

SCIENCE

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AGRICULTURAL GEOLOGY

CONTENTS

<i>Agricultural Geology</i> : PROFESSOR JOHN E. SMITH	139
<i>The Nomenclature of Families and Subfamilies in Zoology</i> : DR. HARRY C. OBERHOLSER.	142
<i>Further Results of Analysis of Light Deflections observed during the Solar Eclipse of May 29, 1919</i> : DR. LOUIS A. BAUER	147
<i>Scientific Events</i> :—	
<i>Chemical Research in France and England; Medical Education in the United States; Work of the Bureau of Mines; The Reorganization of the Nela Research Laboratories; The Lister Memorial</i>	148
<i>Scientific Notes and News</i>	151
<i>University and Educational News</i>	153
<i>Discussion and Correspondence</i> :—	
<i>Transverse Vibrations of Rods</i> : PROFESSOR ARTHUR GORDON WEBSTER. <i>The Exploration of Venezuela</i> : E. B. WILLIAMSON. <i>Mathematische Zeitschrift</i> : PROFESSOR G. A. MILLER	154
<i>Scientific Books</i> :—	
<i>Gold's Aids to Forecasting</i> : A. M.	155
<i>Special Articles</i> :—	
<i>Linked Genes in Rabbits</i> : PROFESSOR W. E. CASTLE. <i>The Fat-soluble A Vitamine and Xerophthalmia</i> : DR. A. D. EMMET	156
<i>The American Chemical Society</i> : DR. CHARLES L. PARSONS	158

DURING reconstruction, as the present period is frequently termed, many new applications of the principles of pure science to special fields of endeavor are being made. The principles of geology thus applied during recent years have given rise to economic geology, mining geology, engineering geology, oil geology and perhaps to that branch of the subject indicated by the above title for it is not entirely new. The application of the principles of the science to the solution of the geological problems that are met in agricultural enterprises and pursuits, in brief, the relation of geology to rural welfare may appropriately be considered as agricultural geology.

Such a problem is that of securing an abundant supply of pure water. In regions of copious rainfall it is essential, in those of average to minimum rainfall it is absolutely necessary to consider the properties and the structure of the substrata in their relation to water in order to obtain such a supply. Pursuant to the requirement of this necessity, the United States Geological Survey maintains a branch of service whose work is concerned with the water resources of the entire country. The purity of subsurface water depends chiefly on the filtering power of the yielding rocks. One of the best natural filters consists of residual material of considerable depth. Some rocks below this mantle are sufficiently pervious to hold, transmit, filter and consequently to yield pure water. Certain others are impervious. Another condition is found where the rocks contain joints or cracks along which water moves freely without filtration, conveying to wells or springs contamination from distant sources. This condition is a strong possibility in limestone regions. Artesian water which, in some localities, flows from wells may be found where the properties and structure of

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