"The Isolation of Bacillus Typhosus from Butter," D. H. Bergey.

"Note on a Peptid-splitting Enzyme in Woman's Milk," Louis M. Warfield.

"Carcinoma Involving the Entire Kidney" (with two plates), Lindsay S. Milne.

"A Study of a Case of Thrombo-angitis Obliterans," Harlow Brooks.

"The Value of the 'Hormone' Theory of the Causation of New Growth," I. Levin and M. J. Sittenfield.

THE contents of the *Astrophysical Journal* for September are:

"Spectrum of Comet Morehouse (1908 *c*)," A. de la Baume Pluvinel and F. Baldet.

"The Discovery of Eclipsing Variable Stars," Joel Stebbins.

"A New Bright Variable Star, β *Aurigæ*," Joel Stebbins.

"Motion and Condition of Calcium Vapor over Sun-spots and other Special Regions. II.," Charles E. St. John.

"An Enclosed Arc for Spectroscopic Work," James Barnes.

"The Spectra of Aluminium, Copper and Magnesium in the Arc under Reduced Pressure," James Barnes.

"An Inquiry into the Variation of the Spectroscopic Binary κ *Pavonis*," Alex. W. Roberts.

SPECIAL ARTICLES

THE ORIGIN OF THE GREAT PLAINS

PASSARGE'S dictum that "Wasser ist nicht im Stande solche Ebene zu erodieren" now seems eminently applicable to vast, arid and remarkably smooth plains other than those of the great South African plateau. In the light of the recent advances in our knowledge of general desert-leveling, or regional planation and lowering without base-leveling, the vastness and evenness of the Great Plains lying between the Rocky Mountains and Mississippi River at once raise the query whether genetically their dominant characters have been properly interpreted.

At the present time the geologic formations receiving greatest critical attention are those known as continental deposits, or terranes laid down and preserved on land instead of in lakes or seas. In the recent considerations of the subaerial formations so many novelties enter that in many an old and well-known field a new interest is aroused. The Great Plains and their deposits are one of these. On a grand scale they appear to introduce to us a mode of terranal genesis hitherto almost unrecognized. Continental deposits thus begin to assume in this country an importance which has never been before accorded them.

Singularly enough, the so-called fresh-water Tertiaries of the Great Plains have had ascribed to them every known method of origin. The same is true of the surface-relief. In the descriptions and discussions of this one geologic formation and of this single topographic feature is reflected in all its various phases a century's trend of sedimentative and physiographic thought in America. For this reason, if for no other, the theme is deserving of more than passing notice.

The origin of the Great Plains and their deposits has been ascribed to (1) normal marine deposition, (2) lacustrine sedimentation in vast bodies and (3) fluviatile aggradation. To these hypotheses must now be added a fourth—that of eolative planation. In the extreme west in front of the Rocky Mountains is a belt of deflative character where often the substructure forms a typical rock-floor. In the broad median belt eolian deposition to vast extent has taken place, and is still going on. In the eastern belt along the Missouri River wind-effects, although extensive, are almost wholly obscured by moist-climate phenomena.

The two essential points to be noted are, first, continental deposits may be as important as marine or lacustrine deposits; and second, that on the American continent eolic deposits are of vast extent and are being formed under conditions whereby they may be preserved through the geologic ages as effectually as any of the marine Cambrian terranes have been.

In this new century the theory of eolic planation and deposition promises to be one of the half-dozen great and novel thoughts in the domains of geology.

CHARLES R. KEYES