ment be broadened from an engineering society standpoint to that of a national museum. This idea was acceptable to the engineers and the museum will be founded on the broadest possible basis.

A CONVENTION between the United States and Great Britain for the preservation of the halibut fishery of the north Pacific Ocean, including Bering Sea, was signed March 2 and on March 4 it was ratified by the senate. The chief feature of the convention is a close season on fishing for halibut, both in territorial waters and on the high seas off the western coast of the United States and Canada, from November 16 to February 15 following, both days inclusive. It is provided also that within two months after the exchange of ratifications an International Fisheries Commission, consisting of four members, shall be appointed, two from each country. This commission is to investigate the life history of the Pacific halibut and make recommendations to the two governments as to any regulations that may seem to be desirable for the preservation and development of the halibut fishery. The convention is to continue in force for a period of five years and thereafter until two years from the date when either of the high contracting parties shall give notice to the other of a desire to terminate it.

UNIVERSITY AND EDUCATIONAL NOTES

DR. JAMES A. PATTEN, of Chicago, has given $50,000 to Monmouth College, at Monmouth, Illinois. Mr. Patten's donations to the college now amount to $133,000.

APPLICATION has been made to the Ontario legislature to amend the act of incorporation, changing the name of Western University Medical School, London, to the University of Western Ontario, the desire of the authorities being to make this university the educational center of the western part of the province.

J. A. HILL, wool specialist of the University of Wyoming Agricultural Experiment Station, has been elected dean of the Wyoming College of Agriculture and director of the Wyoming Experiment Station.

DR. CLIFFORD I. CARPENTER, Dr. Arthur W. Thomas and Dr. J. Enrique Zanetti, assistant professors of chemistry in Columbia University, have been promoted to the rank of associate professors.

DR. KIMBALL YOUNG, appointed this year assistant professor at Clark University, will return to the University of Oregon in September to teach social psychology and anthropology.

DR. ROBERT L. PENDLETON, for some years director of the department of agriculture, Gwalior State, India, has been appointed professor of soil technology in the College of Agriculture, Los Banos, Philippine Islands.

DR. J. S. ANDERSON, of the helminthological department of the London School of Tropical Medicine, has been appointed to the chair of medicine at the University of Hong Kong.

DISCUSSION AND CORRESPONDENCE

ERYTHRODEXTRIN IN MAIZE[1]

DR. WEATHERWAX has found that the endosperm of Chinese waxy maize when tested with a solution of iodine dissolved in aqueous potassium iodide gives a red color reaction instead of the characteristic violet color of starch. From this phenomenon he infers that the endosperm of waxy maize is composed not of starch but wholly of a relatively rare substance, erythrodextrin. In a criticism of Weatherwax's paper East[2] questions the propriety of designating this substance erythrodextrin based solely on its color reaction and possibly there is justification for his position. This difference of opinion, however, must not be allowed to obscure the fact that the endosperm of waxy maize can be differentiated from the endosperms of all other known types by its color reaction when treated with iodine solution and whether Weatherwax's contention is substantiated or not will not materially affect the value of his discovery which remains as a distinct contribution to the genetics of maize.

The iodine test has made possible the identification of the double recessive combination of waxy and sweet obtained in the F_2 of hybrids between the waxy type and varieties of sweet

[1] Weatherwax, Paul. A rare carbohydrate in waxy maize. *Genetics*, 7, 568-572, 1923.

[2] East, E. M. Weatherwax on maize endosperm. SCIENCE, LVII, No. 1475, pp. 416-418, April 6, 1923.

corn. This double recessive combination completely resembled sweet seeds in contour and could only be determined by subsequent breeding tests. The iodine method has been of value also in separating the waxy from the starchy seeds in hybrids with the large-seeded Cuzco variety where heretofore classification has been impossible owing to the looseness of the carbohydrate particles.

The fact must not be overlooked, however, that the identification of the carbohydrate as erythrodextrin does not furnish a complete explanation of the physical properties of waxy endosperm since like starch this carbohydrate can be found in an extremely floury condition.

The chief criticism of this latest contribution of Weatherwax to the literature of maize and it applies equally well to several of his previous papers has been epitomized aptly by East in his phrase "blending of the didactic and the dogmatic" but this manner of presentation of course is purely personal and should not detract from the observed facts.

A more serious defect and one also not unique in this paper on erythrodextrin is a tendency to magnify the importance of minor discoveries.

This tendency is well illustrated by the extended discussion of the genetic difficulties met with in sweet-starchy maize hybrids—difficulties which hardly can be solved by the discovery that waxy endosperm turns red in a solution of iodine—and the discussion of this subject might well have been postponed until a true chemical solution could be offered.

Appreciating that there was to be a delay in publication Dr. Weatherwax kindly furnished us with a copy of his manuscript early last May and at that time his statement that "the sporadic appearance of sweet corn as a mutant from starchy corn in many parts of America is known" was questioned. Since he has not found it expedient to qualify this statement it seems desirable to record that as far as we are aware no such mutations are known to geneticists. In the thousands of guarded pollinations that have been been made in starchy maize varieties in the past decade not a single instance of a mutation to sweet seeds has been reported. While the value of the discovery of the red reaction of waxy endosperm in iodine solution can not be affected by the truth or falsity of this observation, it seems unfortunate that such a statement should be published under circumstances likely to afford it credence.

J. H. KEMPTON

BUREAU OF PLANT INDUSTRY

THE PERSONAL EQUATION AND REACTION TIMES

THE question whether personal equation in star transits is a matter of reaction time may be one that has been somewhat confused by not using the respective terms with the same significance.

But perhaps the real difficulty has been in the interpretation of the particular form of personal equation in this case. The usual understanding of recorded chronograph transits is based on the explanation given in books on descriptive astronomy, in which the observer is represented as tapping the key in coincidence with the instant when a star is on the wire, as nearly as he can do so. The flying bird and a sportsman, armed with a gun, is the popular illustration. Thus for a Mallard, dropping into decoys, we allow a lead of a yard, while for the Black Brant, commonly called a goose in California, we lead ten feet, because he is flying high and his size makes his real speed very deceptive.

My own habit of observing, however, based upon early consultation with such masters in the "old astronomy" as Benjamin Gould and Lewis Boss, has been to tap the key when I see the star on the wire. Thus every record is late and consciously late, but the advantage is that accidental deviations from uniformity of record are presumed to be smaller than they would be in efforts to allow for the motion of the stars as they approach the wire, each with a special velocity.

The systematic error thus introduced is a part of the personal equation and would be of importance in the determination of absolute clock corrections and in longitude work. It is eliminated in the measures of right ascensions where the observed clock correction and clock rate depend upon observations of standard stars. We are there concerned in making the accumulated accidental errors of observation as small as possible.

My own understanding of the reaction time in this process is the elapsed interval between