A Manual of Zoology. C. JEFEREY PARKER and WILLIAM A. HASWELL. New York and London, The Macmillan Company. 1900. Pp. xxv + 563. $1.60.

Optical Activity and Chemical Composition. H. LANDOLT, translated by JOHN MCCRAE. London, Whittaker & Co.; New York, The Macmillan Company. 1899. Pp. ix + 158.

The Refraction of the Eye. A. EDWARD DAVIS. New York and London, The Macmillan Company. 1900. Pp. xii + 431. $3.00

SCIENTIFIC JOURNALS AND ARTICLES.

The Osprey for January begins with a paper by Paul Bartsch on 'Birds of the Road,' which is followed by an illustrated article on 'Esthetic Birds; The Bower Birds of Australia and New Guinea,' by Theodore Gill. Under the title, 'The Birds of the Hawaiian Islands,' Leonhard Stejneger reviews Scott Wilson and Evans' monograph of the Hawaiian birds and discusses some of the many interesting points connected with the avifauna of the islands. Charles E. Beecher contributes a sketch of 'Othniel Charles Marsh as an Ornithologist,' and gives a list of the fossil species described by him. The editorials contain some interesting statements as do also the notes.

Bird Lore for February opens with a brief, but appreciative biographical sketch of the late Dr. Coues, accompanied by an excellent portrait. Frederic A. Lucas contributes an illustrated article, 'Concerning Birds' Tongues,' and Frank M. Chapman has a 'Note on the Economic Value of Gulls,' which includes a very beautiful picture of a group of kittiwakes. A list is given of '*Bird Lore's* Advisory Council,' whose members have consented to assist students by responding to their requests for information. Lynds Jones discourses 'On Methods in Teaching Ornithology at Oberlin College' and W. H. C. Pynchon has a paper on 'Every-Day Study of Birds for Busy People.' Morgan St. John (aged 12) has an article on 'February Birds,' which shows that good observations may be made by a young observer. There are numerous notes and book reviews, and in the editorial department the question of bird protection is discussed at length.

The Plant World commences its third year with the January number and announces that a series of articles by Mr. Pollard on the families of flowering plants will appear as supplements to each number. C. F. Saunders describes the 'New Jersey Pine Barrens in July,' Wm. T. Davis has some 'Observations on a Woodland Fire,' and C. A. Crandall under the caption 'The Fall Green Orchis (*Habenaria hyperborea*) visited by Mosquitoes' tells how these insects assist in the pollination of this plant. V. K. Chestnut discusses a 'Fatal Case of Amanita Poisoning' and Mrs. Caroline A. Creevy continues the series of articles on 'Plant Juices and their Commercial Values.'

McClure's Magazine for October contained a short story entitled 'The Killing of the Mammoth,' which was taken by many readers, not as fiction, but as a contribution to natural history. Numerous requests for information have been received by the Smithsonian Institution and the editors of the magazine. To explain matters, the editors have inserted in the issue for February an interesting and excellently illustrated article by Mr. F. A. Lucas of the U. S. National Museum, entitled 'The Truth about the Mammoth.'

SOCIETIES AND ACADEMIES.

THE PHILOSOPHICAL SOCIETY OF WASHINGTON.

THE 511th meeting of the Society was held at 8 p. m., on January 20th at the Cosmos Club, Surgeon General Sternberg, presiding.

Under the head of Informal Communications Professor T. J. J. See of the Naval Observatory, presented the results of his researches on the orbits of the Double-Stars τ Cygni and 95 Ceti. The substance of the paper was as follows: No good orbit of either star has been determined by previous investigators. The period of τ Cygni was found to be 57 years, and the eccentricity 0.37. The companion, which is always very difficult, has passed through periastion, and is slowly becoming easier to observe. 95 Ceti is the most difficult of known Double-Stars, and only a few measures have been made by previous observers. So many unsuccessful attempts had been made by Burnham and others during the last twenty years to separate the small star, that some astronomers

had reached the conclusion that the system is in very rapid motion, with a period of perhaps less than ten years. But the recent measure secured by Professor See with the great Equatorial of the Naval Observatory, combined with others taken by him with the Lowell telescope in Arizona in 1897, show that the System in fact revolves slowly with a period of about 150 years. The present position-angle is 157°, and the distance 0.33. As the components are of the 6th and 11th magnitudes, the difficulty of the investigation is apparent. This star has not before been seen at Washington, and Professor See's success in observing it led him to think the seeing here is occasionally very good indeed. As the companion of 95 Ceti will remain at a constant distance for about 20 years it forms a test object for telescopes which will prove a useful criterion for observers.

The first regular paper was by Dr. Hyvernat, Professor at the Catholic University of America, who made a tour last summer in Syria for the purpose of ascertaining the cause of the perennial fountains so numerous in the Middle Region, or Wusut, of the Lebanon System. Special attention was given to the Province of Kesrawan which he explored from west to east, following the Nahr-el-Kelb and its chief tributary, the Nahr-el-Zalib, until he arrived at the Sannin Group. He discovered that the juncture of the main with the side-ridge, which runs in a northwesterly direction between the basin of the Nahr-el-Kelb and that of the Nahr-Ibrahine, forms a table-land sloping towards the north-west and studded with gigantic, rocky knobs. Between these knobs are numerous holes in the shape of craters, or funnels, filled with snow. Finding these holes entirely without outlet on the sides and without an exception, free from water, Dr. Hyvernat came to the conclusion that as the snow melts, the water filters immediately through fissures in the underlying rock and appears again at the foot of the High-Mountain, or Jurd, in the form of the aforementioned fountains. This to him seemed a better solution of the question of the origin of the fountains, than the theory of the condensed vapors, put forth by many geographers. Completing his own observations from those of E. H. Palmer and R. F. Burton, the lecturer remarked that Mount-Lebanon offered very likely the most extensive system of perennial fountains fed by 'snow-swallowing' holes. Dr. Hyvernat showed quite a number of specimens of geology, particularly from the lower cretaceous and the Nubian sandstone.

The second paper was by Mr. Mitchell Carroll on 'Recent Excavations in the Roman Forum.' Mr. Carroll said that the excavations in the Roman Forum, conducted during the past year under the direction of Signor Guido Bacelli, Minister of Public Instruction, and with Signor Giacomo Boni as superintendent, have shown gratifying results, especially in three directions: First, in the removal of mediæval and modern accumulations from certain ancient structures, and in the collecting and classification of the architectural fragments scattered about in the Forum; second, in the reconstruction of the temple of Vesta and *Ædicula* adjacent to it, and of a number of the honorary columns, whose pedestals front the Basilica Julia; and third, in the excavation of the area of the Comitium bordering on the Forum which has led to the discovery of what purports to be relics of the period of the Kings. These are: the 'Niger Lapis,' popularity designated the 'Tomb of King Romulus'; archaic votive offerings, (such as a terra-cotta tablet, bronze figurines, etc.); and above all in importance, a stelé, bearing an archaic inscription, supposed to date from about the middle of the seventh century, B. C. The lecture was illustrated by lantern slides showing the progress of the work.

E. D. Preston,
Secretary.

GEOLOGICAL SOCIETY OF WASHINGTON.

The 96th regular meeting was held at the Cosmos Club, January 24, 1900.

The following papers were presented on the regular program.

(1) Mr. C. W. Hayes: 'Solution Sinks in a Quartzite Formation.'

Two circular depressions, 150 feet in depth, occur on the southern flanks of Coldwater Mountain in Alabama. These depressions have all the characteristics of solution sinks. The rocks in which they occur are lower Cambrian quartzites and sandstones, the upper beds of

the Weisner formation, which has a thickness of several thousand feet. The explanation offered for these sinks is that the beds in which they occur have been faulted over beds of limestone, and the material which originally occupied the depressions has fallen into underground channels through which it was carried off by flowing water.

(2) Mr. J. E. Spurr: 'Structure of the Basin Ranges.'

This paper describes the structure of many hitherto unstudied ranges in southern Nevada. The general structure is a series of open regular folds, with general north and south axes, accompanied by occasional parallel and transverse faults. Folding and faulting have gone on continuously since the region was upheaved at the close of the Jurassic. The present mountains owe their forms chiefly to erosion, which has been in progress, synchronously with the folding and faulting, since Jurassic time. The more common types are anticlinal ridges and synclinal valleys. The mountains are the compound result of erosion on rocks upheaved by these compound movements.

F. L. RANSOME,
DAVID WHITE,
Secretaries.

NEW YORK ACADEMY OF SCIENCES.

SECTION OF GEOLOGY AND MINERALOGY.

AT the meeting on January 15, 1900, with Mr. G. F. Kunz in the chair, there were twenty persons present.

A report was presented by Professor J. J. Stevenson in behalf of the committee appointed November 20, 1899, in reference to the death of Sir William Dawson, of Montreal. On motion by Professor D. S. Martin, the report was adopted and recommended to the Council for printing.

The Chairman called attention to the coming meeting this year, in Paris, of the Eighth Session of the International Geological Congress, described the proposed excursions, and suggested the earnest coöperation of the Section by delegates, contribution of papers and financial aid. On motion by Professor J. F. Kemp, the matter of the representation of the Academy at the International Congress was referred to the Council for action.

A paper was read by Professor F. B. Peck 'On Serpentines and Talcs in the Vicinity of Easton, Pennsylvania,' with abundant illustrations by specimens of rocks, diagrams and lantern views.

In the subsequent discussion Professor Kemp stated that, in the talc deposits on the west side of the Adirondacks, described by Professor Smyth, the derivation of the talc had been attributed to the magnesium limestone or intrusion of a magnesium silicate rock.

Professor Peck replied that he considered the tremolite rock to be due to the alteration of a siliceous dolomite; the talc, possibly to the interchange of silica from the pre-Cambrian gneisses and magnesia from the adjacent dolomite limestone.

The serpentine and 'viridolite' had indeed been subjected to much shearing and fracture, but had been solidly re-cemented, so that they they could be quarried out in large blocks, free from cracks—sometimes of twenty tons weight, in the case of the 'viridolite.'

Professor J. J. Stevenson then discussed 'C. E. Bertrand's Theory respecting the Origin of Certain Coals.'

Mr. F. E. Lloyd remarked that the cells of algæ, to whose accumulation Bertrand and Rénaud mainly attributed the formation of these coals, are exceedingly delicate and often mucilaginous. Those of *sphagnum* are much thicker, solid and woody, and yet a large quantity of this is required to produce much deposit of carbonaceous matter in swamps.

The Chairman inquired whether freezing or the introduction of silty waters might cause the precipitation of ulmic acid referred to by these authors.

Professor Stevenson stated that ulmic acid so precipitated would tend to carry down suspended matters and to clear the waters.

A paper by Mr. H. Ries was then read, 'Note on the Occurrence of Allanite in the Yosemite Valley, California.'

While in the Yosemite Valley in September, 1899, my attention was attracted by a black, coaly-looking mineral in the pegmatite veins on the northwestern side of the Valley. On closer

inspection the mineral proved to be allanite, and as it has not yet been recorded from this region, it seems of interest to note the fact.

The rock forming the walls of the Yosemite is a grano-diorite according to Turner (17th Ann. Rep. U. S. G. S., pt. I., p. 710). Traversing this in many directions are veins of pegmatite, which are sometimes straight and unbroken, at others curved, branched, or even broken into. These pegmatite veins are very prominent on the face of El Capitain, and also in the rock forming Eagle Peak. It was in the talus at the foot of the latter that the allanite was found, and while the mineral was at times abundant in the pegmatite blocks, still none of it was noticed in the grano-diorite. In only one instance was a distinctly bounded individual found, and on this a combination of orthopinacoid and base were recognizable. The other specimens were irregularly bounded grains that varied from a sixteenth to a quarter of an inch in diameter.

In addition to the quartz, muscovite and orthoclase present in the pegmatite, there were a number of radiating masses of epidote, which were evidently of primary origin; but in two instances the epidote occurred as a coating on hornblende and then seemed to be secondary. None was found in association with the allanite.

In conclusion, it may be said that it is interesting to find that allanite is evidently not the rare mineral that it was formerly considered to be, and that a careful watch is beginning to show its presence at many localities in the United States.

Alexis A. Julien,
Secretary of Section.

ONONDAGA ACADEMY OF SCIENCE.

At the January meeting the following officers were elected: *President*, John Van Duyn; *Vice-President*, J. D. Wilson; *Recording Secretary*, E. N. Pattee; *Corresponding Secretary*, H. W. Britcher; *Treasurer*, Miss L. W. Roberts; *Librarian*, Mrs. L. L. Goodrich; *Councilors*, G. A. Dakin, H. A. Peck and W. M. Beauchamp.

The annual report of the Geological Section showed that several investigations of local problems are being carried on and that some have been already completed during the year.

The report of the Zoological Section noted the occurrence within the county during the past year of the Bohemian wax wing, *Ampelis garrulus*, the jumping mouse, *Zapus hudsonius* and the hairy-tailed mole, *Parascalops breweri*. Additional localities were indicated for planaria, bryozoa and hydra. During the year fifty moths were taken, thus bringing the number of Lepidoptera of the county to over 600.

The report of the Botanical Section added the following plank to the county list: *Hyssopus officinalis*, *Chenopodium anthelminticum* and *Polygonum lapathifolium* with new stations for *Crepis virens*, *Glaucium glaucium* and *Scolopendrium*.

At the January meeting of the Geological Section, Professor E. N. Pattee reported on the progress of the investigations of the iron compounds of the county. The chief sources of these compounds are the red shales of the Salina formation, yielding small scales and flakes of hæmatite, the Corniferous, yielding crystals of pyrite and the Oriskany sandstone, yielding from one to five per cent. of iron, the color of the stone being, however, no index to the amount of iron, existing as a cement, which the rock contains.

H. W. Britcher,
Corresponding Secretary.

THE TEXAS ACADEMY OF SCIENCE.

During the last quarter of 1899 regular meetings of the Texas Academy of Science were held in the chemical lecture room of the State University on the second Friday evening of each month.

On October 13th, after a proper tribute to the worth and work of the late Dr. W. W. Norman, Professor of Animal Biology in the University and one of the most active members of the Academy, in which Messrs. Bray, Harper, Garrison, Sutton and others participated, Dr. Frederic W. Simonds, the incoming president, read his inaugural address, 'From the Standpoint of a Man of Science,' in which he made a vigorous protest against sham in all things, but especially in science, and an earnest effort to explain many of the popular misunderstandings of science and misconceptions concerning men of science and their work.

At the October meeting, Professor W. S.

Sutton, of the School of Pedagogy, read a timely and exceedingly interesting paper upon the 'Bachelor of Arts Degree,' in which he showed the origin of this ancient honor and its evolution until at the present time it stands for culture, and, in several prominent American institutions, has even become the sole mark of academic training.

The program for the December meeting was of two parts. The first, representing original investigation, consisted of two papers by Mr. E. T. Dumble, formerly State Geologist, entitled 'Cretaceous of Obispo Cañon, Sonora,' and 'Occurrence of Oyster Shells in Volcanic Deposits in Sonora, Mexico.'

Part second was of the nature of a symposium, in which the advancement of science during the past year occupied a conspicuous place. Dr. William L. Bray, discussed the 'Modern Trend of Botanical Studies,' showing clearly and forcibly the enormous strides made within the last few years; he pointed out the differentiation of the science of botany—how it had outgrown the grasp of any one man—and spoke briefly of its economic relations to many important industries.

Dr. Henry Winston Harper discussed the 'Recent Advances of Chemistry.' The solidification of hydrogen was, in his opinion, the most important chemical contribution to science during the past year. From a thermo-dynamic standpoint it is one of the greatest accomplishments of the nineteenth century, as it requires a temperature within 15° C. of the absolute zero. The study of the properties of matter at such extremely low temperatures is a virgin field for original investigation and phenomena of a most startling character may be looked for here. Some of the results of the latest research along this line were brought before the Academy. The advances of chemistry along many other lines were also discussed, especial stress being given to the recent utilization of the Indian corn plant, or maize, not only of the grain, but of the entire plant—pith, stalk and leaves. Professor Harper closed his discussion by reference to some recent developments of chemical theory, devoting particular attention to 'Werner's Theory of Coördinated Types.'

At a meeting of the Council, following this public session, Drs. Hilgartner, Bray and Bailey, were elected a Committee on Publication.

F. W. S.

UNIVERSITY OF TEXAS.

DISCUSSION AND CORRESPONDENCE.

FALSE BIBLIOGRAPHIC INDICATIONS.

TO THE EDITOR OF SCIENCE: For some years past a few scientific Hamlets have been trying to set the time right in the matter of 'authors reprints,' 'Separat-abdrücke', or 'tirages à-part.' The most essential of their demands is that such separate copies should be furnished with correct bibliographic indications, and should retain the original page-numbers. They recognize with gratitude that the last ten years have witnessed a vast improvement in this respect. But a new terror has arisen, and appears so frequently and in so many quarters that it seems time to raise a vigorous protest.

It is not uncommon to be favored by an author with a copy of his latest work giving the desired bibliographic indications—name of periodical, volume, page, and plate numbers, and date of publication—and apparently with the type undisturbed. But should some chance lead one to the original, one finds that one or more, perhaps all, of these indications are incorrect; or else that the type has been shifted, so that matter appears on a page other than that which it originally occupied. Direct misstatements of this specious nature are worse than no statement at all.

It is not gracious to look a gift horse in the mouth, but some instances will make the point clearer and may serve as a warning. Be it understood that this is no question of mere incompleteness of information, simple repaging, or even incorrect dating, for examples of these offences are familiar to every serious worker and are remedied by him in due course. But take such a case as this: "Studier öfver den baltiske Yngre kritans bildningshistoria. Af Anders Hennig. Aftryck ur Geol. Fören i Stockholm Förhandl. Bd. 21, Häft 1., 1899." The pagination runs from 19–82, and appears to be, as indeed it is, the original pagination. Then comes 'Häft 2' and the paper is said to be continued from the preceding 'Häft.' The pagination also continues, 83–138. There is