

son, if any were needed, for not introducing even the latest one into the manual.

In the classification of mosquitoes he expresses strong dissent from the process of continually subdividing the great central mass of the genus *Culex*, but naturally is not in a position to elaborate a system, and is therefore obliged to use one that is not much different from that of Dyar and Knab. In Cecidomyiidae, too, he finds too many genera, and adopts a current generic table only under protest. In Dexiidæ and Tachinidæ the tables were prepared by Professor C. F. Adams. Dr. Williston, wishing the criticism of a specialist on this difficult group, and being unable to secure the assistance of Mr. Coquillett, asked Mr. C. H. T. Townsend to prepare notes on the figures. This was unfortunate, as Mr. Townsend's ideas of genera are extremely radical; it naturally happened that his notes only serve to confuse the subject. He, however, seized the opportunity to erect a few new genera on the figures, which was the more out of place and uncalled for since he promised fuller descriptions in a forthcoming paper. Would that he had reserved his adumbrations in their entirety!

A few errors in typography and other mistakes are corrected in a brief appendix. Typographical or any other sort of perfection must not be demanded in a contribution offered as a gift to science after years of strenuous and wholly gratuitous effort. Professor Williston has acquitted himself well, and has given us a work which no one else in the world could have produced, one not approached in any other large order of North American insects. Nay, he has done still more—he has printed it practically at his own expense, and will not be reimbursed until almost the whole edition is sold. Because I happen to know this I wish the entomological public to understand how great their debt really is. And Professor Williston never occupied an entomological position in his life. He has given *himself* to science, and that is the greatest offering any man can make.

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#### SCIENTIFIC JOURNALS AND ARTICLES

THE contents of *The Journal of Biological Chemistry* (Vol. VI., No. 2, issued May 10, 1909) are as follows: "On the Composition of Dilute Renal Excretions," by A. B. Macallum and C. C. Benson. Large volumes of water were ingested to increase rapidity of flow and decrease concentration of urine in order to diminish the reabsorption of water and salts in the convoluted tubules of the kidney postulated in Ludwig's theory of urine formation. Estimations of potassium and chlorine in very dilute urine revealed neither a proportionality between salt content of blood plasma and of urine nor a uniform ratio of potassium and chlorine excretion. Secretion of water and salts is therefore not a process of filtration, but is truly secretory; the secretory activity varies for each inorganic constituent. "On the Depression of the Freezing Point Due to Dissolved Caseinates," by T. Brailsford Robertson and Theo. C. Burnett. Casein combines with bases to form "neutral" and "basic" salts of definite composition which produce a definite measurable depression of the freezing point. Estimations indicate a molecular weight of "basic" caseinates of 1,400; of "neutral," 2,000. "The Cerebrospinal Fluid in Certain Forms of Insanity, with Special Reference to the Content of Potassium," by Victor C. Myers. Analyses show that changes in the composition of cerebrospinal fluid occur after death. Protein-phosphates, and especially potassium, are increased. The protein-content in dementia paralytica is increased during life. "Human Pancreatic Juice," by Harold C. Bradley. Examination of human pancreatic juice showed an average specific gravity of 1010; alkalinity equal to  $N/20$ — $N/10$  sodium bicarbonate; no definite relation between diet and enzyme content; no rennin, invertase or lactase; trypsinogen in all specimens, trypsin in 50 per cent. A study was made of the influence of various conditions upon the activity of lipase. "On a Modification of Lunge's Method for the Quantitative Estimation of Urea," by Clarence Quinan. Lunge's method (*Zeitschr. f. angew. Chem.*, 1890, p. 139) of reducing measurements of

gas volume to standard conditions applied to the estimation of urea in urine by the hypobromite method. "The Relation of Different Acids to the Precipitation of Casein and the Solubility of Cheese Curds in Salt Solutions," by J. L. Sammis and E. B. Hart. The amount of  $N/10$  acid required to precipitate casein from a lime-water solution varies with the temperature, kind of acid and age of solution. The solubility of cheese curds in salt solution depends upon the kind of salt and the concentration. It is influenced by contact with acids. "An Endeavor to Account for the Transfer of Proteid in Inanition," by Albert Woelfel. An attempt to explain why some tissues waste more than others during inanition by comparison of autolytic and heterolytic digestions. Results negative. "Proceedings of the American Society of Biological Chemists," in session in Baltimore, December 28-31, 1908.

*The Museums Journal* of Great Britain for March describes "A Method of Mounting Eggs," by Raymond Bennett, in use in the Ipswich Museum; and Mrs. Roesler tells of "The Work of an Instructor in the American Museum of Natural History," whose work lay especially with children and teachers. There is a note on a "Conference on Indian Museums" at which eleven governments or states were represented and a variety of topics discussed.

*The Zoological Society Bulletin* for April is an Aquarium Number, devoted to things aquatic. It contains a description of "The Bermuda Aquarium," tells of "Frogs and Frog Raising," of the "Water-throwing Habit of Fishes in the New York Aquarium," of "The Solution of the Carp Problem" and "Angling and Water Pollution." Finally there is "A Photographic Study of the Ghost Crab."

*The Museum News*, of the Brooklyn Institute, is mainly devoted to a "Guide to the Exhibits Illustrating Evolution and the Preservation of Animals" and a "Guide to the Trees and Important Shrubs of Bedford Park."

*The Bulletin of the Charleston Museum* announces the beginning of a collection to

illustrate the mineralogy of the middle and southern Atlantic states, to be known as the "Piedmont Mineral Collection."

#### BOTANICAL NOTES

It now turns out that the big cactus so common in Arizona, and which is a foot or so thick, and from fifty to sixty feet in height, is not a *Cereus* as had always been supposed. Under this generic name it had been known in books and reports as *C. giganteus*. A recent careful study of this plant by Drs. Britton and Rose has convinced them that its reference to this genus by Engelmann was erroneous, and they find that it is the type of a new and hitherto undescribed genus, which they name *Carnegiea* (*Jour. N. Y. Bot. Gard.*, Nov., 1908). Accordingly this striking cactus is hereafter to be known under the name of *Carnegiea gigantea* (Engelm.) Britt. and Rose.

ANOTHER genus has been segregated from *Cereus*, to which the name *Harrisia* has been given by Dr. Britton (*Bull. Torr. Bot. Club*, Dec., 1908). Three species from Cuba and Jamaica are now referred to this genus, and five new species from Cuba, Porto Rico, Haiti and the Bahamas are added.

A MORPHOLOGICAL paper of much more than ordinary importance recently appeared in the *Transactions of the Connecticut Academy of Arts and Sciences* (Vol. 14, pp. 59 to 170), under the title of "The Morphology of *Ruppia maritima*," by Dr. A. H. Graves. This plant is a slender branching aquatic, grass-like in appearance and belonging to the family *Potamogetonaceae*, which contains other genera and species of "pondweeds." After a morphological and ecological study of the vegetative organs, the reproductive organs are taken up in a most satisfactory manner, followed by a study of embryo, fruit, seed and seedling. Thirty-three text illustrations and fifteen large, full-page plates with 121 figures help to elucidate the descriptions. A bibliography of 98 titles closes the paper. In his closing chapter devoted to a summary of the relationships of *Ruppia* to other Potamogetonaceae.