

Mr. E. O. Wooton made 'Remarks on some of the rarer Plants of New Mexico,' sketching briefly the botanical regions of New Mexico, and tracing upon a map the routes traversed by most of the botanical collectors who have visited them. Mr. Wooton was himself practically the first to make collections in the southeast section of the Territory, a very interesting, botanical region, with high mountains, some of which were illustrated by photographs. Specimens of Mr. Wooton's collecting were then shown, exhibiting about thirty-five flowering plants and ferns, and including, among those familiar in the East, *Pellaea atropurpurea*, *Cystopteris fragilis*, *Pteris aquilina* and *Cheilanthes tomentosa*.

Mr. Rydberg compared some of the features presented by the sand region of central Nebraska; referred to *Muhlenbergia pungens* and other so-called 'blow-out grasses' of the sand-hills, and described the formation of the characteristic 'blow-outs' or hollows, originating in spots where the grasses had died out and deepening rapidly, sometimes to 300 feet, producing a country where the hills are moving every year, and where he, when camping, could find no fuel except roots of sand-cherries exposed along fresh 'blow-outs.'

Dr. H. M. Richards spoke 'On Some of the Reactions of Plants Toward Injury,' as shown by his experiments in Germany last summer. Diagrams illustrating the effect of injury upon both respiration and temperature were shown. In the former case it was seen that the respiration is greatly increased by wounding, attaining its maximum about 24 hours after the injury was inflicted; this increase depending both on the stimulus of the wound itself and upon the access of atmospheric oxygen to the tissues. The occurrence of a corresponding rise in temperature, of a local nature, was also briefly referred to; the temperature curve corresponding closely to that described by the increased respiratory activity. The thermo-electric apparatus used was described; its delicacy is such as to indicate a difference of $\frac{1}{100}$ of a degree; the result with potatoes showing a maximum rise of temperature of a little over $\frac{1}{10}$ of a degree at the end of the second day, falling to the end of the fifth day. A remarkable temperature rise in the onion of nearly $3\frac{1}{2}$ degrees was explained

by the fact that here the rise was not local, but affected the whole onion, in accordance with the morphological structure, and with the fact that metabolism is carried on very fast in the onion.

The next paper was a contribution from Dr. Alexander Zahlbrückner, of Vienna, a corresponding member of the Club, entitled, 'Revisio Lobeliacearum Bolivienensium hucusque cognitarum.' The paper, which is in Latin, enumerates all the species, giving synonymy and references to the literature, and cites collectors and their numbers. There are 39 species, as follows: 9 in *Centropogon*, 2 new; 20 in *Siphocampylus*, 7 new; 1 in *Laurentia*; 2 in *Rhizocephalum*; 3 in *Hypsela*; 4 in *Lobelia*.

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NEW BOOKS.

Agriculture in some of its Relations to Chemistry.

F. H. STORER. New York, Charles Scribner's Sons. 1897. Seventh edition, revised and enlarged. Three Volumes. Pp. iv+610, iv+602, vi+679. \$5.

Stones for Building and Decoration. GEORGE

P. MERRILL. New York, John Wiley & Sons. 1897. Second edition, revised and enlarged. Pp. ix+506. \$5.

The Elements of Physics. Vol. III. *Light and*

Sound. EDWARD L. NICHOLS and WILLIAM S. FRANKLIN. New York and London, The Macmillan Co. 1897. Pp. vii+201. \$1.50.

The Outlines of Physics. EDWARD L. NICHOLS.

New York and London, The Macmillan Co. 1897. Pp. xi+452. \$1.40.

Hypnotism. ALBERT MOLL. London, Walter

Scott, Ltd. 1897. Fourth edition, revised and enlarged. Pp. x+448. 1s 6d.

Art Education. W. T. HARRIS. Syracuse, N.

Y., C. W. Bardeen. 1897. Second edition. Pp. 77. 50 cents.

Les gaz de l'atmosphère. H. HENRIET. Paris,

Gauthier-villars et Fils, Masson et cie. Pp. 192.

Anleitung zur Mikrochemischen Analyse der Wich-

tigste organischen Verbindungen. H. BEHRENS.

Hamburg and Leipzig, Leopold Voss. 1897.

Viertes Heft. Pp. vii+129. M 4.50.