

glass, but from the back of a bronco with ideas and ways of his own. The first chapter charmingly describes the valley in which the observations were made, and the bronco who shared the studies. The second, under the name of 'The Little Lover' tells the captivating tale of a pair of Western House Wrens, from the building of the nest to the departure of the little brood. The third introduces us to a bewitching bit of featherhood—the Blue-Gray Gnat-catcher, and rehearses the tragedy that befell the nest. And so it goes on, presenting to us in every chapter a fresh group of birds, in new and always interesting situations. At one time there is a pair of orphaned Woodpeckers to bring up by hand, and at another the vicissitudes of home-making in the Bush-Tit family, cousins of our Chickadee and 'little gray balls with long tails,' as the author calls them. On one page we read of the ups and down in life of a pair of Vireos, on another the efforts of the author to assist the Titmice in nest-building. Rattlesnakes and Burrowing Owls, Jackrabbits and Coyotes appear here and there, and in fact the local color is so strong that the reader is fairly transported to that land of sunshine.

The whole book is delightfully written and most fascinating in interest, and the reader has the added pleasure of knowing that every statement is to be depended upon; there is no dressing-up of incidents or intensifying of situations for purposes of sensationalism. It is an honest and faithful chronicle of the delights of bird study without a gun, in a region unfamiliar to most of us, and it is a most valuable book to place in the hands of a young person, boy or girl. It is well illustrated with cuts that really illustrate, not only characteristic drawings of the birds themselves, but photographs of the valley with the trees and bushes in which they dwell.

OLIVE THORNE MILLER.

SOCIETIES AND ACADEMIES.

BIOLOGICAL SOCIETY OF WASHINGTON. 206TH MEETING, SATURDAY, NOVEMBER 21ST.

MR. FREDERICK V. COVILLE exhibited a sinew-backed Modoc bow, made of the Western yew, saying that, although the wood was formerly in considerable demand among the In-

dians, he was not aware that it was used for any economical purpose.

Mr. Theo. Holm showed some old books in which the first attempts were made to demonstrate the presence of two sexes in flowers, viz., De la Croix's 'Le mariage des fleurs (Paris, 1727);' Vaillant: 'Sermo de structura florum (Leyden, 1728);' and Sprengel's illustrious work, 'Das entdeckte Geheimniss der Natur (1793).' The title page of De la Croix's work showed a most curious representation of the sheep plant (now known as *Raoulia mamillaris*), of which the speaker exhibited a photographic reproduction from nature, published in Goebel's 'Pflanzenbiologische Schilderungen.' Mr. Holm then explained the Latin suffix, 'aster, astra, astrum.' Certain authors have recently made new names, composed of individual names in connection with this suffix, erroneously supposing 'aster,' as thus used, to mean a star. Pliny and other ancient authors, besides some of much later date, used the suffix only to signify a genus which looks like another one, but which is of inferior quality, aspect, odor, taste, etc. Pliny says, for instance, that the olive tree (*Olea*) when growing wild is an *Oleastrum*: "In deteriora mutantur, ex olea in oleastrum." *Mentastrum*, *Lilliastrum*, etc., are additional examples.

Mr. Gilbert H. Hicks presented a paper on the 'Mildews' (*Erysipheæ*) of Michigan, as a contribution to the geographical distribution of fungi. Thirty-one species of this family were accredited to Michigan, as follows: *Sphaerotheca*, 7; *Erysiphe*, 5; *Uncinula*, 6; *Phyllactinia*, 1; *Podosphaera*, 2; *Microsphaera*, 10. One new species, a *Sphaerotheca*, was described and illustrated with specimens and photographs.

Under the title of *The Inflorescence of the Junaceæ* Mr. Frederick V. Coville gave a resumé of the present knowledge of the subject, showing that two distinct types of inflorescence occur in the family, one made up of terminal flowers, forming a cymose inflorescence, the other made up of lateral flowers, forming a paniculate inflorescence. Both types pass into a variety of minor forms.

Mr. Theo. Holm read a paper on the *Alpine flora of Pike's Peak and Gray's Peak, Colorado*. He exhibited specimens collected at an altitude

of 14,100 feet, some of which represented circumpolar species, and also made a comparison between these species and those collected on San Francisco Mountain and described by Dr. Merriam (North American Fauna, No. 3). Dr. Merriam's statement that most of the alpine plants from San Francisco Mountain are circumpolar species appeared to the speaker too broad. A tabulation of Dr. Merriam's plants showed that the majority of them were not circumpolar and that many of them did not grow outside of the Rocky Mountains.

Mr. C. L. Pollard made *Some Further Remarks on Britton and Brown's Illustrated Flora*.

F. A. LUCAS,
Secretary.

THE PHILOSOPHICAL SOCIETY OF WASHINGTON.

At a meeting of the Philosophical Society of Washington, held November 8, 1896, Mr. Lester F. Ward gave an account of a reconnaissance made by himself in company with Mr. T. Wayland Vaughan, in October last, through parts of Indian Territory, Oklahoma and southwestern Kansas. The expedition left Muskogee, Indian Territory, on October 1st, and reached Coldwater, Comanche County, Kansas, on the 16th. It then proceeded to Belvidere, Kiowa County, and to Medicine Lodge and Sharon, in Barber County, where Mr. Ward turned over the outfit to Mr. Vaughan, who returned by a different route to South Macalester, Indian Territory. The distance actually traveled was not less than 400 miles.

The route lay across the western decline of the great Carboniferous anticlinal uplift that separates the coastal plain of the Gulf border and Mississippi embayment from the ancient Mesozoic and Tertiary sea that occupied the present Rocky Mountain region. The rocks accordingly dip gently to the west-northwest. In general the Arkansas River and its southern tributaries were followed, but the immediate valleys were avoided as far as practicable. The principal railroad towns passed through were Tulsa, Perry, Enid and Alva. The Carboniferous consists of shales overlain by coarse, brown sandstones, forming the hills, which are more or less wooded with black-jack (*Quercus*

nigra), post-oak (*Q. minor*) and hickory (*Hicoria alba* and *H. minima*). The shales weather red, but are sometimes carbonaceous and dark, occasionally furnishing thin coal seams. The best exposure seen is on Cane Creek, fifteen miles west of Muskogee. The sandstones gradually grow more and more reddish from east to west, and above Tulsa, on the Arkansas, there are fine exposures. Between the Arkansas and the Cimarron, east of Perry, limestones are interstratified between them. The oak barrens are covered with coarse grasses and tall weeds (*Desmodium*, *Lespedeza*, *Frœlichia*, *Eriogonum*, etc.). On the plains east of Perry the first gravel was seen, and the red sandstones were replaced at intervals by clays of different colors, but weathering red. Farther west the sandstones disappear and the underlying strata becomes a red, sandy clay shale, constituting the well-known Red Beds, the base of which, at least, is probably of Permian age, while the summit may even be Cretaceous. These continue to some distance west of the 99th meridian, where they pass under the Cheyenne sandstone of the Comanche Series. These latter were encountered between Evansville and Nescatunga, in Comanche County, Kansas, some twelve miles east of Coldwater.

The work in Kansas consisted in studying the Cheyenne Sandstone and its relations to the Red Beds below and the marine Cretaceous deposits above. The best exposures are in the vicinity of Belvidere. Fossil plants were obtained at three different horizons, showing corresponding changes in the flora. So far as they go they confirm Mr. Hill's conclusion that at least the upper part of the Cheyenne Sandstone belongs to the Wachita Division of the Comanche Series. It may be approximately correlated with the Raritan Clays or the Albiropean series of the Potomac formation.

Mr. Ward collected a large number of plants at all points along the route, some of which are rarely obtained because botanists had scarcely ever visited the region so late in the season. Among the 77 species in his collection may be mentioned the following, which have interest either as rare or as extending the range of these plants: *Lacinaria acidota*, *Phyllis rotundata*, *Allionia Bushii*, *Solidago rigidus-*

culus, *Aster Fendleri*. Specimens of these and many others were exhibited to the Society.

Mr. Walter Hough read a paper on 'The Mokis in Relation to their Plant Environment,' and Mr. G. W. Littlehales exhibited and described a new machine for engraving parts of the plates from which charts and maps are printed.

BERNARD R. GREEN,
Secretary.

CHEMICAL SOCIETY OF WASHINGTON.

THE 90th regular meeting of the Society was held November 12, 1896. The President, Dr. de Schweinitz, was in the chair, with fourteen members present. A communication from the Medical Society of the District of Columbia was read, in which the Chemical Society was requested to appoint a representative on a Joint Commission on Vivisection. The commission is to be charged with the duty of investigation relating to the practice of animal experimentation in the District of Columbia, and the representation before Congress of the constituent organizations (The Medical Society of the District of Columbia, the Bureaus of Medicine and Surgery of the Army, Navy, Marine Hospital Service and Animal Industry, the Medical Departments of the Columbian, Georgetown, Howard and National Universities, and the Chemical, Biological, Anthropological, Entomological and Philosophical Societies of the District of Columbia).

The first paper of the evening was on 'Poisonous Honey,' by V. K. Chesnut, who referred to the literature, and enumerated several recent cases of poisoning which happened in New Jersey and North Carolina. Reports of other poisonous honeys had been received from Texas and California.

The principal cases were ascribed to honey derived from the laurels (*Kalmia latifolia* and *Kalmia angustifolia*). A new method of detecting the presence of andromedotoxin in honey was described and specimens were exhibited of poisonous honey and the plants from which it was derived.

The discussion of Mr. Chesnut's paper was by Prof. Stokes, Munroe and Seaman and Dr. de Schweinitz. Prof. Stokes asked if the flower

of the horse chestnut was known to be poisonous to bees. Mr. Chesnut was not aware of the fact, but thought it possible; the flowers of the Judas tree have a similar reputation. Prof. Munroe spoke of the honey locust, Prof. Seaman of the possible evaporation of gelsemine from gelsemium honey, and Dr. deSchweinitz cited a historical case of poisoning which happened in Asia Minor.

The second paper was by Dr. de Schweinitz, on 'A Convenient Lamp for Generating Formaldehyde Gas and Acetic Aldehyde.' Several forms of lamps in working order were exhibited. Ordinary lamps are used, but the upper part of the wick is supplemented by a piece of plantinized asbestos. The cotton wick is turned high enough to light. After burning a minute or so the platinized asbestos begins to glow and the flame is extinguished. The glow continues till the alcohol is exhausted. The decomposition is simple. With methyl alcohol, formaldehyde and water are the chief products; with ethyl alcohol, they are acetaldehyde and water.

Traces of carbonic, formic and acetic acids are also present in the reaction. Dr. Fireman asked what the yield of aldehyde was. Dr. de Schweinitz replied that he did not have the exact figures at hand, but that he obtained about three-fourths of the theoretical yield.

A. C. PEALE,
Secretary.

NEW BOOKS.

Handbuch der Physiologischen Optik. H. VON HELMHOLTZ. Zweite umgearbeitete Auflage. Hamburg und Leipzig, Leopold Voss. 1895-6. Parts 11, 12, 13-17.

Primitive Travel and Transportation. OTIS TUFTON MASON. Washington, Government Printing Office. 1896. Pp. 593.

Auto Cars. D. FARMAN. Translated from the French by LUCIEN SERRAILLER. London, Whittaker & Co.; New York, The Macmillan Company. 1896. Pp. 249. \$1.50.

Charles Darwin and the Theory of Natural Selection. EDWARD B. POULTON. New York, The Macmillan Company. 1896. Pp. vi.+224. \$1.25.