pleasure of a very successful and profitable excursion and conference. A similar excursion into the Delaware and Guadalupe mountains of Texas and New Mexico will be given probably in May.

THE new Chemical and Metallurgical Laboratory of the United States Naval Station, Cavite, Philippine Islands, was officially opened on March 1, with Francis W. Glaze in charge. Although there had formerly been a laboratory at the Olongapo Station, this laboratory had been connected with the ordnance depot. This is the first time that this naval district has had a laboratory at the service of the district as a whole and operating under the supply department. The location is more or less ideal as far as light and ventilation are concerned. The building was an old, substantial one, with cement floors, and was well adapted for laboratory purposes.

ACCORDING to *Museum News* construction has begun on a $900,000 unit of the new museum building for the University of Michigan, at Ann Arbor. It is expected that this unit, which is about one third of the entire structure as now planned, will be completed by January 10, 1928. The finished building will be in the form of an irregular rectangle, two sides of which are included in the first unit. A feature of the building is the separation of the exhibition and laboratory space in different wings. The laboratory wing extends east and west, most of the laboratories being arranged on the north side. The aquaria and storerooms are for the most part on the south side of this wing. The laboratories will be equipped in accordance with the best modern practice, for the teaching of science.

ONE of the largest private collections of ferns in the world, contained in the herbarium of Dr. E. D. Copeland, has been deposited in the herbarium of the University of California, through the efforts of Dean E. D. Merrill, of the College of Agriculture. The collection, comprising some 12,000 specimens of ferns, many of them from old collections and of great historical value, will be available for use and reference at the university. Dr. Copeland is spending several weeks in Berkeley classifying the specimens and getting the herbarium into useful shape.

UNIVERSITY AND EDUCATIONAL NOTES

THE new chemistry building of the University of Richmond will be dedicated on April 11 during the spring meeting of the American Chemical Society in Richmond. Drs. Charles H. Herty and E. Emmet Reid will be the principal speakers at the ceremonies. After the dedication opportunity will be afforded everyone to inspect the new plant and the exhibition of industrial products to be displayed.

THE University of Rochester is perfecting plans for the construction of a new chemistry building. It will be three-story and basement, estimated to cost close to $250,000, with equipment.

A NEW chemical engineering laboratory is to be built at the Iowa State College, Ames. The building, for which contracts have been let, will be 100 by 72 feet and will be devoted exclusively to teaching research work in chemical engineering.

DR. JAMES KENDALL, professor of chemistry in New York University, has been appointed dean of the graduate school of the university, succeeding Dean Earle Brownell Babcock, who resigned recently after two years' leave of absence as European representative of the Carnegie Endowment for International Peace.

DR. W. C. BOWER, professor of electrical engineering at Northwestern University, has been appointed director of the school of engineering in the university.

MRS. THEODORE BOVERI, wife of the Italian biologist and organizer of the biological laboratory at Vassar College, has accepted the chair of biology at Albertus Magnus College, the new Catholic college for women in New Haven, and will come to this country next fall to organize the department.

DUE to the vacancy caused by the recent death of Dr. Albert W. Smith, late head of the department of chemical engineering, President Charles S. Howe, of the Case School of Applied Science, has appointed Dr. William Reed Veazey, professor of physical chemistry, acting head of this department.

DR. CHARLES A. DICKINSON has been appointed professor of psychology at the University of Maine.

ASSISTANT PROFESSOR F. S. NOWLAN, of the University of Manitoba, has been appointed professor of mathematics at the University of British Columbia.

M. MASSON, professor of pathological anatomy at the University of Strasbourg, has been appointed to a position in the University of Montreal.

PROFESSOR VON BERGMANN, of Frankfort, has accepted a call to the University of Berlin to succeed Professor F. Kraus in the chair of internal medicine.

DISCUSSION AND CORRESPONDENCE

HELIUM

A SUGGESTION in the use of helium for diving is that, on account of the cost of helium, the divers' atmosphere consisting of oxygen mixed with helium

and which gradually loses its oxygen by breathing and accumulates impurities, such as carbonic acid gas, shall be returned in a closed cycle for purification and restoration of its original composition. Gas filters would be used to take out impurities and effete gases, and new oxygen would be supplied in accordance with the advisability discoverable by gas tests, so that the same helium could be used over and over again for a great length of time without any considerable loss. In the same way, in a caisson, where the space is considerable, filters can be mounted within the caisson, through which the atmosphere can be circulated, filtering out the effete gases and impurities, and perhaps reducing the moisture by drying and returning the same to the caisson; while it is perfectly easy in this case to replenish oxygen by oxygen in pressure tanks or by using dioxide of barium or dioxide of sodium, to obtain any desired enrichment with oxygen to take the place of that which has been consumed. All of this can be put under automatic control, even within the caisson itself. An air-lock could also be constructed for saving as much as possible the helium from diffusion and loss when such lock is operated. Helium being a light gas, the exit from the air-lock should be in a downward direction and not upward. In other words, the trap door, as it were, should open outward in the air space in the form of a depending syphon, so that the helium necessarily escaping into the air-lock could be pumped out and recovered.

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BALL DANCING ON WATER-JET

A NOTE in *Science Abstracts* for January, 1927, reminds me that in the issue of SCIENCE for August 13, 1926, Mr. W. C. Baker discussed "The Retention of a Ball by a Vertical Water-Jet," reaching the conclusion that the "law of Bernoulli," sometimes referred to in this connection, has little if anything to do with the matter.

I reached a similar conclusion many years ago, writing in the *Youth's Companion*, probably about 1902. On page 166 of my "Elements of Physics," published in 1912, is a figure with the legend "Action and Reaction due to Adhesion," and the accompanying text reads substantially as follows: "If a spool carried on a flexible horizontal support is made to touch one side of a slender vertical jet of water, adhesion of the spool to the water deflects the stream, making it turn partly around [and above] the spool. The reaction for this action is a pulling of the spool toward and into the stream, so that it is presently hit on its under side by the rising water and is accordingly lifted. This phenomenon suggests an explanation of the fact that a small ball of cork or wood may be supported for a considerable time, perhaps many minutes, in such a jet of water as that just described, without falling out at the side."

The spool was carried by a rod on which it was free to turn, and it did turn briskly as the stream of water wound about it. The shape of the stream, drawn out into a thin web at the place of parting from the spool, plainly showed the action of adhesion. To allow sidewise motion of the spool the rod supporting it was carried by a piece of clock-spring.

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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

THE secretary of the International Commission on Zoological Nomenclature has the honor to announce the publication of Opinions 91 to 97 (rendered by the International Commission on Zoological Nomenclature) by the Smithsonian Institution in Smithsonian Miscellaneous Collections, volume 73, number 4, pages 1 to 30. The summaries read as follows:

OPINION 91. Thirty-five generic names of mammals placed in the official list of generic names: The following names are hereby placed in the official list of names: *Alces, Arvicola, Ateles, Bison, Bradypus, Canis, Capra, Cebus, Cervus, Choloepus, Condylura, Cricetus, Crocidura, Cystophora, Dasyprocta, Didelphis, Erethizon, Felis, Gulo, Halichoerus, Lepus, Lynx, Mus, Myrmecophaga, Nasua, Ovibos, Phyllostomus, Procyon, Putorius, Rangifer, Rhinolophus, Rupicapra, Sciurus, Sorex, Vespertilio.*

OPINION 92. Sixteen generic names of *Pisces, Amphibia* and *Reptilia* placed in the official list of generic names: The following names are hereby placed in the official list of generic names: PISCES: *Blennius, Echeneis, Esox, Ophidion.* AMPHIBIA: *Cryptobranchus, Desmognathus, Siren.* REPTILIA: *Alligator, Calamaria, Chelydra, Crotalus, Dermochelys, Eremias, Lacerta, Mabuya, Phrynosoma.*

OPINION 93. Twelve generic names of fishes placed in the official list, by suspension of the rules: The following twelve generic names of fishes are herewith placed in the official list of generic names, under the plenary power for suspension of the rules: *Conger* Cuv., 1817 (*Muraena conger* L.); *Coregonus* Linn., 1758 (*Salmo lavaretus* L.); *Eleotris* Bloch & Schneider, 1801 (*gyrinus* Cuv. & Val.); *Epinephelus* Bloch, 1792 (*marginalis* Bloch); *Gymnothorax* Bloch, 1795 (*reticularis* Bloch); *Malapterurus* Lacépède, 1803 (*Silurus electricus* L.); *Mustelus* Linck, 1790 (*Squalus mustelus* L. [=*Mustelus laevis*]); *Polynemus*