lowing papers: 'Report of the Annual Meeting of the Society,' by the Secretary; 'On Some Birational Transformations of the Kummer Surface into Itself,' by Dr. J. I. Hutchinson; 'Theorems concerning Positive Definitions of Finite Assemblage and Infinite Assemblage,' by Mr. C. J. Keyser; 'Dini's Method of showing the Convergence of Fourier's Series and of other Allied Developments,' by Mr. Walter B. Ford; 'Shorter Notices'; 'Fehr's Application of the Vectorial Analysis of Grassmann to the Infinitesimal Geometry,' by Mr. E. B. Wilson, and 'The Annuaire du Bureau des Longitudes,' by Professor E. W. Brown; 'Notes'; 'New Publications.'

The Plant World for January comes in a new and improved garb externally and internally. The first article, by Alice Carter Cook, entitled, 'Some Filipino Botany' comprises some curious extracts from Blanco's 'Flora.' C. F. Saunders contributes 'Hints for Beginners in the Determination of Grasses,' and an excerpt from Bulletin 28, Division of Forestry, discusses 'The Threatened Destruction of the Big Trees of California.' E. M. Williams describes 'The Rosy Tricholoma' and C. L. Pollard in the supplement continues 'The Families of Flowering Plants,' treating of various families of the orders Polygonales and Centrospermæ.

The American Naturalist for February is a particularly strong number in spite of the absence of 'Editorial Comment and Reviews.' It opens with a long and critical review of 'Scharff's History of the European Fauna' by Leonhard Stejneger, Scharff's work being praised for its admirable suggestiveness and treatment of the subject, though Dr. Stejneger combats, we think successfully, his advocacy of an invasion of Europe from North America by way of Greenland. B. Arthur Bensley discusses 'The Question of an Arboreal Ancestry of the Marsupialia and the Interrelationships of the Mammalian Subclasses,' considering that in spite of all evidence presented, Huxley's theory of a genetic succession of the former representatives of the Monotremata, Marsupialia and Placentalia is still entitled to first consideration. Arnold E. Ortmann briefly reviews 'The Theories of the Origin of the Antarctic Faunas and Floras,' stating that he accepts Hooker's general idea of the former existence of land connection between the southern portions of existing continents. Oldfield Thomas writes of 'The Generic Names *Myrmecophaga* and *Didelphis*,' claiming that the former name justly belongs to the Great Ant-eater and *Didelphis virginiana* to the Virginia opossum. The species *cinereus* and *alstoni* he considers as members of the genus *Marmosa*. Finally Edwin C. Eckel presents 'The Snakes of New York; an Annotated Check List,' giving twenty-five species and subspecies, this being the first paper on the ophidian fauna of New York since Baird's 'Serpents of New York.'

Numbers 62 to 66 of the interesting *Communications from the Physical Laboratory at the University of Leiden* have been received in this country. The preceding numbers of the series are mainly in English. These numbers are in German except No. 65, which is in French. All are reprints from the *Livre jubilaire dédié à M. Prof. Lorentz.*

THE MACMILLAN COMPANY, agents of the New York University Press, will publish early in March, the first number of a scientific quarterly under the title *New York University Bulletin of the Medical Sciences*, edited, under the auspices of the New York University Medical Society, by an editorial committee consisting of B. Farquhar Curtis, M.D., Robert J. Carlisle, M.D., E. K. Dunham, M.D., John A. Mandel and William H. Park, M.D.

SOCIETIES AND ACADEMIES.

ANTHROPOLOGICAL SOCIETY OF WASHINGTON.

THE 315th meeting of the Anthropological Society was held on February 12th. Mr. Paul Brockett gave a short paper on 'Ancient Mexican Books,' and exhibited a copy of the Borgian Codex, lately reproduced through the munificence of the Duc de Loubat. With the codex was shown a Japanese book, illustrating the similarity in methods of folding. 'The Unwrapping of a Peruvian Mummy,' by W. H. Holmes and Walter Hough, proved interesting. A mummy pack from Peru was divested of its wrappings and from the swathings of cotton-bolls, leaves and cloth were taken the skeletons

of an adult and two infants. With the bodies were fabrics, pottery, gourds, a basket of two compartments containing a thorn needle, thread, red pepper and spinning apparatus. The presentation was further illustrated with plates from Reiss and Stübel's 'Necropolis of Ancon.'

W. H. Holmes presented a valuable paper on 'The Peopling of America,' in which a wide range of topics was discussed and illustrated by diagrams. It was aimed especially to bring forward the various problems involved in the new light thrown upon them by recent geological research. The biological problems were presented with the aid of a diagram outlining the history of the species and fixing the apparent position of the American people among the races of the world. Problems of chronology were elucidated by means of a diagram in which the genetic tree of the hominidæ was made to traverse the geologic time scale. Taking root in Tertiary times, the human stem is believed to have sent out four or more branches during Glacial and post-Glacial times, the latter period probably witnessing the specialization of the present American branch. The various views with respect to the geographical position of the cradle of the race were reviewed, and distribution and differentiation were discussed. Preference was given to the view that the eastern rather than the western continent was the original home of the group.

In the fourth section, the bridges and ferries by means of which America could have been occupied were passed in review, and the conclusion was reached that, so far as the present populations are concerned, they must have arrived by way of Bering Strait and that they were thus necessarily of Mongolian stock. Possible interference of the glacial ice sheet was considered, and the probabilities of pre-Glacial, inter-Glacial, and post-Glacial migration weighed.

The seventh section dealt with migration and the laws that govern movements of faunas and peoples, and the effects of movements of human groups from Asia to America by Bering Strait upon somatic and cultural conditions were carefully presented.

The eighth section included a comparative study of American culture with reference to questions of origin; and the concluding section presented the archeological and paleontological evidence with the view of determining, as far as possible, its bearing upon questions of time, people and culture. It appeared that, although many phases of the investigation are yet in the speculative stage, comparative anthropology and geology are gradually but surely bringing order out of chaos.

Major Powell, in discussing Professor Holmes's paper, urged strongly that the tendency in culture development is toward integration and not toward differentiation. He pointed out that the number of languages in America evidences a low culture status, and affirmed that a similarly low status had been observed among certain tribes of Indians, as to artifacts. These remarks were in support of Major Powell's hypothesis that the precursor of man entered America destitute of speech and arts and at a period when Alaska was a land area coincident with Asia.

Mr. McGee said, in reference to the chronology of the hominidæ, he would place the precursor well down in the Glacial period, when the change began from divergence to integration. He said that development is by that process, and instead of representing the races by a number of radiating lines, he would show the divisions of the human race by converging lines developing toward unity.

Professor O. T. Mason, whose work on these problems is well known, was unfortunately unable to be present.

Walter Hough.

Biological Society of Washington.

The 334th meeting was held on Saturday evening, February 9th. H. C. Oberholser spoke on the subject of 'A Naturalist in the Catskills,' describing at some length the topography of the region, the character of the vegetation and the more prominent birds and mammals, illustrating his remarks with numerous lantern slides. The remainder of the evening was devoted to a continuation of the discussion of the question of previous land connections between Asia and North America. Theo. Gill reviewed the evidence presented by the fossil mammals and existing fishes, saying that there

had not been one, but several land connections between the continents during the past.

Vernon Bailey said that nine species and subspecies of voles inhabiting the islands, coast and barren grounds of Alaska, belong to a well-defined group in the subgenus *Microtus* not represented elsewhere in America, but largely rep resented in Siberia and Northern Europe, *M. aperazius* of St. Michaels, for example, being closely related to *M. arvalis* of Europe. Among the red-backed voles *Evotomys alascensis* of the barren grounds of Alaska is much more nearly related to *E. rutilus* of northern Siberia and Europe than to any other American species. As these animals were small and weak and must therefore travel and spread slowly, he concluded that they could not have crossed over an ice bridge, but that their affinities pointed to a comparatively recent and somewhat extended, in point of time, land connection.

F. A. LUCAS.

THE NEW YORK SECTION OF THE AMERICAN CHEMICAL SOCIETY.

THE monthly meeting of the New York Section of the American Chemical Society was held on February 8th at the Chemists' Club, 108 West Fifty-fifth street.

Dr. T. C. Stearns read a paper on 'The Chemistry of Materials used in Perfumery and Kindred Arts,' in which he described the methods of preparation and chemical relations of the essential odors of flowers and their synthetic imitations.

In the discussion it was suggested, and by some maintained, that the effect of the synthetic preparations was harmful to the human system, but nothing whatever in the way of proof was adduced.

Dr. C. W. Volney gave the results of his investigation of the 'Decomposition of the Chlorids of the Alkali Metals by Sulfuric Acid,' with exhibition of crystals, which he considered polysulphates, the most important being the trisulphate. Some of those present thought these salts were probably acid sulphates, with sulfuric acid of crystallization, and that even the thermal evidence was in support of this explanation.

A paper by Dr. H. T. Vulté and Harriet W. Gibson on the 'Metallic Soaps from Linseed Oil; an Investigation of their Solubilities in certain of the Hydrocarbons,' was read by Dr. Vulté. Professor Sabin said that a great many of the driers in use were made from rosin and contained no linseed soaps at all. Dr. Dudley said that he knew of no subject needing more study than the chemistry of the drying of oil, and that a great deal of time had been spent on it in his laboratory. He found that oil driers used in excess retard drying, but that gum shellac driers could be used in all proportions and drying would occur approximately in proportion to the drier used. He had also found that a lead and manganese drier could be prepared which would induce drying of linseed oil in two hours.

H. C. Sherman and J. F. Snell were represented by H. C. Sherman, who read a paper in two sections: (a) 'On the Heat of Combustion as a Factor in the Analytical Examination of Oils'; (b) 'The Heats of Combustion of some Commercial Oils.'

It was shown that in the case of a drying oil exposure to the air produced a reduction in the heat of combustion which may amount to ten per cent., whereas lard oil with the same exposure lost only one per cent. of its heat of combustion.

To ignite the oil in the bomb calorimeter it was found satisfactory to absorb it on asbestos wool, whereby the use of any special igniting substance, with its consequent introduction of a troublesome error, was entirely obviated.

DURAND WOODMAN,
Secretary.

THE WESTERN PHILOSOPHICAL ASSOCIATION.

THE Western Philosophical Association held its first annual meeting at the University of Nebraska, Lincoln, on January 1st and 2d. The program was as follows:

Greetings—Chancellor E. Benjamin Andrews, University of Nebraska.

President's Address—'The Theory of Interaction'—Frank Thilly, Professor of Philosophy, University of Missouri.

'The Dominant Conception of the Earliest Greek Philosophers'—Frederick J. E. Woodbridge, Professor of Philosophy, University of Minnesota.

Discussion led by Arthur Fairbanks, Professor of Greek, University of Iowa.

'Martineau's Heredity and Philosophy'—Rev. J. R. Brown, of Kansas City.

Discussion led by C. B. McAfee, Professor of Philosophy, Park College.

'The Psychology of Profanity'—G. T. W. Patrick, Professor of Philosophy, University of Iowa.

Discussion led by D. D. Hugh, Professor of Psychology, State Normal School, Colorado.

'The Postulates of the Psychology of Style'—J. D. Logan, Professor of Philosophy, University of South Dakota.

Discussion led by L. A. Sherman, Professor of English Literature and Dean of the College of Arts, University of Nebraska.

'Some Philosophical Problems of the Present Time'—An informal address by J. E. Creighton, Professor of Logic and Metaphysics, Cornell University, and editor of the *Philosophical Review*.

'The Primacy of Will'—Edgar L. Hinman, Adjunct Professor of Philosophy, University of Nebraska.

Discussion led by W. M Bryant, of St. Louis.

'The Psychology of Imitation'—T. L. Bolton, Instructor in Psychology, University of Nebraska.

Discussion led by H. Heath Bawden, Instructor in Philosophy, University of Iowa.

'The Theory of Imitation in Social Psychology'—C. A. Ellwood, Assistant Professor of Sociology, University of Missouri.

Discussion led by A. Ross Hill, Professor of Philosophy, University of Nebraska.

The meeting next year will be at the University of Iowa under the presidency of the University of Iowa.

DISCUSSION AND CORRESPONDENCE.

CROCODILIAN NOMENCLATURE.

Mr. William J. Fox (Science, February 8, 1901, p. 232) in maintaining that the name *Lacerta crocodilus*, given by Linnæus, has become restricted to the Nile crocodile by its exclusive use for the latter in Hasselquist's 'Reise,' 1762, has apparently overlooked the fact that the types of *Lacerta crocodilus* are still in existence. It has been shown both by Dr. Lœnnberg and Mr. Andersson that the specimens which served Linnæus as types for his descriptions belong to the species which is commonly known as *Caiman sclerops*. As the generic name of the latter is also untenable, the species will stand in the future as *Jacaretinga crocodilus* (Linnæus), while the name of the crocodile of the Nile remains as before: *Crocodylus niloticus* Laurenti.

Leonhard Stejneger.

U. S. National Museum,
Feb. 16, 1901.

SHORTER ARTICLES.

STRATIGRAPHICAL NOTE.

In Science, N. S., Vol. XIII., No. 317, January 25, 1901, p. 135, I notice that the order in which the proposed names of the geological formations occurring in the Devonian and Silurian of Antigonish County, Nova Scotia, is given, might lead to a misapprehension of the natural succession of the strata in question. I have much pleasure in drawing attention to the following notes on the names suggested and characteristics of the five geological formations as they appear, in descending order, as follows:

Devonian.

1. The Knoydart formation. (Knoydart being the name of a settlement and brook in the vicinity of McArras brook, where this formation is well developed. The word is pronounced as if spelt Kroydiart.)

The Knoydart formation consists of red shales and sandstones, marls and tufaceous strata holding pteraspidian and cephalaspidian fishes associated with crustaceans whose affinities are close to a number of forms described from the Cornstone or Lower Old Red Sandstone of Great Britain, especially as developed in Herefordshire.

This Knoydart formation is thus referred to the 'Old Red Sandstone' or Devonian System.

Silurian.

Unconformably (?) below the Knoydart formation we find just east of the mouth of McArras Brook and along the south shore of Northumberland straits at this point, Silurian strata, holding marine organisms, which may be provisionally divided into *four* distinct formations.

2. The Stonehouse formation. This consists for the most part of dark red thin-bedded, fine-grained, shales or mudstones with a conspicuous and abundant lamellibranchiate fauna,