Alabama, through the kindness of Mr. Robert A. Love, yielded a race which behaved in the same way, and which evidently belongs to the *Œ. Tracyi* described by Bartlett.[4] The plants, which were grown at the John Innes Horticultural Institution this year, numbering 173, were very uniform and agreed in general with Bartlett's description. They were very tall and stout, much more so than *Œ. grandiflora,* and several plants showed small buds at the end of September. Certain other facts in this connection are referred to in a paper now in press in the *Transactions* of the Linnean Society.

In growing scores of wild races belonging to the species *Œ. biennis, Œ. muricata, Œ. grandiflora, Œ. argillicola, Œ. Hookeri* and others from various parts of North America, in the climate of England during the past summer, I have been greatly impressed by the constancy and the peculiarity of each race as regards such physiological characters as the strength of the biennial habit, and the time of blooming. The differences in these respects are quite as marked and constant as any morphological characters can be, and in hybrids they are frequently intermediate. Evidently each race is closely adapted to the conditions of the growing season in its own native locality; and within certain limits it is possible to predict what the behavior of a race will be when one knows the latitude and climatic conditions from which it came. The elucidation of the origin of these racial climatic adaptations in *Œnothera* is a most interesting evolutionary problem.

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Inheritance of the Russet Skin in the Pear

The russet skin occurs commonly in the pear and it is found in amounts varying from 0 per cent. to 100 per cent. In Ragan's "Nomenclature of the Pear"[1] are described 547 varieties having no russet, and 772 varieties having a very light to a solid russet covering. In the latter class only 16 are given as simply "russet"; however, several others, as the Bosc, should come under this head. The low number of russet individuals indicates that the russeting is recessive to the smooth-skinned condition, and that many of the partially russeted and smooth-skinned pears must be heterozygous—the dominance of the smooth-skinned condition being frequently incomplete.

The results obtained at the New York Agricultural Experiment Station, Geneva, New York, support such a postulation. In a cross between Kieffer ♀ and Elizabeth ♂, both parents having smooth skins, were obtained two russeted and ten smooth-skinned seedlings. This population is too few in number to allow one to draw definite conclusions; nevertheless, it approaches closely a simple 3:1 Mendelian segregation. In a cross between Bosc ♀ and Kieffer ♂, the ♀ parent having a russet skin and the ♂ parent carrying the russet condition as a recessive?, there were produced five seedlings—two of which were smooth-skinned and three russeted. The progeny of this latter cross approximate a 1:1 Mendelian ratio, viz., one individual is homozygous to the smooth-skinned condition and one individual is heterozygous to russeting. As a Russet Bartlett of unknown origin, differing from the normal Bartlett in no character except the skin—even in the self-sterility of the blossoms—is growing on the experiment station grounds, it is reasonable to suppose that the russet condition is due to a loss of a determining factor, for the loss of a character is much more common than the addition of a new one.

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[4] Bartlett, H. H., "Systematic Studies on *Œnothera*. I. *Œnothera Tracyi* sp. nov.," *Rhodora,* 13: 209–211, pl. 93, 1911.

[1] U. S. Dept. Agric., B. P. I. Bull. 126, 1908.

Societies and Academies

Academy of Science, St. Louis

A meeting of the Academy of Science of St. Louis was held at the academy building, Monday, November 18, President Englar in the chair.

Professor James F. Abbott, of Washington University, addressed the academy on "Permeability of Animal Membranes," dealing particularly with some experiments conducted during the summer on fiddler crabs.

Dr. C. H. Turner, of the Sumner High School, gave a short talk on "The History of an Orphan Colony of a Paper-making Wasp"; and Dr. H. M. Whelpley spoke on "Indian Miniature Axes and Celts," illustrating his remarks with numerous interesting examples.

Professor F. E. Nipher, of Washington University, presented some results of his experiments on "The After Effects in an Aluminum Wire used in Electric Discharge."

Since making a communication to the Academy of Science of St. Louis on November 4, experiments have been made in the study of the creeping of an aluminum wire through which a rarefaction wave is sent.

When a fresh wire is used, the wire creeps in a direction opposite to that of the corpuscular displacement.

After the discharges from a condenser of large capacity have passed through the wire for fifteen or twenty minutes the position of the wire is reversed; no other change being made, the wire creeps in the opposite direction in space. This has been repeated many times.

On the other hand, if the polarity of the influence machine is reversed the wire creeps in the same direction in space.

The end of the wire which is in advance in the motion of the first case is in advance in the two subsequent cases.

In the two latter cases the wire creeps toward the positive terminal. The discharge terminals at the wire were in the form of rings of large copper wire, which closely encircled the aluminum wire. The long spark was in the conductor leading to the positive terminal of the machine, about ten feet distant. Some preliminary experiments seem to indicate that this after-effect can not only be eliminated, but that it can be reversed.

Such effects have not been observed in copper wires, but it is possible that a decrease in the sensitiveness of response of the wire was due to this cause, and not to frictional contact in the grooved supports, as had been supposed. It was at first thought that the effects described might be explained as differential end or point reactions between the ends of the wire and the air and other surrounding matter. The ends of the wire were, however, bent downward, so that they point in a direction at right angles to that in which the wire creeps. Either end may be bent downward, the other pointing either in the direction of motion, or in the reverse direction, without affecting the direction in which the wire creeps, in any material way. This apparently eliminates end effects from any part in these very remarkable results, and it is entirely possible that some of the conclusions heretofore published may require modification.

It would not be surprising, in view of these results, to learn that the resistance of this wire depends upon the direction of flow of the current.

GEORGE T. MOORE,
Secretary

THE BOTANICAL SOCIETY OF WASHINGTON

THE 83d regular meeting of the society was held at the Cosmos Club November 12, 1912. The program included the following papers:

A Portrait of Linnæus: Dr. J. N. ROSE.

Dr. Rose exhibited an engraved portrait of Linnæus which had recently been presented to the Smithsonian Institution by Captain John Donnell Smith, of Baltimore, who had previously given to that Institution his magnificent herbarium and library. This portrait is one rarely seen in this country, being a mezzotint of one of the earliest portraits of Linnæus, the original being a replica of Hoffman's famous picture showing Linnæus in Lapland dress, of which the original is now the property of the Clifford family. This replica was known to have been in the possession of one Thornton as late as 1811; but its whereabouts now is not known.

Dr. Rose also called attention to the large collection of portraits of Linnæus in the possession of the Linnean Society, and also to the work of Tycho Tullberg, "Linneporträtt," a quarto volume of 185 pages with 25 portrait plates.

"Rough-bark" Disease of the Yellow Newtown Pippin: Mr. JOHN W. ROBERTS.

Botanizing in the Region of the Natural Bridges of Southeastern Utah: Dr. P. A. RYDBERG (by invitation).

THE 84th regular meeting was held at the Cosmos Club on December 3, 1912. The program included the following papers:

Summary of Studies of Glomerella (with lantern): Dr. C. L. SHEAR.

Probable Origin of Maize (with lantern): Mr. G. N. COLLINS.

The Effect of Lime on the Alkali Tolerance of Wheat Seedlings (with lantern): Dr. J. A. LeClerc and Mr. J. F. Breazeale.

C. L. Shear,
Corresponding Secretary

THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON

At the meeting of the society in the New National Museum on Tuesday afternoon, November 19, President George R. Stetson in the chair, Mr. James Mooney, of the Bureau of American Ethnology, lectured upon "The Gaelic Language of Ireland."

The lecturer outlined the history of the Keltic nations, of whom the Gael of Ireland and Scotland are a part, from their first acquaintance with the Greeks about six hundred years before Christ, down to the storming of Rome in 390 B.C.—the earliest authenticated date in Roman history—their alliance with Alexander the Great, their invasion of Asia Minor and colonization of Galatia in 278 B.C., and the final subjugation and Latinization of the continental Kelts by the Romans about the beginning of the Christian era.

Gaelic is the oldest living language in Europe, unless we except modern Greek, and it closely resembles Latin in many of its roots.

The Gaelic colonization of Ireland probably dated as far back as 1000 B.C. The island was known to the Greeks under a form of its native Gaelic name of Eire as early as four centuries before Christ. The ancient annals mention several earlier races or colonizations, the most important being the Firbolg, probably a part of the Belgæ of the continent. They continued to exist as a distinct people under their own chiefs up to the sixth century or later.

The alphabet of pre-Christian Ireland was the Ogam (Ogum), a system of straight lines or dots ranged along either side of a base line, and somewhat resembling a cross between the Morse alphabet and the cuneiform inscriptions. It was used chiefly for monumental inscriptions, and continued in use to some extent up to the tenth century. The modern Gaelic alphabet, consisting of seventeen letters, is an adaptation from the Roman.

Mention was made of some of the most ancient manuscripts, some of which have been already translated and others of which are now under translation by the Irish Texts Society. Under the Penal Laws, from 1691 until about 1800, the whole native population was practically debarred from education. Under the so-called National School System, established in 1831, the national language continued to be proscribed, resulting in its rapid decline. The great famine of 1845–7 with the ensuing wholesale emigration reduced the Gaelic-speaking population by nearly one half within twenty years, the great majority of those remaining being entirely illiterate. In 1878 the first concession to the native language was made by the national schools. In 1893 the Gaelic League, under the presidency of Dr. Douglas Hyde, began an active propaganda for the restoration of the language to its proper status, with the result that it is now taught in 3,000 of the 8,000 governmental "national" schools, as well as in a large number of private and denominational schools, a whole flood of modern Gaelic literature covering every subject of intellectual interest is coming from the press, and the Gaelic language has been made an essential for matriculation in the new National University of Ireland beginning with 1913. Out of its own funds the league also maintains ten normal colleges for the training of teachers in the language, in several of which schools the entire course of instruction is through the Gaelic. The census just completed shows that Gaelic is still the home language of nearly 600,000 persons in Ireland above the age of three years.

Outside of Ireland the Gaelic speakers in Scotland, England, the United States, Canada and elsewhere probably number considerably over a million. Prince Edward Island and adjacent parts of Nova Scotia have a compact body of about 100,000, mostly descendants of emigrants from the Hebrides. In this country Gaelic instruction is now conducted in several universities and a translation of the Rubaiyat, in Gaelic language and type, was recently published in Chicago.

W. H. Babcock

THE ELISHA MITCHELL SCIENTIFIC SOCIETY

The 202d meeting of the society was held December 10 in Chemistry Hall, University of North Carolina. The following program was presented:

"Notes on the Construction of the Crest-of-the-Blue-Ridge Highway," by Mr. T. F. Hickerson.

"Zonation in the Chapel Hill Stock," by Mr. Collier Cobb.

James M. Bell,
Recording Secretary

Chapel Hill, N. C.