later became head of the art department, the predecessor of what was then termed the Division of Illustrations of the Geological Survey, and in 1898 was appointed chief of that division. His association with the Survey continued for more than thirty years until his resignation and change of residence to California in 1920. During this long period of service countless drawings were products of his pen and brush. Ridgway's experience with the needs of authors led to the publication by the Survey of his pamphlet on the preparation of illustrations. This article received wide use and has been reprinted four times.

To pass in review the names of some authors whose contributions to science were materially aided and embellished by Ridgway's illustrations emphasizes the amazing productivity as well as versatility of this artist. His work included the execution of wash drawings of Mesozoic invertebrates for C. A. White, Cambrian fossils for C. D. Walcott, geological sections and paleontological materials for R. T. Hill, living reptiles for Shufeldt and Yarrow, fossil insects for Scudder, birds' eggs in natural color for the memoir by Bendire, fossil plants for White and for Knowlton, cephalopods for Alpheus Hyatt and later for J. P. Smith, ores and rocks in their natural colors for Van Hise and Leith, fossil crinoids for the well-known memoir by Wachsmuth and Springer, and in addition literally hundreds of pen and ink sketches on various subjects of which many have been reproduced in textbooks. It was during this period also that Ridgway was called upon for advice in matters of illustration by the newly established Carnegie Institution of Washington, and the high standards evolved in the handling of illustrative material by that institution were in a measure the result of his personal supervision.

To many men these accomplishments would have sufficed as a satisfactory life's work, but not long after his retirement to California, Ridgway was again busily engaged, at first with the Carnegie Institution and later with this institution and the California Institute of Technology, in supervising and making illustrations. During this additional period of eighteen years he was occupied for a time at Mt. Wilson Observatory, but the major part of his contributions were in vertebrate paleontology. The various paleontological papers and memoirs illustrated by him and published particularly by the Carnegie Institution give ample testimony of his skill and artistic ability. As a fulfillment of a wish and a remarkable accomplishment in itself, considering the fact that it was written by the artist late in life, is Ridgway's recently published work on "Scientific Illustration." This book, which contains a fund of information, marks a new departure in subject-matter and has received much favorable comment.

John L. Ridgway will long be remembered for his high standards in illustration. It is indeed a privilege and a pleasure to acknowledge the debt of gratitude which the natural sciences owe to this modest servant, who for more than half a century has labored to combine beauty with scientific accuracy in the delineation of fact.

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EDITORIAL LICENSE

IN the May issue of the *Pan-American Geologist* there appeared a paper by the writer entitled "Outlines of Kentucky Geology," the first of a series of stratigraphic articles, the manuscript for which had been submitted two months earlier. These notes are written to call attention to an example of the misuse of the editorial prerogative. Certainly in the editing of any manuscript changes both in construction and content must be approved by the author under whose name it is printed and for the statements in which he takes responsibility. This along with the final check of the page proof is accepted practice and the author's right.

Yet in the matter of the paper referred to above the writer heard nothing from his manuscript until, quite unexpectedly, the first instalment appeared in print. Errors introduced include:

(a) Plate XX—Stratigraphic Chart
   1. To make space for rearranged column headings two explanatory notes were eliminated. These notes called attention to changes made in the interpretation of stratigraphic sections taken from the work of others.
   2. To help reduce it to page size the bottom of one section was cut off along with a part of a formational name. The Camp Nelson limestone became the "Nelson" limestone.

(b) (p. 283) The Mt. Hope and Fairmont formations were reinterpreted as the Mt. Hope and Fairmont facies. There is no justification for the use of the term facies for these faunal zones.

(c) (pp. 286, 287) The Arnheim formation was changed to the Arnheim member and the Sunset and Oregonia members of that formation continued as members of that "member."

(d) (p. 268) The Saint Peter sandstone was changed to "Peter sandstone."

(e) (Pl. XIX) In retouching the outline geologic map, weighting of the eastern state boundary has made the Pine Mountain fault appear to extend north of the Breaks of the Sandy.

(f) The term High Bridge is changed to Highbridge on page 269 and left as High Bridge on page 268. This is a matter of not misspelling but inconsistency.

(g) An occasional misspelled word which the author had no opportunity to correct in the galley proof.

(h) A tabular outline of formations which would have clarified the text was eliminated.

There are few manuscripts that may not be improved through proper editing, but the question is not one of the desirability or undesirability of any changes. It is one of responsibility on the part of the author for the contributions printed under his name and his right of approval of these changes before the article comes from the press. The editor has been notified that the manuscript is to be returned and that no further instalments be printed.

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SOCIETIES AND MEETINGS

THE CONFERENCE ON ALGEBRA AT CHICAGO

THE intense current interest in algebraic research was exemplified in a conference on algebra at the University of Chicago from June 28 to July 1. It followed a conference at Notre Dame in February on the algebra of geometry and a symposium of the American Mathematical Society at Charlottesville, Virginia, in April on the "structure" or "lattice" theory of algebraic systems. The success of these meetings has demonstrated the effectiveness of mathematical conferences devoted to the study of a single topic.

The Chicago conference was concerned largely with linear algebras and algebraic geometry. It opened on Tuesday morning with an address by Professor L. E. Dickson, of the University of Chicago. He traced the history of quaternions and other linear algebras. Some of the rules of ordinary algebraic manipulation do not apply to these algebras; in particular, $xy = yx$ is not always true. However, the algebras still include "integral" elements with many of the properties of ordinary whole numbers. Professor Dickson described the long and difficult search for these numbers and their final discovery.

New and explicit formulas for sets of whole numbers in certain important algebras, the cyclic algebras, were presented by Professor R. Hull, of the University of Illinois. Professor C. G. Latimer, of the University of Kentucky, explained how the arithmetical properties of the integral sets in quaternion algebras are closely related to properties of quadratic and hermitian forms. These arithmetical properties depend on certain sets of elements, called ideals. Professor MacDuffee, of the University of Wisconsin, explained how many of the computations with such ideals could be carried out by the use of matrices.

A new and very general process for the reduction of hermitian and related types of matrices to canonical forms was outlined by Professor J. Williamson, of Johns Hopkins. Professor M. H. Ingraham, of the University of Wisconsin, explained how certain reductions to canonical forms can be simplified by replacing a matrix by a smaller matrix whose elements are themselves in a division algebra.

The algebras found by combining division algebras with algebras of all n-rowed square matrices were analyzed by Professor R. Brauer, of the University of Toronto. Professor A. A. Albert, of the University of Chicago, gave a new proof for some properties of the algebras built up by combinations of cyclic algebras. Cyclic algebras constructed from numbers with certain continuity properties were analyzed by Dr. O. F. G. Schilling, of Johns Hopkins. Certain related arithmetical devices were used by Professor Artin, of Notre Dame, for the solution of quadratic equations homogeneous in several variables.

Professor R. Baer, of the University of North Carolina, investigated the extent to which the structure of a commutative group is determined by the inter-relations of its subgroups. Dr. N. Jacobson, of the University of North Carolina, explained the structure of Lie algebras. One example of such algebras is furnished by ordinary vectors, using vector multiplication.

Considerable controversy attended the presentation of papers on Wednesday on curves and surfaces defined by algebraic equations. Professor S. Lefschetz, of Princeton, declared that many results in such geometry previously found by analytical methods could be obtained by simple algebraic devices. There was a lively discussion of the role of such methods. After the formulation by Dr. S. MacLane, of the University of Chicago, of certain algebraic tools which characterize the points on a curve, Professor O. Zariski, of Johns Hopkins, made elegant applications of such methods to the simplification of singular points of surfaces.

On the second day of the conference a dinner was held in Judson Court for visiting and local mathematicians. More than 140 enjoyed the dinner and the ensuing speeches. One speaker stated that over 90 graduate students are in residence at the university this summer.

The university's program of mathematics this summer emphasizes algebra. In addition to the regular courses, there is a seminar on algebra conducted by members of the staff.

S. MACLANE
G. B. PRICE