

were 17.1 in Bournemouth, 18.2 in Hastings, 20.8 in Hornsey and in Bury, 21.3 in Halifax, 23.0 in Bradford, and 24.0 in Rochdale; the highest rates were 36.4 in East Ham, 36.5 in South Shields, 36.7 in Gateshead, 37.5 in St. Helens, 37.9 in Wigan, 39.4 in Merthyr Tydfil, and 41.5 in Rhondda. During the period under notice 263,091 deaths were registered in these seventy-six towns, corresponding to an annual rate of 17.4 per 1,000 living. In London the rate of mortality was 17.7 per 1,000, while it averaged 17.6 in the seventy-five other large towns, among which the rates ranged from 8.6 in Hornsey, 10.9 in Hansworth, 11.5 in Walthamstow, 11.6 in King's Norton, 11.9 in East Ham and in Leyton, and 12.4 in Bournemouth to 20.0 in Hanley, in St. Helens and in Manchester, 20.2 in Middlesbrough, 20.6 in Wigan, 22.5 in Liverpool, and 23.1 in Merthyr Tydfil. The 263,091 deaths from all causes registered in these seventy-six towns last year included 32,021 which were referred to the principal infectious diseases; of these, 1,764 resulted from small-pox, 7,441 from measles, 2,870 from scarlet fever, 3,924 from diphtheria, 5,578 from whooping-cough, 2,336 from 'fever' (principally enteric), and 8,108 from diarrhea. The death-rate from these diseases averaged 2.12 per 1,000 in the seventy-six large towns.

THE efforts of the hydrographic branch of the United States Geological Survey are being directed to the discovery of sufficient water to lead to the reclamation and habitation of that area of the Great Plains lying west of the prairies and east of the Rocky Mountains, commonly known as the High Plains. The section is admirably suited to agriculture and grazing except for its inadequate water supply, which is so uncertain that great areas of fertile land lie quite uninhabited. This is especially true of the regions lying between the river valleys which cross it at wide intervals. These broad intervalley plateaus are practically waterless, but it has been discovered that water may be had from underground sources by wells and windmills, and it has been demonstrated that, while the region may not be largely reclaimable by irrigation, it may be successfully used for grazing by cre-

ating stock-watering points at comparatively close intervals. It will, however, be difficult, if not impossible, for the grazers to raise anything besides fodder cane of the drought-resisting varieties, such as Kaffir corn. Vegetables and other products will, for the most part, probably have to be grown elsewhere. The river valleys, on the other hand, seem destined to be extensively cultivated by irrigation, the water for which will be pumped from the gravels of the river beds, where an underflow has been known to continue in the summer season after the rivers themselves have ceased to run. These areas will furnish garden produce for the ranches on the plateau, and in this manner make the region as a whole habitable. The details of this investigation, with exhaustive studies of the nature of the underground waters of the High Plains, appear in the Twenty-first and Twenty-second Annual Reports of the United States Geological Survey, the latter of which is now in press and will soon be issued.

UNIVERSITY AND EDUCATIONAL NEWS.

ON April 1 Governor Peabody signed a bill giving to the University of Colorado two fifths of a mill annually on the taxable property of the state. This assures an income for the present of \$140,000 per annum, with an automatic increase depending on the growth in wealth of the state. The university has now enrolled about 550 students.

MR. ANDREW CARNEGIE has offered to pay the expenses of the students of Cornell University, who suffered from typhoid fever during the recent epidemic at Ithaca.

MRS. VAIL, wife of Professor Vail, has given Hobart College \$5,000 to establish a fund to be known as the Charles Delamater Vail library fund.

THREE scholarships of \$200, \$150 and \$125 are announced for the Harvard summer geological course in Colorado under Mr. C. H. White. These scholarships are open to general application from teachers and students of geology, whether now enrolled at Harvard University or not. Applications should be addressed to Mr. White, at the Rotch Build-

ing, Cambridge, Mass., and should state the applicant's previous training in geology and his purpose in further study. Letters of recommendation should be enclosed. Action on applications will be taken about June 1. The expenses of the course, including fee for instruction, will be about \$200 from Chicago and return.

THE class in geology and mining of the Missouri School of Mines and Metallurgy will make a summer excursion this year, in charge of Director George E. Ladd, to the Black Hills, Butte and Anaconda and the Yellowstone Park. Similar excursions will in the future be a required part of the work at this institution. The new catalogue of this school announces that there will be made, during the spring and summer months, as a part of regular courses, excursions to the Joplin mining district for mine surveying; to the Gasconad River for field practice in lines of communication; to southeast Missouri for geological field work; and to Joplin, St. Louis, Herculaneum and the Flat River district for the study of mines and ore-dressing and metallurgical plants.

THE report prepared by the business committee of the general council of the University of Glasgow in response to a statement drawn up at the request of the Carnegie trustees by the University Court and setting forth what in the opinion of the court were considered to be the most urgent needs of the university, the trustees have made to the university a grant of £55,000, the payment being distributed over a period of five years. This includes an annual grant for the period above named of £8,000 for buildings and permanent equipment, the branches of study which are to benefit including natural philosophy, materia medica, physiology, forensic medicine and, if any sum remains over, chemistry or geology. There is also to be for five years an annual grant of £2,000 for teaching, including the endowment of a chair of geology, for which the capital sum is £7,500. The annual grant to the library for the same period is to be £1,000. The University Court has now allotted sites for new buildings for

the department of natural philosophy and for the department of materia medica, physiology and forensic medicine and public health, and progress with these buildings may be expected without delay.

AT the University of Pennsylvania senior fellowships of the value of \$800 for those who have already taken their doctor's degree have been awarded. In zoology, to Dana B. Casteel, of Tarentum, Pa., A.B. (Allegheny College, 1899), A.M. (Ohio Wesleyan, 1900); in mathematics, to Lewis I. Neikirk, of Boulder, Col., A.B., M.S. (University of Colorado, 1898, 1901). Ordinary fellowships of the value of \$500 have been awarded. In psychology, to Robert H. Gault, of Ellsworth Station, O., A.B. (Cornell, 1902); in biology, to Everett F. Phillips, of Youngstown, O., A.B. (Allegheny College, 1899). The Tyndall fellowship in physics was granted to Leon W. Hartman, of Walton, N. Y., B.S., A.M. (Cornell, 1898, 1899). A special fellowship in mathematics for the year 1903-04 was given to Professor B. F. Finkel, of Drury College, Springfield, Mo. Fellowships for women were awarded as follows; Bennett fellowship in mathematics, to Alice M. McKelden, A.B., A.M. (Columbian, 1899; University of Pennsylvania, 1900). Bennett fellowship in chemistry, to Alice L. Davidson, A.B. (Elmira College, 1902). Moore fellowship in zoology, to Annie B. Sargent, Bellwood, Pa., B.S. in biology (Pennsylvania, 1899).

THE formal installation of the newly elected president of Hobart College, the Rev. Langdon Cheves Stewardson, will take place on commencement day, June 17.

THE departments of mining engineering and metallurgy at McGill University will be separated. Professor Stansfield will have charge of the metallurgical department, while Professor Porter will continue to direct that of mining engineering.

DR. JOSEPH BARRELL, assistant professor of geology at Lehigh University, has received a call to a similar position at Yale University.

BENJAMIN L. MILLER, A.B. (Kansas), Ph.D. (Johns Hopkins), has been appointed associate in geology in Bryn Mawr College.