Barbour on 'Sand-lime Crystals.' This latter paper was certainly an important contribution to the subject of crystallography, and will be received by geologists as a permanent contribution to the subject. Immediately following this paper some time was spent by Robert E. Moritz in presenting a discussion on the 'Extension of the Differential Processes' in a manner approved of by the mathematicians in attendance. Robert H. Wolcott then read by title a rather technical paper entitled 'A Review of the Genera of Water Mites,' in which the auther critically reviewed all the former attempts at the classification of these animals. He also suggested in that paper a more natural scheme of classification based on the derivation of the different forms aside from their chance present external resemblances.

Another paper of more than ordinary interest was that of Professor William Hastings, entitled 'The Nebraska Type or Norm for each School Age, and Vitality Coefficients.' 'Thunder Storms' was the title of a paper by J. H. Spencer, in which the author gave a very concise description of what constitutes such a storm, its cause, method of development, extent, importance, and the comparative annual number of such storms for the State of Nebraska and surrounding regions.

The feature of the evening session was the presentation of papers of a more general nature. Some of these were 'Notes on the Occurrence of Asparagus Rust in Nebraska,' by J. L. Sheldon; 'The Determination of the Longitude of the University of Nebraska Observatory,' by G. D. Swezey; 'A Report on the Morrill Geological Expedition for 1900,' by E. H. Barbour; 'Additional Observations on Plant Movements,' Wm. Cleburne; a paper on the 'Delimitation of the Field of Pedagogy,' by W. A. Clark, and one on 'Degeneracy,' by Dr. H. B. Lowry. In his presentation of this latter subject the doctor dealt chiefly with the criminal phase. It is needless to state that this paper will form very interesting reading when published.

The papers presented at the session on the morning of December 1st were 'The Geology of Saunders, Lancaster and Gage Counties,' by C. A. Fisher; 'North American Bees of the Genus *Agapostemon*,' by J. C. Crawford, Jr.; 'The Work of the State Geological Survey during the Summer of 1900,' 'Bone Tissue, Recent and Fossilized,' and one on the 'Extent of the Fiberous Arikaree Beds,' by E. H. Barbour; 'Some Tests of Camera Shutters,' G. D. Swezey; 'Notes on Beet Diseases in Nebraska,' Geo. G. Hedgecock; 'A Brief Account of some Rare Alaskan Worms,' H. B. Ward; 'Observations on Species of Nebraska Water Mites,' Robert H. Wolcott; 'Report on the Botanical Survey of Nebraska,' Roscoe Pound; 'Additions to the List of Nebraska Fossils,' Carrie A. Barbour, and 'Some Impressions of Biological Conditions in Arizona,' A. A. Tyler. As nearly all these papers were more or less technical in their nature, or of minor general interest, they were presented by their authors in abstract.

The officers elected for the ensuing year are: Ellery W. Davis, President; J. H. Powers, Vice-President; Robert H. Wolcott, Secretary and Custodian; G. A. Loveland, Treasurer; Board of Directors: William Cleburne, C. H. Gordon, H. B. Lowry and L. Bruner.

On motion of the chairman of the committee on publication it was decided to publish at once the proceedings of the present meeting, also the proceedings of the last two meetings, which have been held in abeyance awaiting the publication of the report of the Nebraska Historical Society with which they are to appear.

A committee of three was also appointed to await upon the members of the coming legislature for the purpose of securing any possible State aid in the future publication of the Academy's proceedings.

LAWRENCE BRUNER,
Secretary.

DISCUSSION AND CORRESPONDENCE.

A GASOLINE LAUNCH FOR FIELD WORK.

TO THE EDITOR OF SCIENCE: Three years ago I published in your columns a few brief statements regarding the feasibility of using gasoline for motive power in conducting geological work in the Eastern United States, and more particularly in New York. Since then several long, and I may venture to say successful, excursions have been made. It is, however, to show the

aid which power of this kind can give to regular university work in field geology that this communication is written.

The Cornell Summer School of Field Geology had for headquarters this season the classic region of Trenton Falls, N. Y., where collecting, section-making, map-making, etc., were carried on in great detail. At different times the two divisions of the class were taken by boat along the Erie Canal to Troy, and, by short railway trips to the Helderberg Mountains, the Cambrian east of Troy and to Oriskany Falls. The farthest north reached by boat was Plattsburg on Lake Champlain. During the summer the students had an opportunity to study the Archæan at several localities, also the Lower and Upper Cambrian, the Calciferous, Chazy, Birdseye, Black River, Trenton, Utica, Hudson River, Clinton, Onondaga, Water Lime, Lower Pentamerus, Delthyris shaly, Upper Pentamerus, Oriskany, Cauda-galli, Schoharie, Corniferous, Marcellus and Hamilton formations. Owing to boat accommodations, the class was limited to fifteen (four women and eleven men) though many more applications for admission to the class were made.

For the coming summer (1901) there will be room for forty-five. The Helderberg Mountains (Country man hill section) will be used as a rendezvous, where a camp will be formed similar to that of the past summer at Trenton Falls. This place has been selected because of the large number of formations (about a dozen) accessible within a radius of one mile. Excursions by boat down the Hudson to Rondout, up the Champlain to Valcour Island, westward on the Erie Canal to Syracuse, will be made without fail.

Many of the places visited could be reached by rail supplemented by hack drives, but I venture to say not so economically for the student. By camping and cooperation in the work, no one need spend over $65 for a ten-week term. This includes tuition, board and everything, and is the result of experience and not a mere estimate. Compare these figures with estimates of expenses as usually given in announcements for summer schools of field geology (usually for six weeks only) and observe the difference. Special attention is called to this fact, for it has often seemed to the writer that not enough consideration is usually given to the class of students who would profit most by opportunities for field work.

That the most advantageous place to study geology is in the field is too obvious to need any explanation here. The drawback in such work is the expense. In a recent English publication we read: "Would that some munificent person would found in the basin of the river Ribble a geological station where Cambridge students would have the means of acquiring a knowledge of field geology under conditions more favorable than those presented by the flats around the sluggish Cam."* The points of special note in our method of work, with the Helderbergs as a center of operation, are the following: (1) The mountains were long ago recognized by the illustrious Lyell and others as most ideal for geological study. (2) By camping and cooperating in camp duties we can make fair progress without the 'munificent person' so often appealed to. (3) By making long excursions by boat in various directions a far broader view of geology can be obtained than by remaining all the time at one station, however well it may be equipped, or however well located. (4) The more advanced student can keep his eyes open and ask the party to stop and stay at localities affording new materials so long as seems advisable.† There is no hurrying to catch trains and no fear of the oncoming of the night. Original work can accordingly be done to great advantage, serving not only to advance our knowledge of geological science, but also to demonstrate to the less advanced students the meaning of real geological work.

Gilbert D. Harris.

Cornell University,
December 8, 1900.

CURRENT NOTES ON METEOROLOGY.

DE SAUSSURE'S ESSAYS ON HYGROMETRY.

No. 115 of Ostwald's 'Klassiker der exacten Wissenschaften,' is a German translation of de Saussure's 'Essais sur l'hygrométrie,' which

* 'The Principles of Stratigraphic Geology,' by J. E. Marr, 1898, p. 98.

†See *Bull. Amer. Paleont.*, No. 13, November, 1900.