

to the original writer, though the geographical conditions must have been somewhat changed in his time.

I rejoice that a scholar like Dr. Haupt has advocated a view which will almost for the first time bring this very ancient and very accurate geographical description before the notice of modern biblical scholars in a manner which will be intelligible from their point of view.

I may add that a popular view of the geological argument on the subject will be found in my work, 'Modern Science in Bible Lands,' published in 1888,\* where will also be found a sketch-map of the region, illustrating the bearing of the geological and geographical researches of Loftus and others on this much vexed and much misunderstood question.

J. WILLIAM DAWSON.

MONTREAL, May 7, 1895.

#### COLOR-ASSOCIATIONS WITH NUMERALS, ETC. (THIRD NOTE).

TO THE EDITOR OF SCIENCE: In SCIENCE, old series, Vol. vi., No. 137, p. 242, I printed the results of some experiments upon the association of colors with letters of the alphabet, with numerals, etc., in the case of one of my daughters. In *Nature* for July 9, 1891, I gave a table exhibiting the results of these experiments in the years 1882, 1883, August, 1885, December, 1887, June, 1889, and June, 1891, a period of about nine years. The table can be readily consulted by anyone interested, so that it need not be reprinted here. In February, 1895, I again questioned my daughter on the subject, and I find that the colors given in her replies of June, 1891, are unchanged except in two cases. The figure 8 was visualized by her as white (August, 1885), cream color (December, 1887), white (June, 1889), cream (June, 1891), and is again seen as white (February, 1895). The figure

\*Harpers, New York.

10 was noted as brown (1885), brown (1887), black ? (1889), black or brown (1891), and black (1895). With these exceptions there are no material changes. My remarks on the table, given in *Nature*, do not seem to call for any additions or subtractions. The present note, taken with the others cited, seems to be of value, as it records the results of experiments made under exceptionally good conditions and now extending over a period of some thirteen years.

EDWARD S. HOLDEN.

MOUNT HAMILTON, May, 1895.

#### UNIVERSITY OF KANSAS STATE GEOLOGICAL SURVEY.

IN conformity with the law under which the University of Kansas is now working, the Board of Regents at a recent meeting formally organized the University Geological Survey of Kansas with Chancellor F. H. Snow, ex-officio Director; Professor S. W. Williston, Paleontologist; Professor Erasmus Haworth, Geologist and Mineralogist, and Professor E. H. S. Bailey, Chemist.

In addition to these, other members of the University Faculty will be engaged upon the work of the Survey, as well as the advanced students of the departments of Geology and Paleontology. An effort will also be made to centralize and unify the energies of different geologists in the State who have been doing valuable work along different lines of geological investigations. Already a considerable start has been made and the coöperation of different geologists of the State has been secured.

The policy of the Survey will be conservative, with the expectation that it will be continued and eventually include all other branches of the natural history of the State. The general stratigraphy of the State will first be elaborated in order that it may be used in the further study of various questions of economic and scientific importance, all of which will be taken up as rapidly as

existing conditions from time to time will permit.

Work in the Coal Measures of the State has been in progress for two summers, and Volume I. of the Report is now almost ready for publication. Other volumes will appear at irregular intervals. Those already under preparation are: One on Coal, Oil and Gas; one on the Vertebrate Paleontology of the State; and one on the Salt and Gypsum deposits of Kansas.

F. H. SNOW,

*Chancellor University of Kansas.*

LAWRENCE, KANSAS,

April 20, 1895.

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SCIENTIFIC LITERATURE.

*Our Native Birds of Song and Beauty.* BY H.

NEHRING. 4°, 36 colored plates from originals by RIDGWAY, GOERING and MÜTZEL.

Published by Geo. Brumder, Milwaukee.

To be completed in 16 parts, \$1.00 each.

Part eleven of this excellent work, carrying it nearly half through the second volume, has been delivered to subscribers. It is enough praise to say that the high standard of the first volume is maintained. Mr. Nehrling is a field naturalist of the kind who deem a bird in the bush worth two in the hand. He loves everything in the woods and fields, and in telling about the birds and their lives he tells also of the trees and flowers.

The aim of the book is to give trustworthy accounts, in popular style, of the haunts and habits of our birds. Occasionally it does more and introduces a new fact of scientific interest, as when the breeding of the Pine Grosbeak (*Pinicola*) is recorded for northern Wisconsin. On the other hand, it is not always down to date. For instance, under the Black Rosy Finch (*Leucosticte atrata*), the statement is quoted from Ridgway that "nothing has yet been learned as to its range during the breeding season." As a matter of fact, the species is common

in summer in the higher parts of the Salmon River Mountains in Idaho, where it was obtained by the reviewer five years ago (see North American Fauna, No. 5, 1891, 102). Similarly, the Gray-crowned Rosy Finch (*L. tephrocotis*) is said to be 'a resident of the interior of British America, near or in the Rocky Mountains,' and further, that 'none seem to breed in our territory.' If Mr. Nehrling had consulted the 'Report on the Ornithology of the Death Valley Expedition,' by Dr. A. K. Fisher, he would have found the statement that this species "is a common summer resident in the higher portions of the White Mountains and the Sierra Nevada in eastern and southern California," where it breeds abundantly and where nearly 40 specimens were secured by the expedition (North Am. Fauna, No. 7, 1893, 82).

The plates are of two kinds, some showing a single species in appropriate surroundings; others showing a number of species grouped together on a background of landscape or dense vegetation. The reproductions, while amply sufficient for purposes of identification, are evidently inferior to the originals, the number of stones used in printing being too small, and the workmanship not of the best. By far the most effective picture in the second volume is one of a group of winter birds—Evening Grosbeak, Pine Grosbeak, Redpoll, White-winged Crossbill, Nuthatch and Chickadee—on top of a spruce tree laden with snow. The combination of colors is striking and is aided by the red berries of a giant mountain ash, which, by the way, forgot to drop its leaves! Among the earlier plates of high merit, both in conception and execution, are several by Robert Ridgway that give charming glimpses of birds in characteristic attitudes and surroundings. Of these, the Golden-crowned Kinglet, Prothonotary Warbler, and Canon Wren are among the best.