

with fires, lumbering, grazing, tree-planting, stream flow and erosion.

The Chief of the Division of Records is Mr. Otto J. J. Luebker. It takes charge of all office and routine matters, and also has custody of the library of literature bearing on forestry, and of a unique collection of photographs, which is continually being added to, illustrating forest conditions all over the United States.

The result of the work of the Division has been to turn practical forestry in the United States from a doubtful experiment into an assured success. Special studies of some of the most important trees, commercially, have been made, from which can be calculated their probable future yield. Cheap methods of harvesting the present lumber crop without injuring the productivity of the forest have been put in operation. Such concerns as the Great Northern Paper Company and the Deering Harvester Company have been led to undertake conservative management of their forest properties. Meanwhile, the work of tree-planting, particularly in the almost treeless Western States of the plains, has been furthered; the relation of the forest to the volume of streams, erosion, evaporation and irrigation have been studied; matters connected with irrigation and water supply have been investigated; hopeful progress has been made in the direction of regulating grazing in the Western reserves in a manner fair both to the important interests of cattle and sheep owners and to those who look to the reserves as a source of continuous supply of wood and water; and studies of forest fires were conducted with a view of reducing the great yearly loss from this source, a loss which has been estimated at \$50,000,000.

Field work is to go on this summer in 17 States. There are in all 179 persons engaged in the work of the Bureau. Of this number 81 are student assistants—young men, largely college students, who expect to enter forestry as a profession, and who serve during the summer on small pay for the sake of the experience gained.

SCIENTIFIC NOTES AND NEWS.

PROFESSOR RUDOLF VIRCHOW has been appointed a Knight, with the right to vote, of the

Prussian Order 'Pour le Mérite' for Science and Art.

TRINITY COLLEGE has conferred the honorary degree of M.S. on Mr. John H. Sage, secretary of the American Ornithologists' Union.

CAPTAIN SCOTT and the other officers and the members of the scientific staff of the British National Antarctic Expedition were entertained at a farewell dinner by the Savage Club, on July 6.

THE annual dinner of the Royal Institute of Public Health will take place on July 24, in London, when the Harben Gold Medal of the Institute will be conferred on Professor R. Koch, of Berlin. Lord Lister, Lord Strathcona, Professor Brouardel and other guests will be present.

F. W. DYSON, chief astronomer at the Greenwich Observatory, arrived at San Francisco on June 8, after having observed the total eclipse of the sun in Sumatra. He visited the Lick Observatory on the ninth, and intends to inspect other American observatories before his return to England.

DR. THEO. GILL, after having attended the ninth jubilee of Glasgow University as a representative of the Smithsonian Institution and the National Academy of Sciences, is at present on the continent, where he will visit scientific institutions, including the Zoological Station at Naples.

PROFESSOR WILLIAM OSLER, of the Johns Hopkins University, and Dr. Edward G. Janeway, of the University and Bellevue Hospital Medical College, are among the delegates who will attend the Congress of Tuberculosis to be held in London next week.

MR. F. H. NEWELL, in charge of the hydrographic work of the U. S. Geological Survey, and Mr. Gifford Pinchot, chief of the Bureau of Forestry, left Washington on July 11 for the West, having in view, among other things, the investigation of the forests and water supply of eastern Oregon. Mr. H. Gannett, of the U. S. Geological Survey, is already in Oregon inspecting the work of the various parties surveying the forests.

THE Secretary of Agriculture has recently

made a reconnoissance of a portion of the area of a proposed Appalachian forest reserve designed for the protection of forests and the preservation of the water resources and soils of the Appalachian region. He was accompanied by Messrs. Gifford Pinchot, chief of the newly created Bureau of Forestry; F. H. Newell, chief of the Hydrographic Division of the U. S. Geological Survey; W. J. McGee, of the Bureau of American Ethnology, and J. A. Holmes, state geologist of North Carolina.

PROFESSOR O. P. PHILLIPS, of the Southern California University, is in the Pueblo region, under the auspices of the Bureau of American Ethnology, for the purpose of obtaining motion-pictures illustrating the industries, ceremonies and domestic customs of the Pueblo peoples.

DR. FRANZ BOAS, of Columbia University, received on July 1 an honorary appointment as philologist in the Bureau of American Ethnology; and under an arrangement completed just before his departure for Europe, Messrs H. H. St. Clair and W. A. Jones have taken the field and commenced the collection of several Indian languages.

As we have already stated Dr. Paul C. Freer, professor of chemistry in the University of Michigan, has received a year's leave of absence to go to the Philippines. We are now informed that he will there organize the laboratories recently established by the civil government.

DR. W. W. FORD, of McGill University, will undertake researches on some subject connected with preventable diseases under the auspices of the trustees of the Rockefeller Institution for Medical Research. He will spend the next six months at the Pasteur Institute at Paris, returning to McGill University, when the new laboratories are completed, to work under Professor Adami.

SIR ROBERT BALL, professor of astronomy at Cambridge University, will lecture in the United States during the autumn, under the auspice of Major Pond.

SIR HENRY ROSCOE, the eminent chemist, has been reelected vice-chancellor of the University of London.

SIR A. R. BINNIE has resigned the position of chief engineer to the London County Council. Under his direction many important public works, such as the Blackwell Tunnel, were carried out.

PROFESSOR A. JACOBI, New York City, has sent a notice, calling attention to the fund being collected in honor of Rudolf Virchow's eightieth birthday, to which we have already referred. The fund is to be added to that collected ten years ago, its income being used for furthering biological, anthropological and medical research. Professor Virchow will celebrate his birthday on October 13, and contributions should be in Professor Jacobi's hands not later than the first of September.

DR. ROBERT MAYER, eminent for his announcement of the law of the conservation of energy, was born at Heilbron in 1814 and practised medicine in that city until his death in 1878. The Berlin branch of the German Association of Engineers has recently placed a memorial tablet on the house in which he lived.

A BUST of Dr. Armauer Hansen, the discoverer of the bacillus of leprosy, will be unveiled with appropriate rites in the Lungegaards-Hospital at Bergen on August 10.

DR. WILLIAM H. HARKNESS, known for his contributions to entomology and botany, died in San Francisco on May 10.

WILLIS H. BARRIS, D.D., corresponding secretary and curator of the Davenport Academy of Sciences died last month in his eightieth year. Dr. Barris was professor in a theological school of the Protestant Episcopal church and was at the same time much interested in science, having published in the *Proceedings* of the Davenport Academy of Sciences numerous papers on geology and paleontology. He was a trustee of the Academy from the time of its foundation, and was elected president in 1876, and for many years acted as curator and corresponding secretary.

PROFESSOR JOHANNES LAMP, one of the scientific members of the expedition which is demarcating the boundary between German East Africa and the Congo State in the neighborhood of Lake Kivu, died on June 21 of sun-

stroke. He was for some time employed at the Geodetic Institute in Berlin, and was afterwards appointed to the observatory at Kiel, and held a professorship at the university of that city.

DR. AXEL ERICSSON, the Swedish explorer, died in the interior of Africa on May 31.

It is this week reported that Mr. Andrew Carnegie has offered to give \$100,000 for a library building at Leadville, Colo.; \$35,000 for Alameda, Cal., and \$75,000 for Coatbridge, Scotland.

MR. T. G. YOUNG has bequeathed £3,000 to the Technical College, Glasgow, for the purpose of establishing exhibitions in connection with the chemical laboratory.

AN institute for the official examination and analysis of new drugs and remedies is to be established in connection with the Imperial Board of Health in Berlin.

THE newly established Health Board for the Philippines will shortly begin to work in co-operation with the army surgeons throughout the archipelago in studying the relation of mosquitoes to malaria.

THE library of the late Dr. Felix Birch-Hirschfeld, professor of pathological anatomy in the University of Leipzig, has been purchased by the Cornell University Medical College. It contains about 5,000 volumes, and cost about \$10,000.

THE Worshipful Company of Goldsmiths has purchased for £10,000 the library of economic literature collected by Professor H. S. Foxwell. This was done just in time to prevent the removal of the library to the United States.

MR. GEORGE GRANT MCCURDY, of Yale University, secretary of Section H, Anthropology, of the American Association, has sent to members the following notice:

The Fiftieth Meeting of the American Association for the Advancement of Science will be held in Denver, Colorado, August 24-31, 1901. Dr. J. Walter Fewkes, of the Bureau of American Ethnology, will preside over the Section of Anthropology.

You are cordially invited to attend and to contribute papers upon subjects connected with your field of research.

In order that a preliminary sectional program may be distributed in advance of the meeting, titles of communications should be sent to the secretary as soon as possible. Abstracts of papers or the papers themselves may be sent later at the convenience of the authors, who are reminded that no title will appear on the final program until the paper either in full or in abstract has been passed upon by the Sectional Committee.

Excursions to points in the southwest, of special interest to anthropologists, are being planned.

THE president of the Davenport Academy of Sciences, Mrs. M. L. D. Putnam, requests us to extend an invitation in the name of the Academy to the members of the American Association to visit its museum and archeological collections in going to, or returning from, Denver. Davenport, Ia., is on the Chicago, Rock Island and Pacific Railway on the direct route to Denver.

THE International Association for the Advancement of Science, Arts, and Education will hold its second meeting at Glasgow, in the University and in the Exhibition, from July 29 to September 27. One of the most important functions of the meeting will again be, as at Paris last year, to study and interpret the matters of scientific, geographic and other interest afforded by the exhibition by means of lectures and conferences, with demonstrations and visits under skilled guidance.

It appears from the London medical journals that the Congress of Tuberculosis which will open in London on July 22 will be of considerable importance. Over 1,200 applications for membership have already been received, and it is expected that more than 2,000 members will be in attendance. The sum of about \$25,000 has already been collected for the expenses of the meeting. The program includes addresses by Professors Koch, Brouardel and Macfadyen.

THE American Philological Association held its thirty-third annual meeting at Harvard University last week with a full program. The meeting will be held next year at Union College, Schenectady, N. Y., under the presidency of Professor Andrew F. West, of Princeton University.

A CIVIL service examination will be held on

August 20 for the position of chief taxidermist in the U. S. National Museum at a salary of \$125 a month. The subjects and weights are :

Practical questions.....	25
Practical tests.....	50
Experience.	25

The practical tests will comprise the submission of photographs or other illustrations of large animals or groups of animals which have been prepared by the competitor. Applicants should submit as complete and perfect representations of their work as they can secure. Applicants will be required to make sworn statements that the photographs or other illustrations submitted by them are taken from work which they executed. The position to be filled is an unusually responsible one and involves on the part of the appointee a rare combination of qualifications. He should not only have mechanical ability to execute first-class taxidermic work, but should possess the qualifications of an artist and some knowledge of the life history of animals. Applicants should have considerable experience in the preparation of large mammals, animals of the size of the grizzly bear or larger.

THE University of California has established a marine laboratory at San Pedro, as part of its proposed biological survey of the waters along the California coast.

THE new pathological institute of the London Hospital was opened by Sir Henry Roscoe, F.R.S., vice-chancellor of the University of London, July 10.

MR. JOHN LEWIS CHILDS, of New York, has purchased a large collection of birds' eggs and nests made by Mr. H. C. Parker, of Ridley Park. The collection is said to be very complete, including a specimen of the great auk's egg and other rare sorts.

MR. ABRAHAM E. SMITH, consul at Victoria, writes to the Department of State that a surveying party has located the landing site of the British Pacific telegraph cable (which is to connect the Dominion of Canada with the Australian Confederation) on Kelp Bay, near Banfield Creek, 7 miles from the entrance to Barclay Sound, and something over 100 miles from

Victoria. The location is described as admirably adapted for the purpose—a good harbor, 12 fathoms of water close to the shore, so that vessels of 10,000 tons can find safe anchorage. The harbor is landlocked, and has a bottom of ooze that it is said will furnish good protection for the wire. Work has already begun in England on the cable. It is to be 5,834.5 miles in length, the longest yet constructed, and will be transported and laid in one ship, which is now being specially built for the purpose. The cable will run from Vancouver Island to Fanning Island, a distance of 3,337 miles, before a landing is effected ; thence to the Fiji Islands thence to Norfolk Island, and thence to Queensland. The first installment of cable, including the sections from Queensland to Norfolk, Fiji and Fanning Islands, is expected to leave England in January, 1902. The second and longest portion is to leave in August, 1902, come direct to Vancouver Island, and be laid from Barclay Sound to Fanning Island. According to the contract, the whole cable is to be laid and working by January 1, 1903. Unforeseen disaster excepted, those engaged in the work believe this great enterprise, which will cost \$10,000,000, will be completed at the date promised.

UNIVERSITY AND EDUCATIONAL NEWS.

GENERAL A. C. BARNES, of Brooklyn, has undertaken to build and equip an astronomical observatory for Cornell University.

THE will of the late Signor Villeneuve of Montreal, leaves \$25,000 to Laval University.

THE sum of about £100,000 has been subscribed toward converting University College, Liverpool, into Liverpool University.

MR. CHAMBERLAIN has asked the city of Birmingham for a contribution towards the maintenance of the new engineering buildings of the University. It appears that Nottingham contributes £7,380 a year to Nottingham College, that Sheffield gives nearly £6,000 a year to Firth College, that Leeds gives £1,500 a year to the Yorkshire College, that Manchester gives £1,100 a year, and that Liverpool gives £1,800 a year to University College, and has in addition given land worth £30,000.