

proportion of the living born to 1,000 inhabitants was 32.99, a proportion which is smaller than that of any year previous to 1901. Of those born living, 651,426 were males, 617,973 females. The births of male children per 1,000 inhabitants diminished 0.32 over the previous year, that of female 0.15. Of all the births, 16,884 were plural, 16,716 being twins, 167 triplets and 1 quadruplet. The number of marriages in 1908 were 311,331, nearly as many in the towns as in the country. There were 693,724 deaths in 1908, an increase of 12,775 over the previous year. The excess of living births over the deaths was 575,675, which, with the exception of 1907 and 1906, is more favorable than in previous years. Of 1,000 inhabitants 19.17 male and 17.02 female, or altogether 18.03 persons died, a figure more favorable than in all previous years. The mortality in large cities of over 100,000 inhabitants remains on the average, 16.51 per 1,000 living, below the average of the entire nation (18.03). The highest mortality is shown by the city of Posen (22.24), the lowest by the city of Schöneberg (11.44). Berlin had a death-rate of 15.42.

THE Uganda Cotton Industry is the subject of a British Colonial Report by Sir H. H. Bell, which is summarized in the *Geographical Journal*. Before 1904, tentative experiments in the production of cotton had been made. In 1905-6, Uganda exported 43, and in the next year, 163 tons. Of all varieties of cotton seed, none, it was found, suited the soil and climate so well as "American upland," producing as it did a better lint, ripening earlier, opposing a stouter resistance to insect pests and blights, and yielding a quality of cotton superior to that of the original stock. In consequence, however, of the distribution of many varieties of seed and the severe competition of buyers, the cotton exported by Uganda depreciated in value from £50,000 in 1907-8 (for 858 tons, 213 unginned) to £41,000 (for 1,150 tons, 640 unginned). To prevent the ruin of an industry of so great promise, the cultivation of cotton was, with the consent and cooperation of the chiefs, subjected to stringent governmental control. Two

large seed farms were established in 1908, one in Buddu, the other in Busoga. Pending the arrival of expert officers, their management was provisionally committed to overseers engaged in British East Africa, under superintendence of the officer in charge of the Botanic Department. Despite the lack of expert knowledge and the decimation by famine of the population of Busoga province in 1908, fair results are being obtained. Thanks to the chiefs' loyal assistance, it is now difficult to find a plant other than of American upland, and the evolution of a hybrid peculiarly adapted to the climatic conditions of the country is deemed probable. The stringent regulations of 1908 have been relaxed, save that the distribution of seed remains for some time longer under government control. In spite of the restrictive regulations, Uganda exported, in 1908-9, 1,150 tons of cotton, 650 unginned. Under the head of the Cotton Department and a staff of instructors, "immense improvement and extension of the industry is confidently expected."

UNIVERSITY AND EDUCATIONAL NEWS

AUGUSTANA COLLEGE, Rock Island, Ill., which celebrated its semi-centennial anniversary last June, benefits under the will of the late Hon. C. J. A. Ericson, of Boone, Ia., to the extent of \$56,000, which goes to the general endowment fund of the college.

THE council of Oxford University, at the instance of its chancellor, Lord Curzon, has recommended that Greek shall cease to be a compulsory study.

DR. ROBERT J. ALEY, superintendent of public instruction for Indiana, and for eighteen years professor of mathematics at Indiana University, has been elected president of the University of Maine and will take office December 1.

PROFESSOR JAMES B. SHAW, of James Milliken University, and Dr. Arnold Emch, of the Obere Realschule, at Basel, Switzerland, have been appointed as assistant professors of mathematics at the University of Illinois. Dr. Emch will take up the duties of his new position on February 1, 1911.

THE trustees of the Massachusetts Agricultural College have established a department of zoology and geology with Mr. C. E. Gordon as its head.

DR. BIRD T. BALDWIN, who for the past year was a lecturer in the University of Chicago, has accepted a call to an associate professorship in education and head of the school of practise teaching in the University of Texas.

DR. FREDERICK P. GAY, of the Harvard Medical school, has been appointed head of the department of pathology of the University of California. Dr. H. B. Graham, who recently returned to Berkeley from Austria, has been appointed assistant professor of hygiene.

DR. F. L. HALEY, of Hoosick Falls, N. Y., has been made professor of physiologic chemistry and bacteriology in the medical department of the University of Alabama. Other additions to the faculty are: Dr. James F. Harrison, professor of chemistry and materia medica; Dr. M. Toulmin Gaines, associate professor of pathology and histology, and Dr. William H. Oates, associate professor of therapeutics.

DISCUSSION AND CORRESPONDENCE

THE LUMINOSITY OF TERMITES

IN SCIENCE of January 7, 1910, I published a note in regard to the luminosity of termites. To that communication I am now able to make the following additions. Herbert H. Smith, a thoroughly trustworthy naturalist, makes the following note at page 139 of his work on "Brazil, the Amazons, and the Coast," New York, 1879:

There are white ant-hills along the sides—pale glows of phosphorescent light, like coals in the ashes. They look ghostly in the darkness.

In a footnote he adds:

The phosphorescence is in the insects; and I believe that it is peculiar to one or two forest species.

The locality where Mr. Smith observed this phosphorescence is near Santarem in the valley of the Tapajos.

Bearing on the other side of the question I here give a translation of a letter just received from my friend Dr. Joaquim Lustosa, a

Brazilian mining engineer living at Lafayette, state of Minas Geraes, of whom I have made inquiries about this matter. Dr. Lustosa writes as follows under date of July 8, 1910:

I have just received authentic information to the effect that in the state of Matto Grosso, in the low swampy lands along streams, and especially in the rainy months beginning with October myriads of fireflies are seen covering the ground. My informant, who has lately come from the upper part of Matto Grosso where it joins Bolivia, tells me that he has seen at night many of the nests of white ants that have been abandoned by the ants themselves entirely covered by fireflies that come from the small openings over the whole surface of the anthill. Is it possible that the fireflies select these abandoned anthills as places in which to rear their larvæ? . . . Unfortunately, I have never observed anything of the kind hereabout, though I have been interested in the subject in order to furnish you information.

It should be noted that the case mentioned by Dr. João Severiano da Fonseca and referred to in my communication of December 13, 1909, was seen in Matto Grosso in the region mentioned by Dr. Lustosa.

J. C. BRANNER

STANFORD UNIVERSITY, CAL.,

August 9, 1910

HONEY ANTS IN UTAH

IN the autumn of 1908, Mr. Guy Hart, a student in the Salt Lake High School, brought to me for identification some of the repletes of the honey ant. He had collected them at Garfield, Utah, a smelter town at the southern end of Great Salt Lake. They had been found while excavating for a house, and Mr. Hart said that they had been noticed on several occasions during the progress of excavations.

I sent a few of these repletes to Professor W. M. Wheeler, and he determined them as a variety of *Myrmecocystus mexicanus*. This variety is closely related to *horti-deorum*, but the repletes are somewhat smaller than those of that variety.

Garfield is at an elevation of about 4,243 feet. Its latitude is approximately 40° 42' N. Honey ants have not heretofore been reported