bring it "into accord with the Vienna agreement." Accordingly the law of priority is observed, and also that requiring the double citation of authorities in certain cases. These, with the acceptance of the year 1753 as the date of the beginning of the binomial nomenclature, and the partial decapitalization of specific names, bring about many changes in the form and appearance of the names of familiar plants, so that sometimes one is not quite sure of the identity of particular species. To help such a situation the authors have judiciously introduced synonyms for certain genera and species.

Although the work is supposed to be rather conservative one notices a surprising number of significant changes in the names of plants. Thus we find *Amaranthus,* instead of *Amarantus; Nymphaea,* instead of *Nuphar; Castalia,* instead of *Nymphaea; Radicula,* instead of *Nasturtium; Gleditsia,* instead of *Gleditschia; Acer saccharam,* instead of *A. saccharinum; Acer saccharinum,* instead of *A. dasycarpum; Acer negundo,* instead of *Negundo aceroides; Psedera,* instead of *Ampelopsis* or *Parthenocissus; Lomatium,* instead of *Peucedanum; Brauneria,* instead of *Echinacea; Agoseris,* instead of *Troximon,* etc. Many minor changes in specific names due to observance of the law of priority may be noticed in glancing through the book; thus we find *Populus deltoides,* instead of *P. monilifera; Carya ovata,* instead of *C. alba; C. illinoensis,* instead of *C. olivaeformis; Fagus grandifolia,* instead of *F. ferruginea; Maclura pomifera,* instead of *M. aurantiaca; Gymnocladus dioica,* instead of *G. canadensis,* etc. That the authors have not been carried away by the flood of new "species" is shown by the fact that they enumerate only sixty-five species of *Crataegus.* They have not been as successful in the genus *Viola* where they admit forty-five species. *Sisyrinchium* is allowed thirteen species, in place of the single species in the first to the fifth edition. Yet we are thankful that the authors have held down the species makers to the extent they have, and we take it as an omen of better things in this regard.

In closing this very general notice of this important addition to the literature of systematic botany we wish to record our opinion that this is the right kind of a revision of such a standard work. It honors the great botanist much more to bring out such a modernized edition than to insist upon retaining the original treatment in all particulars as was done in the ill-starred sixth edition of this manual. The spirit of Dr. Gray was always progressive, and it is right that the successive editions of his books after his death should retain this characteristic, as has been done so well in the volume before us.

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SCIENTIFIC JOURNALS AND ARTICLES

THE concluding (October) number of volume 9 of the *Transactions of the American Mathematical Society* contains the following papers:

G. D. Birkhoff: "Boundary values and expansion problems of ordinary linear differential equations."

A. B. Coble: "An application of the form problems associated with certain Cremona groups to the solution of equations of higher degree."

E. B. Wilson: "On the differential equations of the equilibrium of an inextensible string."

Max Mason and G. A. Bliss: "The properties of curves in space which minimize a definite integral."

Arnold Dresden: "The second derivatives of the extremal integral."

R. L. Moore: "Sets of metrical hypotheses for geometry."

"Notes and errata, volume 9."

THE opening (October) number of volume 15 of the *Bulletin of the American Mathematical Society* contains: "Construction of Plane Curves of given Order and Genus, having Distinct Double Points," by Virgil Snyder; "On Periodic Linear Substitutions whose Coefficients are Integers," by Arthur Ranum; "Even Multiply Perfect Numbers of Five Different Prime Factors," by R. D. Carmichael; "The Fourth International Congress of Mathematicians: Sectional Meetings," by

C. L. E. Moore; "Notes"; "New Publications."

The November number of the *Bulletin* contains: "The Fifteenth Summer Meeting of the American Mathematical Society," by H. E. Slaught; "Answer to a Question raised by Cayley as regards a Property of Abstract Groups," by G. A. Miller; "Note on the Theorem of Generalized Fourier's Constants," by W. D. A. Westfall; "On the Logical Basis of Grassmann's Extensive Algebra," by A. R. Schweitzer; "General Algebraic Solutions in the Logic of Classes," by L. M. Hoskins; "A General Diagrammatic Method of Representing Propositions and Inference in the Logic of Classes," by L. M. Hoskins; "Heinrich Maschke; his Life and Work," by Oskar Bolza; "Notes"; "New Publications."

The American Naturalist for October opens with a paper by F. F. Blackman, on "The Manifestations of the Principles of Chemical Mechanics in the Living Plant." D. D. Whitney describes a number of experiments on "The Desiccation of Rotifers," the conclusions drawn from them being that rotifers do *not* revive after being dried for any length of time, the supposed resuscitation being due to the appearance of those hatched from the winter eggs. O. P. Hay has an article "On the Habits and the Pose of the Sauropodous Dinosaurs, especially of Diplodocus"; he considers that the attitude of these animals was probably like that of a crocodile with the body prone and legs more or less sprawled out, and doubts that they walked erect with legs in an elephantine position. Dr. Hay may not know that crocodiles—some at least—occasionally stand on their hind legs and rush at an assailant. W. A. Setchell gives some "pointers" on "Juvenile Substitutes for Tobacco."

The *Report of the Commissioners on Fisheries and Game* [for Massachusetts] for 1907 contains much general information and is very interesting reading. We commend it to that writer in *Nature* who recently stated that there was no evidence that the lobster was decreasing! As in the report for 1906 there is much information as to the history and status of the heath hen which there is a possibility of saving from extermination. The cut of the new knockabout type of Gloucester fishing vessel shows how far common sense has overcome the prejudice of sailors against any innovation; while the value of the innovations is shown in the statement that "again we are able to record that not a single Massachusetts fishing vessel has foundered." To appreciate this it is necessary to recall that in the ten years ending in 1883, 82 vessels and 895 men were lost.

Part II. of "The National Collection of Heads and Horns," issued by the New York Zoological Society is mainly devoted to a description of the splendid series gathered by A. S. Reed and presented by Emerson McMillin, another bit of testimony of the liberal manner in which New Yorkers support their scientific institutions. The specimens are from Alaska and British Columbia and comprise some striking examples of the mountain sheep, caribou and giant moose of that region.

Incidental to the recent meeting of the International Fishery Congress the Bureau of Fisheries has issued an account of its establishment, functions, organization, resources, operations and achievements. This is well illustrated and contains not only information in regard to the work of the Bureau of Fisheries but as to the fisheries of the United States.

MOOREHOUSE'S COMET

Professor E. B. Frost, director of the Yerkes Observatory, calls attention to the recent increase of brightness of Moorehouse's comet and writes on October 29:

> It was visible to the naked eye, and three or four degrees of tail could readily be seen in a small field glass. Three spectrum plates were obtained with the Zeiss ultra-violet doublet and objective prism by Mr. Parkhurst with some assistance from me. Two of these had exposures of one hour. No continuous spectrum was perceptible, whence we may reach the important inference that last night the comet's light was very largely intrinsic. Seven bands were very conspicuous as knots on the plate. I am measuring