DEAN DEXTER S. KIMBALL, of Cornell University, gave the principal address on the occasion of the hundredth anniversary of the Ohio Mechanics Institute, which was celebrated on November 23 and 24.

ON December 17 and 18 there will be held at the Gayley Chemical and Metallurgical Laboratories of Lafayette College, Easton, Pennsylvania, the third "Plasticity Symposium," with ten papers on various problems of flow. The speakers are expected to include Dr. Albert E. Dunstan, of London, and Dr. Markus Reiner, of Jerusalem.

DR. JOSEPH S. ILLICK, state forester of Pennsylvania, represented the commonwealth at the fourth New England Forestry Conference held at Portland, Maine, on November 15 and 16. Dr. Illick spoke on the "Recreational Opportunities of the State Forests of Pennsylvania."

AT the tercentenary celebration of the birth of Marcello Malpighi, held on October 19 at the Academy of Medicine of Cleveland, Professor Giuseppe Franchini, director of the institute of tropical medicine of the University of Bologna, spoke on "The Life and Work of Marcello Malpighi." Another feature of the celebration was an exhibit of Malpighi's discoveries by the department of anatomy of Western Reserve University School of Medicine, including the alveoli of the lung, Malpighian tufts in the kidney, the Malpighian bodies in the spleen, the pigment layer of the skin and the capillary circulation. Professor Franchini exhibited early books, medals and autographs.

A MEMORIAL meeting for Captain Roald Amundsen, Arctic and Antarctic explorer, will be held under the auspices of the Geographic Society of Chicago in Orchestra Hall, December 14, at 8:00 P. M. Addresses will be made by President Charles Hull Ewing, Dr. Horace Bridges and others. December 14, the anniversary of Amundsen's discovery of the South Pole, has been named the official day of mourning and memorial by the Norwegian government.

AT the inauguration of Dr. Harvey Nathaniel Davis, former professor of mechanical engineering at Harvard University, as third president of the Stevens Institute of Technology at Hoboken, New Jersey, a bronze tablet was unveiled of Dr. Alexander Crombie Humphreys, second president of the institute, who died last year.

DR. FRANK C. WAGNER, president of the Rose Polytechnic Institute, was killed on November 21 when his automobile was struck by an Indianapolis train. Dr. Wagner had been a member of the engineering department since 1896 and became president of the institute in 1923.

UNIVERSITY AND EDUCATIONAL NOTES

THE Agricultural Engineering Building at the University of California's Branch of the College of Agriculture at Davis, erected at a cost of $140,000, was dedicated on November 12.

HARRIMAN DORMITORY, the fourth structure to be erected in Wesleyan University's $1,250,000 building program on the Johnston quadrangle, was recently dedicated.

EDWARD F. ALBEE, president of Keith-Albee-Orpheum, has given $100,000 towards the $2,500,000 endowment sought by St. Stephen's College to enable it to develop adequately as a unit of Columbia University.

Nature reports that the new buildings for the departments of physics and chemistry of University College, Cardiff, Wales, have been completed and the transference of classes and equipment to the new quarters is practically accomplished. Dr. Norman Thomas has been appointed professor of engineering in succession to Professor A. J. Sutton Pippard (resigned). In the Welsh National School of Medicine, Professor J. H. Dible has been appointed professor of pathology and bacteriology in succession to Professor E. H. Kettle (resigned).

DR. GEORGE RAYMOND GAGE, who has lately been associate professor of botany at De Pauw University, is now at Vanderbilt University as associate professor of biology.

FRANCIS M. DAWSON, for the last six years professor of hydraulics at the University of Kansas, has resigned to accept a professorship of hydraulics at the University of Wisconsin.

DISCUSSION

THE INTERNATIONAL UNION OF BIOLOGICAL SCIENCES

As president of the International Union of Biological Sciences I should like to suggest some considerations about this union in order to inform those countries which up till now have not yet become members.

As I know that several countries have not joined for the reason that the scientists of the Central Powers were excluded, I might begin with the statement that this exclusion has been completely withdrawn. In its meeting of June 29, 1926, the International Research Council not only took away the former barrier, but it *invited* Germany, Austria, Hungary and Bulgaria to become members of the council and of the unions attached to it. Also it may be fit to mention that at the last meeting of the council on July 13,

1928, a committee was appointed for the revision of the statutes; among the wishes uttered in this respect one was very general; *viz.*, that the union should get a greater independence than hitherto.

Now coming to my arguments it might be asked whether it is justified for the American biologists to stand aside of the International Research Council when nearly all other sciences are organized in unions, composing this council. It is very well known that there exists already a certain tendency to look upon our sciences as being more or less second rate, as compared, *e.g.*, to physics and chemistry, and we ought to do everything we can in order to avoid an increase of this opinion.

But besides this general consideration, the question may be put, what benefit can result from the existence of a Union of Biological Sciences. I should like to put as a general answer that such a union may be useful in all those cases which can be solved only by international cooperation. Without exhausting this question here, a few instances may be given where such a cooperation is, or may be, profitable.

The most important, but also the most difficult, case is that of scientific reviews. The bulk of literature is increasing in such a manner that even public libraries will be very soon at the end of their resources. Only by mutual understanding it may perhaps be possible to find a solution to this threatening danger to science. On the other hand it must be possible to come at some international understanding as to the Centralblätter, Abstracts, etc., otherwise here again we will get more and more confusion without real help to science. It can not be said that this has to be done by zoology or botany alone, because there are many journals concerning both domains, such as *Protoplasma, Biologisches Centralblatt,* etc.

Secondly, the Union, or rather its sections (zoological, botanical, etc.) could be a connecting link between the succeeding international congresses. Up till now almost every one of these congresses was independent of its predecessors. Even if this should remain so, some kind of link might prove to be useful, especially when it becomes clear that something must be done in order to diminish the avalanche of oral contributions to each congress. Of course every congress might do this on its own, but it certainly would be much better if it could make use of the experience of its predecessors by means of a connecting link.

In the third place questions of nomenclature in zoology and botany will have to be settled by some international organization to come to a result which may be accepted universally.

In the fourth place it is desirable to form a bureau where it may be possible to get information about the way in which living material for scientific work can be procured. In the last meeting of the Union at Brussels a motion on this question was accepted, but the funds of the Union are not yet sufficient to do more than make a preliminary investigation in this respect. It would be highly desirable to come to an international agreement in order to avoid customs house difficulties for shipments of this kind.

As a first step in this direction the Central Bureau of Fungi may be mentioned, which is now established at Baarn under the supervision of Miss Westerdyk; at the present moment about three thousand species of fungi are cultivated there and sent to investigators all over the world. This bureau owes its origin to the former Association internationale des botanistes; this association perished during the war and the bureau could only be continued by the aid of the Amsterdam Academy of Sciences. Now the Union of Biology gives a subvention; it is represented in the Council of the Bureau.

A repository of microscopical slides in the domain of cytology will be established by the union in the laboratory of Professor Grégoire at Louvain. His great authority in this field will guarantee that these slides will be preserved in the best way in order to enable any investigator to study them there. Many controversies will disappear as soon as it becomes possible to compare preparations of different investigators in the same field.

Another plan which has not yet come into execution consists of the establishment of a repository for slides in the domain of botanical embryology. Likewise it may be possible to create something similar with respect to paleontological sections in some center of scientific work which is specially adapted for this purpose.

Plans have been prepared in order to make it possible to know where material collected by scientific expeditions has been preserved and where it may be studied.

These are a few of the possibilities of work for the International Union of Biological Sciences, already partly begun. Some of these are in the domain of zoology, others in that of botany, whereas some have a general biological scope. In this last respect may also be mentioned attempts to organize international preservation of nature. Especially with regard to those questions which have relation both to zoology and botany it seems advisable not to split up the Union into a botanical, a zoological or a physiological one, though every section will enjoy as much independence as possible.

At the present moment the Executive Committee of the International Union of Biological Sciences is

constituted as follows: F. Went, Utrecht, president; M. de Selys Longchamps, Brussels, secretary; A. Pictet, Geneva, treasurer; vice-presidents are the presidents of the sections and also the following: E. Terroine, Strasbourg; F. Botazzi, Naples; A. Lameere, Brussels.

The committees of the sections are constituted as follows: (a) Zoology—Odo de Buen, Madrid, president; M. Siedlicki, Cracow, vice-president; C. Verne, Paris, secretary. (b) Botany—B. Nemeč, Prague, president; K. Shibata, Tokyo, vice-president; J. Briquet, Geneva, secretary.

I conclude by expressing the wish that many countries which up till now have not joined the union will do so, because only then the union will become strong enough to undertake such work as will benefit biological sciences.

F. A. F. C. WENT

QUOTATIONS

INTELLECTUAL COOPERATION

THE movement towards what is known as intellectual cooperation, fostered by the League of Nations (writes our correspondent from Geneva), is steadily gaining ground. The Institute of Intellectual Cooperation, domiciled in Paris but a league offspring, is now subsidized by eleven nations. The committee which takes this sphere of the league's work under its control is presided over by Professor Gilbert Murray, in succession to the late Professor Lorentz, and has among its members some eminent European scientists, including more than one professor of medicine. Professor Gilbert Murray reported to the present assembly that interchanges of professors and students between universities in different countries had been encouraged, and that there was now proceeding an interchange of secondary-school teachers. These interchanges are of the same character as those of public-health officers, undertaken by the Health Organization, and appear to be equally fruitful. It is noteworthy that the American Council of Education has placed a sum of money at the disposal of the committee for the purpose of an inquiry into university relations in Europe and the facilities available there for American students. The question of traveling or exchange scholarships has been remitted to a committee of experts with a view—the reference is rather vague—"to reaching conclusions that will be applicable not only to scientific laboratories, but also to research institutes, in the field of humanities and social science." A draft convention has also been formulated with the object of assuring for scientists the financial benefits which are justified by the profitable use of their discoveries—in other words, to prevent the unauthorized and unacknowledged use in one country of the work of a scientist of another. The British government, however, has found some technical fault in the convention, which as drawn up, it considers, would interfere with industrial activity, and the matter has not at present gone further than the sphere of proposal. An attempt is being made to bring libraries and universities of all countries into a scheme of cooperation whereby scientific or bibliographical information may be made mutually available. Another enterprise aims at the removal of undue hindrances, in the shape of customs barriers and postal tariffs, to the international distribution of books. It is intended to urge that scientific works, particularly works intended for libraries and scientific institutions, should be exempt from customs duties. The question of scientific works published in the less known languages has also received attention; it appears that in the countries where such works have been published there is already a sufficient recognition of the need of securing translations in one or other of the more widely diffused languages. The language difficulty, as any one who has attended an international congress will agree, is the principal hindrance to full international cooperation and understanding. In spite of the skilled army of interpreters at Geneva, difference of language is a constant impediment, leading every day to embarrassment and frustration, and sometimes to even more disagreeable results. If the Committee on Intellectual Cooperation would urge a wider acquaintance with the French language amongst English-speaking peoples, and with the English language among the Latin peoples, a great deal of good might be done.—*The British Medical Journal.*

SPECIAL ARTICLES

ALTERATIONS OF TISSUE CELLS IN THE BLOOD STREAM

CERTAIN aspects of the origin and development of blood cells are difficult to study because of the different fixation and staining qualities of the cells in the bone marrow and those in the blood stream. Fixation of the cells for sectioning changes their morphology so that they are no longer comparable to the pictures obtained when blood films are made. Some of the differences can be eliminated if bone marrow is shaken with blood serum or pleural or ascitic fluid. The cells separate easily, and cover-glass films can be made similar to those of blood. This method was found to be feasible for the study of tumor tissue, and was especially applicable for the study of mitotic figures. The phenomenon was first noted while studies of tissue