

ting currents, etc. In light there are the renowned discovery and theory of the concave grating and the long series of investigations made in the field of spectroscopy. List of wave-lengths will not be reprinted in this volume, as they are readily accessible elsewhere; and any subscriber to this volume may obtain by application to the Johns Hopkins Press, Baltimore, a copy of Rowland's 'Preliminary Table of Solar Wave-lengths.' There will be, further, a description of Rowland's ruling engine, used for the making of gratings, details of which have never before been published.

The Memorial Address of Professor Mendenhall; published in *SCIENCE*, and a portrait of Professor Rowland will also be included.

The volume will be printed in royal octavo, bound in cloth, and will contain between six and seven hundred pages. The price set is five dollars per copy for orders sent in advance of publication.

Orders may be sent to Professor Joseph S. Ames, Secretary of the Committee of Publication, Johns Hopkins University, Baltimore, Maryland.

*THE INTERNATIONAL CATALOGUE OF
SCIENTIFIC LITERATURE.**

THE Third International Conference on this subject, held in London during June, 1900, after considering the questions left in abeyance by the two previous Conferences, decided to publish an annual book catalogue arranged according to both an author and a subject index of the following named sciences: Mathematics, Mechanics, Physics, Chemistry, Astronomy, Meteorology (including Terrestrial Magnetism), Mineralogy (including Petrology and Crystallography), Geology, Geography (Mathematical and Physical), Paleontology, General Biology, Botany, Zoology, Human Anatomy, Physical Anthropology, Physiology (including

* Abstract from a paper on the International Catalogue of Scientific Literature read before the American Philosophical Society, April 4, 1902, by Cyrus Adler, Ph.D. (For fuller history see *SCIENCE*, August 6, 1897, June 2 and 9, 1899. Also reports of the First, Second and Third International Conferences, published by the Royal Society, of London.)

Experimental Psychology, Pharmacology and Experimental Pathology), and Bacteriology.

Government aid was offered by many of the countries represented by delegates. The catalogue was to consist of an index to all original contributions to science published after January 1, 1901. Regional bureaus were to be established in the several countries charged with the duty of furnishing to the Central Bureau an index of the scientific literature of their respective countries. The price of the catalogue was fixed at \$85 per annum for the 17 annual volumes, subscriptions to be made for a period of five years. At the present time the affairs of the catalogue are as follows: The United States Government having as yet failed to contribute toward the support of a regional bureau, the Smithsonian Institution has temporarily undertaken the work.

The equivalent of over 71 complete sets, representing over thirty thousand dollars, have been subscribed for in the United States.

In February the Central Bureau reported that over fifty-one thousand catalogue slips had been received from the Regional Bureaus.

The first parts of Chemistry and Botany will be published during the present month, to be shortly followed by parts of Physics and Physiology. It was found necessary to publish these first volumes in two parts. The next publications will be the complete volumes of Mathematics, Astronomy, Meteorology and Bacteriology for 1901. Single volumes may be subscribed for at their proportional value. A provision has been made for those desiring a card index to print some of the sets on one side of the leaf only in order that the separate entries may be mounted on cards. The charge for the volumes so printed will be about one sixteenth in addition to the cost of the regular form.

SCIENTIFIC NOTES AND NEWS.

THE degree of LL.D. was conferred on Lord Kelvin by Yale University on May 5, this being the first time for over a hundred years that the University has held a special assembly for the conferring of an honorary degree. Lord Kelvin was presented for the degree by Professor R. H. Chittenden, director of the

Sheffield Scientific School. President Hadley in conferring the degree said: "You have joined the different regions of the earth by your investigations of the submarine telegraph; you have joined the different realms of human thought by your contributions to physical theory." Lord Kelvin last week paid various visits, especially to the electrical laboratories of New York City, and sailed for England on May 10.

THE Bavarian Maximilian Order for Science and Art has been conferred on Professor J. H. van't Hoff, professor of general chemistry in the University of Berlin.

THE seventieth birthday of Professor von Leyden, the eminent pathologist, known especially for his work on diseases of the spinal cord and on tuberculosis, was celebrated at Berlin on April 20. In addition to the presentation of a *Festschrift* and other marks of esteem, a fund for research was established amounting to about \$11,000.

DR. ALEXANDER AGASSIZ has been appointed director of the Museum of Comparative Zoology of Harvard University.

THE Geographical Society of Philadelphia has awarded to Lieutenant Robert E. Peary the Elisha Kent Kane medal. It was received by Mrs. Peary on her husband's behalf.

DR. ABRAHAM JACOBI, of Columbia University, has been elected as chairman of the American Committee of the Fourteenth International Medical Congress to be held at Madrid a year hence. Dr. Howard A. Kelly, of Johns Hopkins University, will deliver the address at one of the general meetings of the Congress, and has chosen for his subject 'The Passing of a Specialty.'

DR. J. L. WORTMAN, of the Peabody Museum of Yale University, will be in the West until September, exploring the fields in Dakota, Wyoming, and the Bad Lands, where the late Professor Marsh made his important paleontological discoveries.

ERNST A. BESSEY, in charge of the Section of Seed and Plant Introduction in the United States Department of Agriculture, has been detailed to proceed to Russia, the Caucasus,

and Turkestan for the purpose of securing certain seeds of forage and cereal plants. He is to sail on July 2.

AN expedition to northern Brazil will be sent out by the Austrian Government in the autumn under the direction of Dr. M. Steindachner, curator in the Vienna Museum of Natural History.

A BRONZE tablet in memory of Professor James H. Coffin, the eminent meteorologist, for many years professor of mathematics at Lafayette College, has been presented to the College by the class of 1866.

WE regret to record the death of Henry Morton, the eminent engineer, president of Stevens Institute of Technology since its foundation in 1870. We hope to publish a notice of President Morton's life and work.

COLONEL MALCOLM WILLIAM ROGERS, who carried on important engineering work in India, died on April 25 at the age of sixty years.

M. HENRI FILHOL, professor of paleontology at the Jardin des Plantes, Paris, and the author of numerous important contributions to this science, has died at the age of sixty years.

IMMANUEL LAZARUS FUCHS, since 1884 professor of mathematics in the University of Berlin, died on April 26 at the age of sixty-eight years.

DR. E. VON PFLEIDERER, professor of philosophy at Tübingen, has died at the age of sixty years.

THE mineralogist, Friedr. Baron Rosen, has died at Kassar at the age of sixty-eight years.

THE seventeenth annual meeting of the Association of American Physicians was held in Washington on April 29 and 30, Dr. J. C. Wilson presiding. Officers for next year were elected as follows: *President*, James Stewart, Montreal; *Vice-President*, William T. Councilman, of Boston; *Secretary*, Henry Hun, of Albany, N. Y.; *Treasurer*, J. P. C. Griffith, Philadelphia, and *Recorder*, S. Solis Cohen, Philadelphia. A proposition was made that will be voted on next year to increase the membership of the Association from 125 to 150.

THE agricultural appropriation bill, as introduced in the House, carries an appropriation of \$5,115,570. Compared with the current fiscal year the appropriations are as follows:

	Current fiscal year.	1902-3.	Increase.
Office of Secretary	\$71,670	\$73,690	\$2,020
Weather Bureau...	1,148,320	1,251,760	103,440
Animal Industry...	1,154,030	1,247,180	93,150
Plant Industry...	496,650	601,780	105,100
Forestry.....	185,440	282,860	97,428
Chemistry.....	35,800	73,200	37,400
Soils.....	109,140	168,960	59,820
Entomology.....	36,200	57,200	21,000
Biology.....	32,800	45,600	12,800
Accounts.....	18,900	24,100	5,200
Publications.....	198,020	228,020	30,800
Experiment stations	789,000	792,000	3,000
Silk investigations.	Nothing.	10,000	10,000
Total increase.	581,150

The appropriations in recent years have been as follows:

For 1897-98 the appropriation was \$3,182,902.

For 1898-99 it was \$3,509,202, an increase of \$326,300.

For 1899-1900 it was \$3,726,022, an increase of \$216,820.

For 1900-1901 it was \$4,023,500, an increase of \$297,478.

For 1901-2 it was \$4,582,420, an increase of \$558,920.

EIGHTY-THREE thousand acres of forest land have been purchased by the State Forestry Commission in Central Pennsylvania.

THE 73d anniversary meeting of the Zoological Society, of London, was held on April 29. The report of the council for the past year was read by Mr. P. L. Selater, secretary. It stated that the number of fellows on December 31 last was 3,338, an increase of 88 on the corresponding period of the previous year and showing a larger number of fellows on the Society's books than in any year since 1879. The income of the Society during the past year has been £29,350, showing an increase of £577 over that of the previous year. The ordinary expenditure for 1901 had amounted to £27,526, being £1,187 more than the ordinary expenditure of 1900. The extraordinary expenditure paid in 1901, amounting to £4,530, had been devoted entirely to new buildings and works. The balance carried forward on December 31 last

was £1,121. The number of animals living in the Society's gardens on December 31 last was 2,922, of which 789 were mammals, 1,575 birds, and 558 reptiles and batrachians. Amongst the additions made during the past year ten mammals, 58 birds, 21 reptiles, three batrachians, and two fishes were registered as new to the collection. The Earl of Crawford, Mr. F. Du Cane Godman, Dr. A. Günther, Sir Harry Johnston, and Mr. E. Lort Phillips were elected into the council in the place of the retiring members. The Duke of Bedford was reelected president, Mr. Charles Drummond treasurer, and Mr. Selater secretary of the Society for the ensuing year.

A PHYSIOGRAPHIC Conference will meet at the State Normal School, Westfield, Mass., Saturday morning, May 17, at ten o'clock. The subject to be discussed at the forenoon session will be 'Laboratory Work on Features of the Land for High and Normal Schools.' The discussion will be opened by Professor Richard E. Dodge, of the Teachers College, Columbia University, Miss Mary I. Platt, of the Brookline High School, and Mr. William H. Snyder, of the Worcester Academy. In the afternoon, Professor William Morris Davis, of Harvard University, will conduct the members of the conference over the Westfield terraces.

PROFESSOR FREDERICK STARR, of the University of Chicago, has issued a series of type portraits of South Mexican Indians. The series includes sixty platinum photographs, which represent thirty subjects, front and profile views being given of each. Twenty-three men and seven women make up the series. There is one man from each of the tribes that Professor Starr has visited. The portraits are simple heads, and are of actual size of life. Only fifty sets, are to be issued.

ACCORDING to cablegrams to the daily papers, Professor Behring has published a book in Berlin proving that the bacilli of human and bovine tuberculosis are identical, the seeming differences between them resulting from the capacity of the bacilli to accommodate themselves to the organism in which they live. The writer says he has successfully infected cattle with virus from human beings, produ-

cing thereby fatal animal tuberculosis. He also says he has rendered cattle immune against tuberculosis by vaccinating them when they are young.

At the annual meeting of the California State Medical Society, held April 15-17, the following resolution was adopted: "Whereas, the Mayor of the city of San Francisco has seen fit to remove the so-called old Board of Health; and whereas, the chief executive of the city has stated that he has determined, after a prolonged personal investigation, that bubonic plague has never existed in San Francisco; and whereas, the position is absolutely unsupported by any competent, unprejudiced physician who has made personal examination of suspects or alleged cases of plague before or after death, or who has examined the bacteriological evidence presented, and is further in direct conflict with the findings of the Federal Government experts and Special Commission; therefore be it *Resolved*, That the Medical Society of the State of California emphatically condemns this action on the part of the Mayor of San Francisco, and at the same time endorses the position always maintained by the old Board of Health in its sanitary defence of the people of the city of San Francisco and of the country at large.

We have been requested to print the following note:

Between September 21 and September 28, 1902, the Association of Natural Phylosophers and Physicians will hold its 74th Annual Congress at Carlsbad, the Austrian Spa. As on former occasions the rule that lectures and debates may be carried on in any language of the world, will be adhered to, and to English, American, French, Spanish, etc. Natural Phylosophers and Physicians the same privileges will be again accorded as the ordinary members of the association are in the habit of enjoying. It is estimated that between 6,000 and 8,000 representatives of Natural Philosophy and Physicians will gather on that occasion at Carlsbad, and great preparations are made now already, at Carlsbad, to receive the members and friends of this famous association. Nearly all the principal professors of the Berlin, Vienna, Prague and most of the other Continental universities and high colleges will again be present, and 28 different branches of modern and ancient sciences will form the programme for the

lectures and debates. As several hundred inhabitants of Carlsbad understand and speak English, the place being annually frequented by a few thousand bathers and tourists from England and America, the facilities, comfort and convenience available for English and American Natural Phylosophers and Physicians, at this year's congress, will be by far greater than on any former occasion, but those intending visitors of the congress who wish to hold lectures should give notice of this intention at an early date, as the number of lecturers will be very large. We are requested by the secretary of the association to inform our readers that this Association of Natural Phylosophers and Physicians pursues solely and exclusively the object of promoting and developing all branches of science, and that any other object of whatever kind it may be, is strictly excluded. At the small exhibition of scientific objects which will be held in connection with the Congress, no charge will be made to exhibitors for the space required, nor will any entrance fee be asked from visitors. Enquiries or letters should be addressed to 'The 74th Congress of Natural Phylosophers at Carlsbad.' No stamp for reply need be enclosed.

We learn from the London *Times* that Major Ronald Ross has submitted to Sir Alfred L. Jones, chairman of the Liverpool School of Tropical Medicine, a report on the anti-malaria work accomplished on behalf of the school in Freetown by Dr. Logan Taylor since his arrival last July. Employing about seventy men, Dr. Taylor has drained nearly the whole of the most pestilential parts of the town. The areas which have been dealt with were formerly full of hollows, pits and ill-made drains, which in the rainy season contained pools of stagnant water, breeding swarms of malaria-bearing mosquitoes. In addition to the work of drainage Dr. Taylor has employed a gang of men to collect old tins, bottles and other rubbish from the houses, and 2,257 cart-loads of such refuse have been removed and 16,295 houses have been visited. The effect of these measures has been a demonstration of the possibility of getting rid of mosquitoes in Freetown, and therefore, probably, in any town. The moral which Major Ross draws from the results of the work done is that in order to make the principal West African stations healthy they must be rendered scrupulously dry and clean. Nothing else will remove the

malaria in them on a large scale. To attain this object the colonies must be prepared to maintain proper conservancy gangs, superintended by efficient health officers. As regards the effect of the anti-mosquito measures on the health of Freetown, Major Ross says that he was struck by the great change in the demeanor of the Europeans. Two and a half years ago every one was gloomy; now the Europeans look as cheerful and well as they look in India. Arrangements have been made for Dr. Taylor to proceed at once to Cape Coast, in order to start anti-malaria work there, with the assistance of the governors, as the mortality at present is very high.

WE take from the Mexican *Herald* the following recommendations passed by the second International Conference on January 29: The second international American conference recommends to the republics here represented, that an 'American International Archeological commission' be formed, through the appointment, by the president of each of the American republics, of one or more members of such commission; that each government represented shall defray the expenses of its commissioner or commissioners; that such commissioner shall be appointed for five years, and that they shall be subject to reappointment; that appropriations for the expenses incidental to the prosecution of the work and publications of the reports of the archeological commission shall be made by the respective governments subscribing on the same basis as that on which the bureau of the American republics is supported; that the first meeting for the organization of the commission, the election of officers and adoption of rules, shall occur in the city of Washington, District of Columbia, United States of America, within two years from this date; that the accounting department of the commission shall be exercised by the bureau of the American republics; that this commission shall meet at least once in each year; that the commission shall have the power to appoint sub-commissions, which shall be charged specially with the explorations, or other work committed to their care; that sub-commissions may be appointed, which shall cause

the cleaning and preservation of the ruins of the principal prehistoric cities, establishing at each of them a museum to contain objects of interest; to found an 'American international museum' which is to become the center of all the investigations and interpretations, and that it be established in the city selected by the majority of the republics acquiescing in this recommendation. Committees shall also be appointed to clean and conserve the ruins of ancient cities, establishing in each of them a museum to contain the antiquities that may be gathered, and which is to afford all possible accommodations to the visitors. The archeological commission and the subcommittees it may appoint will be subject in all matters to the laws of the signatory countries.

UNIVERSITY AND EDUCATIONAL NEWS.

PRESIDENT SCHURMAN took the occasion of Lord Kelvin's visit to Cornell University to announce that the necessary \$250,000 required by Mr. John D. Rockefeller's gift was assured, and that \$250,000 will be spent in erecting a hall of physics.

YALE UNIVERSITY has been made the residuary legatee of Edward W. Southworth, New York City, and it is said may receive as much as two or three hundred thousand dollars from the estate.

VASSAR COLLEGE has received a library building from a donor whose name is at present withheld.

DR. A. E. KENNELLY, of Philadelphia, has been appointed professor of electrical engineering at Harvard University.

DR. ABRAHAM JACOBI has resigned the chair of the diseases of children in Columbia University.

DR. B. F. KINGSBURY has been appointed to the chair of human physiology in Cornell University. At present Dr. Kingsbury is at the University of Freiburg; he will assume his duties for the college year 1903-1904. Meantime the classes in physiology will be instructed by Professor B. G. Wilder and Dr. P. A. Fish.