Dr. Hugh Morgan was promoted from an associate professorship to a professorship of clinical medicine, and Dr. Horton Casparis was made professor of pediatrics and head of the department.

AT Yale University, Elliott Dunlap Smith, of the Dennison Manufacturing Company, has been appointed professor of industrial engineering in the Sheffield Scientific School; Dr. John Rodman Paul has been appointed assistant professor of medicine, and Dr. Roland Charles Travis has been appointed research associate in psychology, with the rank of assistant professor, in the institute of psychology.

PROMOTIONS which have been recently announced in the department of chemistry, University of Wisconsin, are: from associate professor to professor, Homer Adkins and Farrington Daniels; from assistant professor to associate professor, George J. Kemmerer, S. M. McElvain and H. A. Schuette.

DR. FLORENCE PEEBLES, lecturer for the extension department of the University of California at Los Angeles, has been appointed professor of biology in the California Christian College in Los Angeles.

A. BRAZIER HOWELL, of the U. S. National Museum, has been appointed lecturer in comparative anatomy in the department of anatomy at the Johns Hopkins Medical School.

DR. ERICH VON GEBAUER-FÜLNEGG, assistant professor at the University of Vienna, has received a similar appointment on the chemistry staff of Northwestern University.

R. A. WARDLE, lecturer in economic zoology in the University of Manchester, has been appointed to the chair of zoology in the University of Manitoba, Canada.

DISCUSSION AND CORRESPONDENCE

AN OLD EXPERIMENT ON COLLISIONS OF THE SECOND KIND

THIRTY-SEVEN years ago, in the course of an investigation on the spectroscopic determination of potassium, F. A. Gooch and T. S. Hart[1] made the interesting observation that the presence of sodium in a flame tends to increase the intensity of the red potassium doublet. A small helix of platinum wire was dipped in a solution of potassium and sodium chloride, dried and introduced in the outer cone of the flame of a large Bunsen burner. The potassium line was observed in a small spectroscope with the telescope set so that the yellow sodium doublet fell outside the field of view. The effect of varying the amount of sodium was roughly studied. The phenomenon began to be noticeable when the ratio of sodium to potassium was about ten. With twenty times as much sodium as potassium the potassium line was "much stronger" than in the absence of sodium. The greatest enhancement was observed when the ratio of sodium to potassium was one hundred. A further increase in the amount of sodium decreased the effect, but this decrease may be psychological, due to the strong sodium light scattered into the field of view.

The explanation of this phenomenon, which Gooch and Hart attribute to some, not specified, chemical reaction, is undoubtedly to be found in the so-called atomic collisions of the second kind.[2] Since the resonance potential of sodium is greater than that of potassium, it is possible for an excited sodium atom, colliding with a normal potassium atom, to transfer enough energy to excite the latter. The presence of a large number of excited sodium atoms will, therefore, increase the number of excited potassium atoms and thus enhance the intensity of the potassium doublet.

J. RUD NIELSEN

UNIVERSITY OF OKLAHOMA

ANOTHER WILD LIFE PRESERVE NEAR ITHACA

IN 1919 through the generosity of the late Mr. C. G. Lloyd, of Cincinnati, Ohio, Cornell University obtained what is now known as the Lloyd-Cornell Wild Life Reservation near McLean, N. Y. This preserve comprises an area of slightly over 80 acres and includes several very interesting cold upland sphagnum-heath bogs, grass bogs and an open mud pond, which is now in the process of being slowly filled in. Each year various classes in the biological sciences of Cornell University make excursions to this preserve and in 1926 a report was published on a preliminary survey of the fauna and flora of this preserve.[1]

In 1924 Mr. Lloyd purchased another tract of more than 400 acres of wooded land near Slaterville, N. Y., some 12 miles to the southeast of Ithaca and this has been designated as the Lloyd-Cornell Wild Flower Preserve. This preserve consists of a wooded hilly upland area which is traversed by several streams as well as by a cold spring brook and affords another bit of area in which Nature will be allowed to function without interference from man.

Just before his death Mr. Lloyd made arrangements for the purchase of still another tract of land near

[1] F. A. Gooch and T. S. Hart, *Am. J. Sci.*, 42, 448 (1891).

[2] O. Klein and S. Rosseland, *Zeitschr. f. Phys.*, 4, 46 (1921); J. Franck, *Zeitschr. f. Phys.*, 9, 259 (1922).

[1] A Preliminary Biological Survey of the Lloyd-Cornell Reservation, by members of the Scientific Staff of Cornell University. Bull. Lloyd Library, No. 27, Ent. Ser. No. 5, 1926.

Ringwood which the limnology classes in Cornell University have frequently for many years. Negotiations for the acquisition of this property have now been completed and this preserve will be known as the Lloyd-Cornell Ringwood Wild Life Preserve.

The Ringwood Preserve lies about 7 miles to the east of Ithaca. It comprises an area of slightly over 110 acres. Situated in the midst of rolling wooded hills, it lies at an elevation of about 1,600 feet. Being of morainic origin the glaciers upon receding have left a series of pot holes which are furnishing some very interesting situations for biological studies. One of these pot holes, known as Winterberry pond, seems to be spring fed and retains approximately the same amount of water the year round. The other pot holes have water in them intermittently. In the spring when the snow begins to melt, the water collects in them to a depth of from 5 to 12 feet, while during the late summer the water becomes lower and lower until in the fall the water disappears entirely. Just to the east of the preserve is found a sphagnum bog which offers a variety of biological forms for study.

The life which is found in these temporary pot-hole pools forms an interesting succession study. Every spring during the latter part of April and the early part of May these temporary pools are fairly alive with the beautiful fairy shrimps, *Enbranchipus gelidus*. Coming back to these pools a week or two later not a single specimen of the fairy shrimp will be noticed. However, another crustacean, *Limnetes gouldii*, is found to be just as abundant as was the fairy shrimp a few weeks previously.

Mr. W. C. Senning, instructor in the department of zoology, has made a study of the plant and animal life of these pools during the last three years so that we have a good beginning of a systematic study of the life in this preserve.

With these three Wild Life Preserves made possible through the generosity of Mr. C. G. Lloyd, Cornell University will always have an opportunity of studying plant and animal life in situations where artificial interference by man has been reduced to a minimum.

P. W. CLAASSEN

CORNELL UNIVERSITY

ÅNGSTRÖM IN ENGLISH

Is it not unreasonable to muster the letter E, as appears imminent, into duty for almost any vowel? Something may be said for the simplification achieved in using E for the sounds represented in the original German, Swedish, etc., by Ä (or in Latin by AE). But it seems to be overdoing the point to render the ō sound of the Swedish letter Å with an E, as is done (through a misprint?) in "engstrom units" appearing above the name of Alfred F. Hess on page 334 of SCIENCE (March 30, 1928). Preservation of the original spelling of Ångström's name is perhaps too much to expect, especially of American typewriters. Nevertheless, to convert it to *engstrom* is unduly to succumb to a somewhat prevalent ignorance of the fact that *ongstrum* is in English the nearest phonetical rendering of the physicist's name (cf. Webster's New International Dictionary). Perpetuating the error fails to simplify international scientific intercourse.

E. F. B. FRIES

EMBRYOLESS SEEDS IN CEREALS

OF interest in connection with the theory of double fertilization in angiosperms is the discovery of embryoless seeds in wheat, rye and bald barley. Such seeds develop endosperm which is perfectly normal, but they show no trace of embryo tissue. The abnormality is not apparent on casual observation, but upon closer examination the lack of embryo is evidenced by a depression at the proximal end of the seed. Microscopic examination of sections also shows embryo tissue and the epithelial layer to be absent.

Pope and Harlan reported the occurrence of five barley seeds in which the embryo was entirely lacking among many thousands examined. The writer finds that embryoless seeds occur in wheat in the proportion of approximately 0.1 per cent. Sufficient additional work has been done to indicate that this same proportion holds true for both bald barley and rye.

MILDRED E. LYON

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THE HOST OF THE BROAD TAPEWORM

THE recent article by Vergeer[1] prompts me to call attention to my experiments on *Diphyllobothrium latum* (the broad tapeworm) which was published in *Minnesota Medicine*, October 1927, page 614. Since my report was the first demonstration of the fact that North American fishes act as hosts for this worm, Vergeer's report may be looked upon as confirmation of my findings. In my report it was indicated that I had evidence of the fact that there was an endemic area in and about Winnipeg, Manitoba. Since then I have obtained wall-eyed pike from Lake Winnipeg and have found larvae in a great percentage of them, which when fed to dogs produced typical tapeworms of the species *D. latum*. The importance of this is apparent when one learns that a great proportion of the wall-eyed pike sold in the middle western markets comes from Canadian Lakes and that a large proportion of

[1] The *Journal of the American Medical Association*, 90: 673–678.