

these new somethings is kirs. This is no common mangy kirs, but a new kind of kirs altogether. He or it—for the author says enough about the relations of the atoms to make one careful—is introduced to our notice as follows:

"The most resultant discovery of all is that kirs is a hydrate of nitrogen, having the atomic form  $N_3HN_3$ ."

The second something new is Stuart, which is  $N_3H$ , it seems. According to the author this, as well as kirs, is unobserved. We understood that Curtius not many years since discovered a compound having the symbol of Stuart, but this is perhaps a mistake. Carbon has been found to be AN., ice is Aq. and made up of Stuart, Cyanogen and more Stuart. Coke equals kars and A. We are nowhere informed what is meant by A, nor is it easy to see what difference there is between 'combining constituents' and 'constituents' except with the eye of faith. The author explains, however, that "The grand difficulty of the calculation is that the revelations at the end constantly contradict the premises at the beginning."

Everything about this wonderful pamphlet is new, even the spelling is *sui generis*. For example: Flourine, Glucium, Rubidium, Phosphorous, Telerium, Tantalium, Lanthanium, Paladium.

We hope that E. H. Lisk, printer, Troy, N. Y., turned off a large edition of these pamphlets. They will all be needed, and when obtained ought to be carefully preserved as an illustration of the magnificent reach sometimes attained by the American intellect.

EDWARD HART.

#### NOTES AND NEWS.

##### BIOLOGY.

THE Tenth Annual Fish Commissioners' Report from Michigan is entirely in the field of fresh-water biology. It is important to mark the rapid development of biological work in the central universities of this

country, and to note that the work carried on by the State is so largely by the coöperation of the biologists of the University. Thus two of the papers of this report are by Professor Jacob Reighard, the first being a study of the development of the wall-eyed Pike, the second a valuable résumé of the whole subject of artificial fertilization. The Bulletin, No. 4, of the Commission, which we receive at the same time, contains a preliminary account of the biological examination of Lake St. Clair during the summer of 1893. This was suggested by the continued decrease in the number of Whitefish, but very wisely the work extended over a broader field. The objects of this examination are stated as follows: "(1) To study carefully and in the broadest possible way the life in the lake. After examining the physical characteristics of the lake, such as the color, transparency and chemistry of the water, a study of this sort should include a determination of the kinds of animals and plants in the lake. Every species should be sought out, carefully described and figured, and a specimen of it preserved. Then the habits of each species should be known, its habitat, its food, its enemies and its parasites. The numbers of animals and plants of each species in a given volume of water should be determined and the variations in these numbers in different parts of the lake and at different seasons of the year. Such a collection of data would form a complete picture of the biology of the lake." The work was under the direction of Professor Reighard, assisted by Dr. Ward, of the University of Nebraska, by Mr. Frank Smith, of the University of Illinois, and by several assistants from the University of Michigan. The materials collected were widely distributed for determination, and the reports are by Dr. Blanchard, of Paris, Dr. E. A. Birge, of the University of Wisconsin, and others. The survey seems to have been carried on with all the thoroughness both

in the collection of littoral, pelagic and deep-lake types, which characterizes the best marine work, and the final results promise to be of the greatest interest and importance.

MR. ARTHUR BIBBINS, who has been engaged during the past year in investigating the fauna of the Potomac Formation, in the interest of the Woman's College of Baltimore, has made a considerable collection of reptilian remains, mostly from the vicinity of Muirkirk, Md. The specimens represent the four species of Dinosaurs described by Professor Marsh under the names of *Allosaurus*, *Pleurocoelus* and *Priconodon*. A tibia, probably that of *Allosaurus*, measures 10 inches in width and 32 inches in length, although the ends are lacking. A single tooth seems to be referable to *Astrodon Johnsoni*, Leidy, which was based on a tooth found at Bladensburg, Md. The conditions are very unfavorable for collecting, as the specimens occur in a tough clay, often at a considerable depth, and are much scattered.

DR. S. W. WILLISTON, of Lawrence, Kansas, has in press a work, entirely rewritten, on the classification and structure of North American Diptera. It will contain tables of all the North American genera, including those from Central America and the West Indies, together with descriptions of larvæ, habits, anatomy, etc. It will appear next autumn. In its preparation he has had the assistance of Messrs. Aldrich, Townsend, Snow and Johnson, who have kindly prepared or revised the tables of the families with which they are best acquainted.

At the second open meeting of the Royal Society, on February 28th, Prof. W. F. R. Weldon opened a discussion on variation in animals and plants, his remarks being based on the report of a committee, consisting of Mr. Francis Galton, Mr. F. Darwin, Professor Macalister, Professor Meldola, Professor Poulton and Professor Weldon

himself, its object being to conduct statistical inquiries into the measurable characteristics of plants and animals. The first part of the report which was presented was described as 'an attempt to measure the death rate due to the selective destruction of *Carcinus menas* (the shore crab) with respect to a particular dimension.' Another paper bearing on the subject under consideration was presented by Mr. H. M. Vernon, on 'The Effect of Environment on the Development of Echinoderm Larvæ: An Experimental Inquiry into the Causes of Variation.' An interesting discussion followed, in which Mr. Thiselton Dyer, Professor Ray Lankester, Professor A. Agassiz, Mr. Bateson, Sir H. Howorth and the chairman took part. There seemed to be a prevailing doubt as to the suitability of mathematical methods in biological research.

PROF. H. W. CONN contributes to the March number of the *American Naturalist* an account of the Cold Spring Harbor Biological Laboratory, of which he is the director. The article is illustrated by four plates, showing the buildings and location. The laboratory was organized by Prof. F. W. Hooper as a branch of the Brooklyn Institute of Arts and Sciences, and held its first session in July and August, 1890, under the direction of Dr. Bashford Dean, now of Columbia College. The Cold Spring Laboratory does not rival the Wood's Holl Laboratory in the amount of research work accomplished, but offers exceptional facilities for students requiring instruction.

#### APPROPRIATIONS FOR THE U. S. GEOLOGICAL SURVEY.

THE appropriations for the U. S. Geological Survey for the fiscal year 1895-96, as made by Congress at its last session, will enable the bureau to continue its work under favorable circumstances. The appropriations for topography, geology, paleontology and chemistry are the same as those

for the present year, except that in the case of geology there is an additional appropriation of \$5,000 for the specific object of the investigation of the gold and coal resources of Alaska. For the rest, there is an appropriation for the preparation of the report on the mineral resources of the United States of \$18,000, an increase of \$3,000; and further was inserted in connection with this work, under the head of Public Printing and Binding, a clause providing for the printing of advance copies of papers on economic resources, and for this work an appropriation of \$2,000 was made. Under the head of engraving and printing the geological maps of the United States, authority was granted the Director to sell copies of topographic maps, with a descriptive text, at cost, with ten per centum added. The object of this item is to provide for the preparation of a series of ten or more maps, with text, to illustrate the typical topographic features of the United States, for use principally in teaching. It is anticipated that the maps and text will be prepared during the summer. To the appropriation for 'gauging the streams and determining the water supply of the United States, including the investigation of under-ground currents and artesian wells in arid and semi-arid regions,' \$7,500 was added, making the appropriation for this work \$20,000.

The total appropriation for the Survey, including all field and office expenses and salaries, is \$515,000.

An appropriation of \$200,000 was made for a survey of the lands of the Indian Territory, with the provision that the "Secretary of the Interior may in his discretion direct that the surveys in the Indian Territory, herein authorized, or any part of them, be made under the supervision of the Director of the Geological Survey." This work will result in the making simultaneously of a land subdivision survey and a topographic map.

## GENERAL.

THE German Anthropological Society is publishing an extensive description of the anthropological collections of Germany. Sixteen parts (costing from 2-15 M.), prepared by competent authorities, have already been issued.

THE *Technologisches Wörterbuch*, edited by Gustav Eger and published by Vieweg, Brunswick, is a full English-German and German-English dictionary of scientific and technical words, which should have as large a sale in America as in Germany.

THE first volume of the memoirs from the Department of Botany of Columbia College, a monograph of the *North American Species of the Genus Polygonum*, by John K. Small, is now in press.

DR. ERNST MACH, Professor of Physics in the University of Prague, has accepted a Professorship of Philosophy in the University of Vienna, and will direct a Laboratory of Experimental Psychology.

PROFESSOR E. W. HOPKINS, of Bryn Mawr College, succeeds Professor Whitney in the chair of Sanskrit and Comparative Philology, and Professor E. G. Bourne, of Western Reserve College, has been elected Professor of History, at Yale University.

PROF. WEIERSTRASS, of Berlin, has been elected Foreign Associate of the Paris Academy of Sciences; he received forty-three votes, one being given to Prof. Frankland and one to Prof. Huxley.

PROF. E. DORN succeeds Prof. Knoblauch as Director of the Physical Laboratory of the University of Halle.

PROF. M. K. RÖNTGEN, of Würzburg, has been called to the chair of Physics in the University of Freiberg, vacated by Prof. E. Warburg.

DR. R. BRAUNS has been made Professor of Mineralogy in the University of Tübingen.

DR. A. KOSSEL has been made Professor of Physiology in the University of Marburg.

DR. K. BOEDEKER, Professor of Chemistry in the University of Göttingen, died on February 22d, aged seventy-nine years.

SIR WILLIAM SAVORY, an eminent surgeon, and at one time Professor of Comparative Anatomy and Physiology at the College of Surgeons, died on March 4th, at London, in his sixty-ninth year.

DR. GEORG VON GIZYCKI, Associate Professor of Philosophy in the University of Berlin, died early in the present month.

DR. DARWIN G. EATON, formerly Professor of Natural History in Packer Institute, died on March 17th, at the age of seventy-two years.

PROF. PETER H. VANDER WEYDE, editor of *Manufacturer and Builder*, and formerly Professor in Girard College and at the Cooper Institute, died at New York, on March 18th, at the age of eighty-two years.

DR. HENRY COPPÉE, Acting President of Lehigh University, Professor of English Literature in the University of Pennsylvania, 1855 to 1866, and President of Lehigh University, 1866 to 1875, died at Bethlehem on March 21st, at the age of seventy-five years.

#### SCIENTIFIC JOURNALS.

##### THE PHYSICAL REVIEW, MARCH-APRIL.

*On the Attractions of Crystalline and Isotropic Masses at Small Distances:* A. STANLEY MACKENZIE.

*The Influence of Temperature upon the Transparency of Solutions:* EDWARD L. NICHOLS and MARY C. SPENCER.

*Determination of the Electric Conductivity of Certain Salt Solutions:* ALBERT C. MACGREGORY.

*The Apparent Forces between Fine Solid Particles Totally Immersed in Liquids, II:* W. J. A. BLISS.

*Minor Contributions; New Books.*

##### THE AMERICAN NATURALIST, MARCH.

*In the Region of the New Fossil, Dæmonelix:* FREDERICK C. KENYON.

*The Cold Spring Harbor Biological Laboratory:* H. W. CONN.

*Minor Time Divisions of the Ice Age:* WARREN UPHAM.

*The Skunk as a Source of Rabies:* W. WADE.

*The Classification of the Lepidoptera:* VERNON L. KELLOG.

*Recent Literature; Recent Books and Pamphlets. General Notes:—Geography and Travels; Mineralogy: Geology and Palæontology; Botany; Zoölogy; Embryology; Psychology; Archæology and Ethnology.*

##### THE BOTANICAL GAZETTE, MARCH.

*Apparatus for Physiological Botany (With plates IX.-XII.):* W. C. STEVENS.

*On the 'List of Pteridophyta and Spermatophyta of Northeastern America:* B. L. ROBINSON.

*Flowers and Insects, XIII.:* CHARLES ROBERTSON.

*Noteworthy Anatomical and Physiological Researches.*

*Briefer Articles; Editorial; Current Literature; Notes and News; Supplement.*

##### NEW BOOKS.

*Louisiana Folk-Tales.* Collected and edited by ALCÉE FORTIÉR. Boston and New York, published for the American Folk-Lore Society, Houghton, Mifflin & Co. 1895. Pp. xi+122. \$2.

*The Free Trade Struggle in England.* M. M. TRUMBULL. 2d Edition. Chicago, The Open Court Publishing Co. 1895. Pp. 288. 35 cts.

*Beiträge zur Kenntniss des Wesens der Säcular-Variations des Erdmagnetismus.* LOUIS A. BAUER. Berlin, Mayer & Müller. 1895. Pp. 54. M. 3.

*Field, Forest and Garden Botany.* ASA GRAY. Revised and extended by L. H. BAILEY. New York, American Book Co. 1895. Pp. 519.