a school of public health and hygiene in the medical department of the University of Georgia, Augusta.

DR. ARTHUR S. HATHAWAY, since 1891 professor of mathematics at the Rose Polytechnic Institute, has retired from active service. He is succeeded by Dr. I. P. Sousley, of Pennsylvania State College.

PROFESSOR FREDERICK SLOCUM has returned to Wesleyan University as professor of astronomy and director of the Van Vleck Observatory.

MR. GUY R. MCDOLE, assistant soils chemist in the Minnesota Agricultural Experiment Station, has accepted a position as associate professor of agronomy and soil technologist at the University of Idaho.

DR. ROBERT STEWART, who has for the past five years been associated with the late Dr. Cyril G. Hopkins at the University of Illinois as professor of soil fertility, has resigned his position to accept the deanship of the college of agriculture of the University of Nevada.

DR. ARTHUR T. EVANS has accepted the position as associate agronomist in South Dakota State College and Experiment Station. He has previously been professor of botany and dean at Huron College; and earlier engaged in corn disease investigations with the Cereal Office of the United States Department of Agriculture.

DR. WM. CONGER MORGAN has resigned his position as professor of chemistry at Reed College to become professor of chemistry at the Southern Branch of the University of California at Los Angeles.

C. LEE SHILLIDAY, professor of anatomy and histology in the college of dentistry, University of Tennessee, has accepted the professorship of biology in the Pennsylvania College of Gettysburg, to succeed Dr. George Stahley, who has retired after thirty years' service.

ASSOCIATE PROFESSOR BURT P. KIRKLAND, and Assistant Professor E. T. Clark, of the college of forestry and lumbering of the University of Washington, have been promoted, the former to a full professorship and the latter to an associate professorship.

DR. WILLIAM BOYD, professor of pathology in the University of Manitoba, Winnipeg, has declined the offer of the chair of pathology at the medical school, Cairo, Egypt.

DR. FRIEDMANN, the value of whose turtle vaccine for tuberculosis is questioned, has been appointed extraordinary professor at the University of Berlin against the vote of the medical faculty.

DR. A. GOSSET, professor of external pathology of the Paris medical faculty, has been appointed to the chair of clinical surgery left vacant by the retirement of Professor Quénu, and Dr. Vaquez, professor of internal pathology, has been appointed to succeed Professor Robin in the chair of clinical therapeutics.

DISCUSSION AND CORRESPONDENCE

A BAND SPECTRUM FROM MERCURY VAPOR

TO THE EDITOR OF SCIENCE: The writer has recently observed that under certain conditions the discharge through mercury vapor gives a glow that is distinctly green. An examination of this glow shows the ordinary line spectrum of mercury together with a spectrum which is apparently continuous through nearly all of the visible spectrum, being most prominent in the green. So far as the writer has been able to learn there is no record of such a spectrum having been obtained from the discharge through mercury vapor.

Two conditions are necessary for obtaining this spectrum with any considerable brightness. First the vapor through which the discharge takes place must be passing from a hotter to a colder region, as from the mercury arc or from the mercury heated by a flame to a condensing chamber, that is, through vapor that is condensing.

Secondly the voltage must be kept as low as possible and yet have a discharge. As the voltage is raised the ordinary line spectrum becomes more prominent and the continuous spectrum less so. The discharge from a Wimhurst machine or from a transformer shows the glow somewhat better than that from an induction coil. Putting condensers in parallel

with the spark has the same effect as increasing the current. It is possible to obtain the glow from hot calcium oxide providing the discharge is kept very small.

The shape and position of the electrodes have no appreciable influence on the production of this glow. It is produced equally well from platinum and from iron electrodes and in tubes made from soda and from lead glass. It does not appear to depend on the purity of the mercury.

It requires approximately .001 sec. for the glow to die out after the exciting current has ceased. As a result of this continuance of the glow the radiators may continue to give light while being carried with the current of mercury vapor for 20 or 30 cm.

These radiators do not appear to be charged. Thus if the luminous vapor containing them is passed through wire gauze, no effect is produced on the intensity of the continuous spectrum when the gauze is charged negatively. This is quite different from the behavior of the radiators of the line spectrum which may be entirely removed by this means. It is possible in this way to obtain the continuous spectrum without any of the line spectrum appearing.

As far as has been observed there are no lines or separate bands in the spectrum here described. It is, however, possible that a spectroscope better than the one at the command of the writer may show such lines.

It appears probable that we are here dealing with a vapor which is intermediate between a gas and a liquid. When a gas is condensing there must be a time when two or more atoms have combined to form clusters. Such a vapor might be expected to give a spectrum intermediate between a line spectrum as given by a gas and a continuous spectrum as given by a liquid or solid. This is a fact the kind of spectrum here observed.

Further work is being done on the subject and it is expected that the results will soon be published in more complete form.

C. D. CHILD

COLGATE UNIVERSITY,
August 6, 1920

A NEW VARIETY OF THE ROOF RAT

DURING the second week of March of this year Miss Jane F. Hill, one of our students, brought to the laboratory about a dozen rats, which had been taken on her father's farm. The farm is located fifteen miles from Austin, in Travis County, Texas. Seven of these rats were cinnamon in color, the others, obviously the wild type, were gray or brownish. The cinnamon color is restricted to the back and sides of the head and body, and is due to the presence of yellow pigment in the outer ends of the hairs, the pigment of the hair base probably being chocolate. In the type and mutant specimens the fur on the ventral surface, from the chin to the base of the tail, is snow white, the hairs being white from the tip to the base.

We attempted to keep these rats in the laboratory, but after a few weeks they began to die. I then instructed one of our assistants to preserve the skins. Some of these were later sent to Professor W. E. Castle, who showed them to Dr. G. M. Allen. Dr. Allen identifies the species as the roof rat, *Mus alexandrinus*.

We were anxious to establish a stock of the cinnamon rat for genetic studies, and through the kindness of Miss Hill and her family, I was able to visit the farm on July 6. During the day we captured 215 rats. Upon examination, the rats proved to be of three varieties, *Mus norvegicus, Mus alexandrinus,* and the cinnamon mutant. We took 61 specimens of the common Norway, 138 of the type of roof rat, and 16 of the cinnamon. Undoubtedly some of the 138 specimens of the roof rat are heterozygotes. We were fortunate enough to capture a mother and four young in one nest. Three of the litter are like the brownish-gray mother, and the third a typical cinnamon.

The interesting point concerning the discovery of this cinnamon rat relates to its origin. When and how did it happen to appear on the Hill farm? With a view of answering these questions, I made a careful study of the conditions on the farm. The farm buildings where the rats are found are close together and