Coast,' Douglas H. Campbell touches on the botany of that region. W. D. Matthew considers the question: 'Is the White River Tertiary an Æolian Formation,' deciding it in the affirmative. F. H. Herrick describes several cases of 'Ovum in Ovo,' and after classifying the various methods in which such abnormalities occur presents theories which account for them. The concluding paper by T. D. A. Cockerell is 'On the Habits and Structure of the Coccid Genus *Margarodes*.' Among the editorials is one on 'The Gypsy Moth and Economic Entomology,' in which the ground is taken that it is not worth while to continue the present extravagant policy. The number is unusually full of brief and good reviews of recent scientific literature.

THE March number of the *Bulletin of the American Mathematical Society* contains: 'On Singular Points of Linear Differential Equations with Real Coefficients,' by Professor Maxime Bôcher; 'The Hessian of the Cubic Surface,' by Dr. J. I. Hutchinson; 'On the Simple Isomorphisms of a Hamiltonian Group to Itself,' by Dr. G. A. Miller; 'Galois's Collected Works,' by Professor James Pierpont; 'Three Memoirs on Geometry,' by Professor Edgar Odell Lovett; 'Stahl's Abelian Functions,' by Dr. Virgil Snyder; 'Calculus of Finite Differences,' by Dr. D. A. Murray; 'Notes' and 'New Publications.' The April number of the *Bulletin* contains an account of the February meeting of the American Mathematical Society, by Professor F. N. Cole; 'Determinants of Quaternions,' by Professor James Mills Pierce; 'The Largest Linear Homogeneous Group with an Invariant Pfaffian,' by Dr. L. E. Dickson; 'Asymptotic Lines on Ruled Surfaces having Two Rectilinear Directrices,' by Dr. Virgil Snyder; 'Willson's Graphics,' by. Dr. J. B. Chittenden; 'Pascal's Repertorium of Higher Mathematics,' 'D'Ocagne's Descriptive and Infinitesimal Geometry,' by Professor Edgar Odell Lovett; 'Sophus Lie,' translation of Professor Gaston Darboux's notice; 'Notes' and 'New Publications.' The May number of the *Bulletin* contains an account of the April meeting of the Chicago Section of the Society, by Professor Thomas F. Holgate; 'An Elementary Proof that Bessel's Functions of the Zeroth Order have an Infinite Number of Real Roots,' by Professor Maxime Bôcher; 'A Generalization of Appell's Factorial Functions,' by Dr. E. J. Wilczynski; 'On the Arithmetization of Mathematics,' by Professor James Pierpont; 'Two Books on the Tides,' by Professor Ernest W. Brown; 'Notes' and 'New Publications.'

THE *Annals of Mathematics* will henceforward be published quarterly, beginning with the number issued on October 1st, by the department of mathematics of Harvard University. Professor Ormond Stone, of the University of Virginia, who founded and for many years supported the journal, has consented to act as a member of the board of editors in coöperation with Professor H. S. White, of Northwestern University, and Professors Byerly, Osgood and Bôcher, of Harvard University. The editors state that their object is to conduct the journal so that it may appeal not merely to the highly trained specialist, but to the general mathematieal public of America from students of mathematics in the graduate schools of our universities upward. Short research articles will be welcomed, but highly technical articles will be avoided. Articles containing little or no absolutely new matter, but giving a clear presentation of some important but not readily accessible field of mathematics, or a more thorough presentation of some subject which is generally treated in an unsatisfactory manner, are especially desired.

SOCIETIES AND ACADEMIES.

CHEMICAL SOCIETY OF WASHINGTON.

THE regular meeting was held on April 13, 1899.

The first paper of the evening was read by Mr. J. K. Haywood, and was entitled 'Some Boiling-Point Curves.' The results obtained have led to the following conclusions:

I. All mixtures of the following pairs of liquids boil at temperatures between the boiling points of the constituents: alcohol-water, alcohol-ether, chloroform-carbon tetra-chloride, acetone-water and acetone-ether.

II. A solution containing 17.5 % alcohol in carbon tetra-chloride distills without change at 65.5° approximately, under a pressure of 768.4 mm. of mercury.

III. A solution containing 12.5 % methyl al-

cohol in chloroform distills without change at 54° approximately, under a pressure of 770.2 mm. of mercury.

IV. A solution containing 12–13 % methyl alcohol in acetone distills without change at 55.9°, under a pressure of 764.8 mm. of mercury. The boiling point of this mixture is about 0.8° below that of the constituent which is present in greatest amount.

V. A solution containing 15–20 % of carbon tetra-chloride in acetone distills without change at a temperature but 0.05° below that of the pure acetone, and all mixtures containing more than 40 % acetone boil within one degree of the boiling point.

VI. The close proximity of the boiling points of the constituents appears to be a favorable condition for the existence of a maximum or minimum point on the boiling-point curve.

VII. In general one constituent remaining the same, mixtures with substances of similar chemical constitution yield similar boiling-point curves.

The second paper was read by Dr. F. K. Cameron, and was entitled 'Boiling Points of Mixtures.'

Dr. H. C. Bolton read an interesting paper on 'The Development of Pneumatic Chemistry,' which was profusely illustrated with lantern slides.

William H. Krug,
Secretary.

GEOLOGICAL CONFERENCE AND STUDENTS' CLUB OF HARVARD UNIVERSITY.

Students' Geological Club, April 11, 1899.—Mr. L. La. Forge reviewed Gregory's 'Plan of the Earth,' indicating several questionable steps in that writer's recent exposition of the subject. Mr. A. W. G. Wilson described a unique lake in Ontario, which is known as Lake-on-the-Mountain.

Geological Conference, April 28, 1899.—Mr. R. E. Burke communicated 'The Discovery of Fossils in the Roxbury Conglomerate,' and will publish on it at an early date.

Under the title 'Mineral Veins of the Mystic Quarries, Somerville,' Mr. R. B. Earle reported the results of his studies in that field. The veins, which are almost entirely limited to a dike and a sill, are composed chiefly of calcite, but include small amounts of quartz, pyrite and prehnite. The speaker divided the fissures which these veins fill into five classes according to their origin, which he believed to have been by contraction of the molten magma, by earthquakes, by tortion, by faulting or by decomposition. The growth and enlargement of these fissures, when once formed, was held to be mainly due to the expansive force of the vein-filling substance.

Mr. G. C. Curtis exhibited a topographic model, which he has constructed, of an area located in the eastern foothills of the Cascade Range, near the great bend of the Columbia River, in Kitattas County, Washington.

J. M. Boutwell,
Recording Secretary.

DISCUSSION AND CORRESPONDENCE.

TELEPATHY ONCE MORE.

To the Editor of Science: Why Professor Titchener should have taken an essay which he now admits to have completely failed even to make probable its point, as an example of the 'brilliant work' which 'scientific psychology' can do in the way of destroying the telepathic superstition, may be left to be fathomed by readers with more understanding of the ways of 'Science' than I possess.

Meanwhile, as one interested in mere accuracy, I must protest against two impressions which Professor Titchener, in your number of May 10th, seeks to leave upon the reader's mind.

The first is that whispering was first considered by Professor Lehmann. It has been elaborately discussed in the S. P. R. Proceedings over and over again. Sidgwick's 6-page discussion of it in the report of his own experiments is the basis of comparison used by Lehmann in his ampler but abortive investigation.

The second of Professor Titchener's implications is that it was Lehmann who introduced number-habits, and even forced the admission of them on the recalcitrant Sidgwick. Lehmann makes no mention of number-habits. Sidgwick himself introduces them to account, not for the thought transference results, but for the many errors common to the guesses of his Subjects and