

Throwing a spadeful of lime upon a cow-dung will destroy the larvæ which are living in it; and, as in almost every pasture there are some one or two spots where the cattle preferably congregate during the heat of the day, the dung which contains most of the larvæ will consequently be more or less together, and easy to treat at once. If the evil should increase, therefore, it will well pay a stock-raiser to start a load of lime through his field occasionally, particularly in May or June, as every larva killed then represents the death of very many flies during August. Dr. C. V. Riley feels certain that this course will be found in many cases practical and of great avail, and will often be an advantage to the pasture besides.

#### THE KANSAS ACADEMY OF SCIENCE.

THE annual meeting of this society was held at Wichita. Among the papers read was the following: "On Monstrosities in Flowering Plants," by W. A. Kellerman. The author illustrated what may be called extreme variations in the development of certain parts of plants. These are looked upon as interesting phenomena in botany, and deserve greater attention.

E. A. Papenoe discussed oviposition in *Tragidion*, and showed that this beetle places its egg within an elliptical case on the surface or bark of the chestnut, oak, and other trees. The egg is oblong, smooth, and dull white. The bark is not punctured, as is commonly the case with this class of beetles. Robert Hay read a paper on artesian wells, in which he showed by diagrams how such wells are possible, and what progress had been made in the West with these wells. The relation of artesian wells to irrigation in arid regions was discussed. J. T. Willard gave a brief description of devices and methods used in the analysis of agricultural products. He described a desiccating apparatus, a method of purifying ether, and a method to prevent foaming in boiling liquids. G. H. Failyer communicated the results of his work on nitric acid and ammonia in rain-water. These observations have extended through more than three years. The per cent is usually greater in smaller rains. About three pounds and a half of nitrogen are annually added to an acre of soil by the rains. But little continuous work has been done in this line in this country. F. H. Snow gave the results of his attempts at artificial spreading of contagious disease among chinch-bugs. It has been observed that a certain fungus is present where the bugs are dying in large numbers. The attempt was made to propagate this disease by sending the infected bugs to different parts of the State and to several other States. The result has been thus far successful, and the war will be pushed next season with the help of a lot of infected material which is being kept over. The same author showed the curve of mean daily temperature for twenty-one years at Lawrence, Kan. Among the interesting facts brought out, it may be noted that the average coldest day is Jan. 6; and the hottest day, July 15. There seems to be a remarkable rise in temperature during the first ten days of April, and a corresponding fall of temperature in November, thus showing a more sudden change of seasons than has been observed in some other States. Professor Snow has also made a discovery on the method of respiration of the salamander. In its final or air-breathing stage, a stream of water was observed passing into the mouth through each nostril, the mouth being opened eight or nine times a minute to allow the water to escape. Folds of mucous membrane in the posterior part of the mouth appear to perform the function of removing the oxygen from the inspired water. E. C. Murphy gave some tests of cements manufactured in Kansas. From these tests it was shown that the native cements are inferior in tensile strength, compressive strength, and transverse strength, to Portland cement. L. I. Blake gave the result of tests made in the physical laboratory on the insulation resistance of electric wires exposed to moisture. The wires were immersed in water, and daily tests were made for three months. The results were shown by a series of curves, and a remarkable difference in quality was observed. The underwriter's wire was especially condemned. The same author gave the results of experiments in telephonic communication between vessels at sea. W. S. Franklin presented a paper on classification of the sense of smell. D. B. Jennings gave the result of his observations on hot winds. Though the paper is too long to

be successfully abstracted, many interesting points were brought out. This is simply a preliminary paper on the subject.

F. O. Marvin exhibited an isogonic chart of the State of Kansas. There is shown to be an irregularity in the action of the needle in several contiguous counties. E. H. S. Bailey and E. E. Slosson presented a paper on the occurrence of celestite and associated minerals in concretionary formations in eastern Kansas. Complete analyses of the minerals will be published. E. H. S. Bailey also called the attention of the academy to the analyses of some Kansas mineral waters. Their occurrence and constituents were discussed. J. R. Mead gave a *résumé* of his observations on the occurrence of gold in Montana. L. E. Sayre gave the history and process of manufacturing binding-twine. In the discussion which followed, W. A. Kellerman suggested that perhaps some common weeds, like the velvet-leaf or the dogbane, might be used as a substitute for the more expensive fibres now in use. F. O. Marvin gave the result of a series of experiments on the second setting of cements. L. E. Sayre gave some notes on albuminoids, and also exhibited a novel and ingenious microscope attachment to be used to facilitate field-work in botany.

At the close of the meetings an excursion was made to the salt-fields of Kingman, where an opportunity was afforded to examine the practical work of salt-manufacture and salt-mining.

#### BOOK-REVIEWS.

*Studies in Pedagogy.* By THOMAS J. MORGAN. Boston, Silver, Burdett, & Co. 12°. \$1.75.

THE author of this work, who is the principal of the Rhode Island State Normal School, here gives the public a statement of the views on education to which his experience and reflection have led him. We cannot say, however, that there is much that is new or valuable in them; on the contrary, they are mostly of a commonplace order. Mr. Morgan rightly lays stress on training, or discipline, as of more importance than mere instruction; but there is nothing new in this idea, and we cannot see that he has any thing striking to offer in regard to methods of training. He lays great stress on the education of the senses and the imagination, and even proposes to have a special series of exercises for training the nose, which he characterizes as an organ of "neglected merit and overlooked modesty." He points out the importance to the teacher of a thorough knowledge of psychology, and also of a preliminary training in methods of teaching. He has a high conception of the function of the teacher, and of the qualifications necessary for their perfect performance. Mr. Morgan's views appear to us in the main sound and true; but they are so familiar that there seems to be no good reason for writing a whole volume for the purpose of setting them forth.

*Seven Thousand Words often Mispronounced.* By WILLIAM HENRY P. PHYFE. New York and London, Putnam. 12°. \$1.25.

THE editor of this book has produced already two books on pronunciation, — one "The School Pronouncer," and the other "How Should I Pronounce?"

That every one cares to pronounce correctly goes without saying. That every one, even if he may be reckoned among the well educated, does not necessarily know the accepted or most acceptable pronunciation of our mysteriously spelled English words, is equally true. But it is not always true that one seeking the recognized pronunciation of a word in dispute is willing to handle his big dictionary, even if he is so fortunate as to possess such; and, again, it not infrequently happens that the word may be a proper name, and proper names are sparingly treated in even the big quartos.

"Seven Thousand Words often Mispronounced" includes fully that number of words which, through inherent difficulty or carelessness on the part of the speaker, are liable to be mispronounced, with twenty-five hundred proper names.

There are the necessary introductory chapters on the sounds of the English language, — sounds both native and adopted or imported, as it were, from foreign tongues; it being the editor's idea that the adoption of so considerable a number of foreign words into