The Work of the Department of Soils and Physics of the New Mexico A. and M. College and Experiment Station.'

E. L. Hewett: 'An Archeological Reconnaissance of the Chaco Cañon Region.'

C. E. Magnusson: 'Observations on Soil-moisture in New Mexico from the Hygienic Viewpoint.'

T. D. A. Cockerell: 'Our Present Knowledge of the Fauna and Flora of New Mexico.'

John Weinzirl and C. E. Magnusson: 'Further Contributions to the Study of the Blood Changes Due to Altitude.'

John Weinzirl: 'The Availability of New Mexico's Climate for Outdoor Life.' (Read by title only.)

W. G. Tight: 'The History of the Sandia Mountains.'

T. D. A. Cockerell.

DISCUSSION AND CORRESPONDENCE.

MARINE ANIMALS IN INTERIOR WATERS.

The recent accounts of the finding of squid in Lake Onondaga, New York, recall two similar instances that were brought to the attention of the U. S. Fish Commission several years ago.

The commission received for identification from Northern Michigan a specimen of remora (*Echeneis naucrates*), with the information that it had been caught by an Indian woman in a trout stream on the southern shore of Lake Superior. There was no reason to doubt the facts from the evidence contained in affidavits which were quickly produced. The true inwardness of this matter has never been cleared up, although it was learned that a New York City sportsman had been to this region a short time before and had been in the company of the man who forwarded the specimen.

By a singular coincidence, which must be of interest to psychologists and telepathists, at the time the Indian squaw was catching a remora in a Michigan river a Washington angler was landing another at the Great Falls of the Potomac, 16 miles above Washington and 60 miles from salt water. This specimen was brought to the Fish Commission the next day by the man who caught it, and whose ingenuousness there was no reason to doubt. Later, several of his friends called and explained that they had bought the fish in the market and attached it to his line when his attention was diverted.

On the authority of Professor Hargitt, of Syracuse University, a sargassum fish (*Pterophryne histrio*), said to have been caught in Onondaga Lake, was exhibited in Syracuse some years ago. H. M. Smith.

A BRILLIANT METEOR.

To the Editor of Science: On the evening of November 15, at 6:45 central standard time, a very brilliant meteor was observed in its fall to the earth by many persons in the states of Ohio, Kentucky, Tennessee, Louisiana, Mississippi, Alabama and Georgia. At once, though at first independently of each