

As a result of the work done by the men enough material for 25 volumes of Wisconsin anthropology has been collected.

The medal is about one and one half inches in diameter, made of Lake Superior copper, and designed by Raymond L. Maas, a Milwaukee artist. It is called the Lapham medal after Increase A. Lapham, who came to Milwaukee and began his research in 1836, and died there in 1875. On the obverse side of the medal is a profile of Dr. Lapham encircled by a string of wampum. On the reverse side a thunder bird symbol signifying the Indian deities of the upper world is found at the top. At the bottom is the Indian symbol of the underground panther or water spirit signifying the lower world. Another string of wampum encircles these designs. Although the Wisconsin Archeological Society was one of the first to be founded, there now exist similar societies in Iowa, Indiana, Michigan, Missouri and Tennessee.

#### NATIONAL RESEARCH FELLOWS IN THE MEDICAL SCIENCES

FOLLOWING is a list of the fellows in medicine recently appointed by the Medical Fellowship Board of the National Research Council:

- Harold A. Abramson, M.D., Libman fellow at the University of London; physiology or medicine, to work with A. V. Hill, London.
- Martin H. Dawson, M.D., of the Royal Memorial Hospital, Montreal; medicine; R. Cole, Rockefeller Institute, or F. W. Peabody, Harvard.
- Arthur R. Elvidge, M.D., Cooper research scholar at McGill University; physiology; J. Erlanger, Washington University, C. J. Wiggins, Western Reserve, or A. J. Carlson, Chicago.
- Peter Heinbecker, M.D., house surgeon, Presbyterian Hospital, New York; physiology or surgery; R. Gesell, California, or J. Erlanger, Washington University.
- Francis F. Heyroth, M.D., Seeley fellow at the University of Cincinnati; biochemistry; E. J. Cohn, Harvard.
- Charles G. Johnston, M.D., student assistant at Washington University; biochemistry; H. B. Lewis, Michigan, or D. W. Wilson, Pennsylvania.
- Florence M. McDonald, M.B., assistant in pathology at Johns Hopkins University; neuropathology or neuroanatomy; G. C. Huber, Michigan, or C. J. Herrick, Chicago.
- Jacob Markowitz, M.B., Ph.D., demonstrator in physiology at Toronto; physiology; E. K. Marshall, Jr., Johns Hopkins, or J. Erlanger and H. S. Gasser, Washington University.
- Walter S. McClellan, M.D., resident physician at Bellevue Hospital; physiology; G. Lusk, Cornell Medical.
- Hobart A. Reimann, M.D., assistant resident physician at Rockefeller Institute; pathology; Anton Ghon, Prague.
- Howard J. Shaughnessy, Ph.D., instructor in public health at Yale University; bacteriology; E. O. Jordan, Chicago.

- Ralph G. Smith, M.B., interne at Toronto General Hospital; pharmacology; T. Sollmann, Western Reserve, or H. S. Gasser, Washington University.
- Wm. L. Straus, Ph.D., student at Johns Hopkins; anatomy; place of work not determined.
- Maurice L. Tainter, M.D., instructor in pharmacology at Stanford; pharmacology; place of work not determined.
- Willard O. Thompson, M.D., research fellow in medicine at Harvard; biochemistry; L. J. Henderson, Harvard.
- Thomas E. Wood, M.D., instructor in medicine at the University of Virginia; physiology; Sir Thos. Lewis, London.

Following is a list of those reappointed:

- Leopold R. Cerecedo, Ph.D.; biochemistry; L. B. Mendel, Yale.
- Rudolph Fisher, M.D.; bacteriology; F. P. Gay, Columbia.
- Wm. P. Gillespie, M.D.; (obstetrics) physics or physiology; L. More and M. H. Fischer, Cincinnati.
- Francis D. Gunn, M.D.; pathology; B. Roman and H. U. Williams, Buffalo.
- Franklin Hollander, Ph.D.; biochemistry; L. B. Wendell, Yale.
- Homer D. Kesten, M.D.; pathology; J. W. Jobling, Columbia.
- Geo. M. Lawson, M.D.; bacteriology; H. Zinsser, Harvard.
- Robert O. Loebel, M.D.; physiology; G. Lusk, Cornell Medical.
- Clive M. McCay, Ph.D.; biochemistry; L. B. Mendel, Yale.
- Howard A. McCordock, M.D.; pathology; W. G. MacCallum, Johns Hopkins.
- I. Theodore Rosen, M.D.; physiology; J. Erlanger, Washington University.
- Noel F. Shambaugh, M.D.; biochemistry; place of work not determined.
- Barbara B. Stimson, M.D.; (surgery) physiology, from C. J. Wiggers, Western Reserve, to H. B. Williams, Columbia.
- Maurice B. Visscher, Ph.D.; physiology; A. V. Hill, London.
- Herbert S. Wells, M.D.; biochemistry; place of work not determined.

#### SCIENTIFIC NOTES AND NEWS

DR. HENRY FAIRFIELD OSBORN, president of the American Museum of Natural History, has been elected a foreign member of the Royal Society of London.

THE Willard Gibbs Medal of the Chicago section of the American Chemical Society has been awarded this year to Sir James Colquhoun Irvine, of the University of St. Andrews, Scotland. The presentation will take place at the September meeting of the Chicago section when Dr. Irvine will be in this country to attend the Philadelphia meeting of the American Chemical Society.

DR. JOHN M. COULTER has been elected corresponding member of the Zoologisch-Botanische Gesellschaft of Vienna.

DR. M. I. PUPIN, professor of electromechanics at Columbia University, has been elected a trustee of Science Service, upon nomination of the American Association for the Advancement of Science.

PROFESSOR CHARLES R. RICHARDS, director of the American Association of Museums, has received the decoration of the Legion of Honor from the French government.

DR. RICHARD POHLE, professor of geology in the Institute of Technology at Braunschweig, has been elected a corresponding member of the Geographical Society of Helsingfors, Finland.

DR. KARL SUDHOFF, professor of the history of medicine at the University of Leipzig, has been made an honorary member of the Royal Society of Medicine, London.

PROFESSOR V. A. STEKLOV, director of the Institute of Mathematics and Physics at Leningrad, has been elected a corresponding member of the Göttingen Academy of Sciences in the section of mathematics and natural sciences.

MAJOR J. HALL-EDWARDS, a pioneer worker in X-ray therapy, has been elected an honorary member by the council of the British Medical Association in recognition of his services to medicine.

DR. WILLIAM G. EXTON, Newark, N. J., was elected president of the American Society of Clinical Pathologists at the annual meeting which took place from April 15 to 17 in Dallas, Texas; Dr. Arthur H. Sanford, Rochester, Minn., *president-elect*; Dr. James H. Black, Dallas, Texas, *vice-president*, and Dr. Ward T. Burdick, Denver, *secretary-treasurer*.

R. E. HALL, formerly physical chemist at the Pittsburgh Experiment Station of the U. S. Bureau of Mines, has resigned to become director of the Hall Laboratories, Inc., Pittsburgh.

DR. JOHN A. MANDEL, professor of biological chemistry in New York University, was the guest of honor at the eighty-seventh annual dinner of the Alumni Association of New York University and Bellevue Hospital Medical College on May 8 at which approximately four hundred graduates were present.

DR. LORRAIN SHERMAN HULBURT, professor of mathematics at the Johns Hopkins University, will retire at the end of the present academic year.

DR. ALEŠ HRDLÍČKA, curator of the division of anthropology of the U. S. National Museum, left on May 17 for Alaska to make a scientific survey of the probable route by which primitive man first reached

the American continent. The expedition is under the auspices of the U. S. Bureau of Ethnology.

To preserve the homes of the prehistoric Indians of the Grand Canyon area, Dr. J. Walter Fewkes, chief of the U. S. Bureau of Ethnology, has left Washington for a summer's work in Arizona. He will concentrate his attention at the Wupatki national monument near Flagstaff.

NEIL M. JUDD, curator of American archeology, expects to leave Washington about May 15 to resume direction of the National Geographic Society's exploration of Pueblo Bonito, a prehistoric ruin in northwestern New Mexico.

F. G. COTTRELL, director of the Fixed Nitrogen Research Laboratory, Washington, D. C., has sailed for Biarritz, where he represented the United States at the joint conference of the British Sulfate of Ammonia Federation and the German Nitrogen Syndicate held on April 28 and 29. Russell A. Oakley, of the U. S. Department of Agriculture, is a second American representative.

LIONEL S. MARKS, professor of mechanical engineering at Harvard University, is on leave of absence for the second half of the current academic year. He is spending his time investigating developments in engineering practice in Germany, France and England.

SIR SPENCER LISTER, research bacteriologist for the South African Institute of Medical Research, Johannesburg, arrived in New York on April 17.

DR. WALTER LEHMANN, director of the Research Institute Museum of Berlin, Germany, is visiting the United States.

It is reported from Paris that Professor A. Pettit, of the Pasteur Institute, has been deputed by the French government to organize a similar Pasteur Institute at Montreal at the request of the University of Montreal, of which it will be a department.

THE ninth series of the Harrington lectures was given at the school of medicine of the University of Buffalo, on May 6 and 7, by Dr. Charles R. Stockard, of Cornell University Medical College. The first lecture was on "The Mechanism of Inheritance" and the second on "Inheritance and Development."

DR. H. G. WELLS, professor of pathology at the University of Chicago, delivered an address on "Heredity and Cancer," before the faculty and students at the University of Colorado Medical School, on May 10. On the same day a dinner was given in honor of Dr. Wells at the National Jewish Tuberculosis Hospital, by Dr. H. J. Korper, at which Dr. Henry Sewall presided.

DR. HARRY N. HOLMES, professor of chemistry at Oberlin College, gave on April 24 a lecture in French at the University of Paris on his work in colloid chemistry.

WE learn from *Nature* that a memorial lectureship and medal have been founded at the University of Glasgow in commemoration of the late Professor Sir William Macewen, F.R.S. The lectureship will be biennial, and the memorial lecture will deal with advances in surgery. The memorial medal will be awarded annually to the most distinguished candidate in the final or qualifying examinations in surgery of the year.

A COMMISSION appointed by the Medical Society of Virginia met in Richmond late in April and authorized the purchase of the little frame building at Belroi, in which Walter Reed was born, as a memorial to the discoverer of the means of transmission of yellow fever.

DR. CARL HERING, consulting engineer of Philadelphia, past president of the American Institute of Electrical Engineers and of the American Electrochemical Society, died on May 11, aged sixty-six years.

SIR HARRY BROOKES ALLEN, professor of pathology and dean of the faculty of medicine at Melbourne University, Australia, has died, aged seventy-one years.

THE United States Civil Service Commission announces open competitive examinations for associate chemist, at a salary of \$3,000, and assistant chemist, at a salary of \$2,400. Receipt of applications for these positions will close June 22. The examinations are to fill vacancies in the departmental service, Washington, D. C., and in positions requiring similar qualifications.

REPORTS of progress in engineering research were presented at the May dinner of the Engineering Foundation at the Union League Club on May 19. Edward Dean Adams, who won the John Fritz gold medal for meritorious achievement in science and industry, was the guest of honor. For ten years Mr. Adams has been vice-chairman of the foundation board. Lewis B. Stillwell, chairman of the foundation, presided. Speakers included Dr. John A. Mathews, vice-president of the Crucible Steel Company of America, and Professor Richard S. McCaffery, of the University of Wisconsin.

THE National Association of Inventors, having chapters and memberships in Washington, Oregon, California, British Columbia and other states, will hold its second annual convention in Portland, Oregon, on June 17, 18 and 19, and in connection with the convention will stage an exposition of inventions.

THE fourth soirée for 1926 of the Iowa Chapter of Sigma Xi was presented on May 5 with the zoology department of the State University of Iowa in charge. The program included five scientific papers and a number of exhibits of research material.

BECAUSE of the fact that sufficient funds have not been raised, which would be necessary to launch the University of Michigan Expedition to Greenland this summer, and it is now too late to make arrangements for the project, Professor William H. Hobbs, of the geology department, has announced that the expedition as regards its main purpose has been postponed until the summer of 1927. However, Dr. Hobbs proposes to make a preliminary trip to the Arctic region this summer, with a small university party in preparation for the main expedition a year later. The sum estimated as necessary for the expedition is \$100,000. The total now subscribed is only about \$9,000.

THE Field Museum of Natural History of Chicago will send an expedition into South America this summer to collect specimens of mineral, animal and plant life, which will sail on June 19 on the *Pan-American* for Rio de Janeiro. It will be financed by Captain Marshall Field and will include in its personnel George K. Cherrie, who accompanied the Roosevelt expedition into Central Asia last year. Mrs. Marshall Field and Mrs. Grace Thompson Seton will be the official photographers of the party of nine.

THE U. S. Senate has passed the bill providing for the acquisition of the Mount Hamilton tract, near the upper Anacostia River, for the establishment of a national arboretum for the Department of Agriculture. The amount authorized to be appropriated was reduced by the senate from \$500,000, as recommended by the committee on agriculture, to \$300,000 after several senators had expressed the belief that the lesser amount would be sufficient. The bill now goes to the house for action. The senate also adopted amendments proposed by Senator Jones, of Washington, which would make the arboretum available also for recreational and park purposes.

A BILL to prohibit the teaching of evolution theories in universities, normal and other public schools and state institutions supported in whole or part by public school funds was introduced in the Louisiana Legislature on May 11.

DR. D. C. BALFOUR, a graduate of the University of Toronto, now with the Mayo Clinic, has offered to the University of Toronto \$4,000 for the establishment of a lectureship in surgery and the board of governors has gratefully accepted his offer. This foundation will probably be used to bring notable surgeons from time to time to the university to deliver special lectures.

*Industrial and Engineering Chemistry* states that a commercial exhibit illustrating the developments in American chemical industry by representative chemical concerns will be one of the features of the fiftieth anniversary of the American Chemical Society to be celebrated in Philadelphia next September. The proposed exhibit was approved by the American Chemical Society at its recent meeting in Tulsa. Major Harry S. Kimberly was chosen to organize and supervise the undertaking. There will be an exhibit of representative commercial concerns showing the progress of various branches of chemical industry in the last fifty years. This exhibit will be held in the gymnasium of the University of Pennsylvania, which is one of the group of buildings in which the society will hold its meetings.

THE *Journal* of the American Medical Association states that the U. S. Department of Agriculture will undertake a survey in July to determine the kinds of food eaten throughout the United States, the quality and the quantities consumed in various sections. There are said to have been no adequate figures on food consumption available, and there is a demand for such information for scientific research and various other groups. It is planned to determine also whether an adequately nutritive diet is within the incomes of large groups of people. A committee will be appointed to conduct the survey.

THE United States Department of the Interior has recently issued a permit to the National Geographic Society which will allow the society to conduct additional archeological excavations in the Chaco Canyon National Monument, New Mexico, during 1926. The new permit authorizes the collection of material from the heaps of debris at the two ruins known as Pueblo Alto and Penasco Blanco. The work of the National Geographic Society during the past five years at Pueblo Bonito del Arroyo in excavating has been so interesting that the Interior Department authorized the continuance of this work during 1926, and the new investigations at Pueblo Alto and Penasco Blanco will supplement this main excavation project.

JOINT investigations by the Bureau of Soils of the United States Department of Agriculture and the United States Geological Survey to determine the location and extent of potash deposits in the United States and to develop improved methods of recovering potash therefrom are provided for in a bill (S. 1821) which has been reported out with amendments by the Senate Committee on Agriculture. It would appropriate \$550,000 for the fiscal year ending June 30, 1926, and a similar amount for each succeeding fiscal year for four years.

At a meeting of the executive committee of the Tennessee Academy of Science on March 30 the fol-

lowing resolution was adopted: "Inasmuch as the Tennessee Academy of Science at the annual meeting, November 27, 1925, passed a resolution recommending the repeal of what is known as the Anti-Evolution Act (House Bill 185, approved by the Governor March 21, 1925) and the case of the State vs. Scopes, which is now before the Supreme Court of Tennessee, involves the constitutionality and validity of this law, it seems fitting that the academy should have the privilege through counsel of filing a brief and participating in the argument before the court. Therefore the executive committee acting for the Tennessee Academy of Science hereby authorizes its president, A. F. Ganier, to engage competent counsel on as favorable terms as he may be able to secure to represent the academy in this case before the Supreme Court of Tennessee.

NALINI RAJAN CHOUDHURY has donated a medal, to be known as the Mahamaya gold medal, to be awarded under the auspices of Calcutta Mathematical Society, for an essay on the Hindu-Arabic numerals. Competition is restricted to graduates of or students in an Indian university.

THE Zeta Chapter of Sigma Delta Epsilon, graduate women's scientific sorority, has recently been organized at Brown University.

THE *American Journal of Surgery*, of which Dr. Walter M. Brickner has been editor for twenty-one years, has been purchased by Paul B. Hoeber, Inc., medical publishers. It is planned to increase the size of the journal and Drs. Harvey Cushing, Joseph A. Blake, Rudolph Matas, Fielding H. Garrison and others will join the advisory editorial staff, in association with Dr. Brickner.

It is reported from Leningrad that a translation of Professor Pavlov's book on "Conditioned Reflexes" will soon be published in the English language. The translation is being made by Dr. W. H. Gantt, an American who for the past eighteen months has been working in Pavlov's laboratory.

PROFESSOR J. SPEK, of the University of Heidelberg (Germany), and Professor F. Weber, of the University of Graz (Austria), have, with the cooperation of Professor R. Chambers (New York) and Professor W. Seifriz (Philadelphia) founded a new periodical which is to be devoted to the publication of research on the physical chemistry of protoplasm. Manuscripts will be accepted for publication in German, English, French or Italian. The publishers are Gebrüder Borntraeger, Berlin. The first number is expected to appear in June of the present year. Over one hundred investigators have so far expressed their willingness to support the new journal. All communications should be directed to Professor F. Weber, Schubertstrasse 53, Graz, Austria.

FOLLOWING the International Congress on Scientific Organization held in Brussels last September, a movement has been started in that city to organize a Belgian National Committee of Scientific Organization.

### UNIVERSITY AND EDUCATIONAL NOTES

THE University of Rochester announces that the formal opening of its school of medicine and dentistry will be on October 25 and 26. There will be scientific medical conferences on these two days. Papers will be presented by Professor Friedrich Müller, of Munich; Dr. C. J. Martin, president of the Lister Institute of London, and by other leaders in medical science. The formal invitations will be sent out some time in September and the program will probably be complete before that date.

A GIFT of \$50,000 from the estate of the late John D. Larkin, of Buffalo, N. Y., made through his son, John D. Larkin, Jr., has been announced by Lafayette College, which is to be added to a fund of \$200,000 given in 1924 by Mr. Larkin for the maintenance of the department of chemistry.

DR. JOSEPH A. CUSHMAN, director of the Cushman Laboratory for Foraminiferal Research, has been appointed lecturer on micropaleontology at Harvard University. The laboratory at Sharon, Massachusetts, will be available to graduate students in the department of geology who desire to do research under Dr. Cushman's direction. This laboratory is especially designed and equipped for the investigation of foraminifera and other fossil remains of minute dimensions.

DR. GEORGE H. SMITH, of the department of bacteriology, and Dr. George E. Nichols, of the department of botany, have been promoted to full professorships at Yale University. Joshua I. I. Tracey and James H. Whittemore have been promoted to associate professorships in the department of mathematics.

AT Clark University, Dr. Charles F. Brooks has been promoted to professor of meteorology and climatology and Dr. Clarence C. Jones to associate professor of economic geography.

DR. J. EDWIN SWEET, of the University of Pennsylvania, has been appointed professor of surgical research at Cornell University Medical College and Dr. Walter C. Klotz director of the Cornell clinic and assistant professor of hygiene.

PROFESSOR W. W. SWINGLE, of Yale University, has been appointed professor of zoology and director of the museum at the University of Iowa. He succeeds Professor C. C. Nutting, who is retiring after forty years' service to devote his full time to research work.

AT the University of Pennsylvania, Dr. Eliot R. Clark, of the University of Georgia School of Medicine, has been appointed professor of anatomy; Dr. David H. Bergey has been promoted to professor of hygiene and bacteriology; Horace B. Baker to be assistant professor of zoology; Dr. Morton McCutcheon to be assistant professor of pathology; James C. Andrews to be assistant professor of physiological chemistry, and Dr. Stanley O. Chambers to be assistant professor of dermatology and syphilology.

DR. HARRY V. ATKINSON, professor of pharmacology at the University of Texas School of Medicine, has been appointed associate professor of pharmacology at Iowa State University College of Medicine. W. T. Dawson, now associate professor of physiology at Texas, has been appointed associate professor of pharmacology.

### DISCUSSION AND CORRESPONDENCE

#### THE CONTRACTILE VACUOLE GRANULES IN AMOEBA PROTEUS

DR. MAST, in his fine paper upon "Structure, Movement, Locomotion and Stimulation in Amoeba,"<sup>1</sup> judges "that my observations upon the localization of the contractile vacuole function<sup>2</sup> were made upon inactive specimens (*i.e.*, specimens not in locomotion). It may be worth recording that the constant association of the contractile vacuole with a certain group of granules, the now vacuole appearing among the old granules, obtains in both mobile and immobile specimens, and that the phenomena were followed in all cases under high powers of the microscope, continuously for hours. I have no opinion as to the function of the contractile vacuole in Amoeba, though I followed the prevalent custom in calling the vacuole excretory and so called the granules excretory.

In *Protoopalina* there are similar (?) granules surrounding the posterior vacuole of the "excretory" system of tubules, and these granules stain differently from the cytoplasmic granules. In *Protoopalina* some of these "excretory" granules drop into the lumen of the posterior vacuole and are thrown out to the exterior when, at irregular intervals, it contracts.

In both *Amoeba* and *Protoopalina* granules resembling in size and appearance the cytoplasmic granules gather around the contractile vacuole. In *Amoeba* differential staining or extrusion of these granules has not been observed; in *Protoopalina* both differential staining and extrusion are readily seen, though prolonged observation may be necessary to catch the actual extrusion. The differential staining

<sup>1</sup> *Journal of Morphology*, v. 41, No. 2, March 5.

<sup>2</sup> *Journ. Exper. Zool.*, vol. 9, pp. 301-331.