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<i>Upsetting the Balance of Nature, with Special Reference to Kansas and the Great Plains:</i> PROFESSOR ROGER C. SMITH	649	<i>Societies and Academies:</i>	
<i>Viruses:</i> DR. T. M. RIVERS	654	<i>The Ohio Academy of Science, 1932:</i> W. H. ALEXANDER. <i>The Tennessee Academy of Science:</i> DR. JOHN T. MCGILL	668
<i>Obituary:</i>		<i>Scientific Apparatus and Laboratory Methods:</i>	
<i>Thomas H. Gronwall:</i> DR. J. F. RITT. <i>Ellen Churchill Semple:</i> DR. WALLACE W. ATWOOD. <i>Memorial to Dr. John Briquet:</i> E. D. MERRILL	657	<i>A Convenient Method of Photographing Small Animals at Low Magnification:</i> DR. ROMAN KENK. <i>Permanent Preservation of the Human Body by Infiltration:</i> EDMOND J. FARRIS	669
<i>Scientific Events:</i>		<i>Special Articles:</i>	
<i>Birth Rates and Death Rates; Investigation of the Woods of the World; Government Controlled Forest Lands; The American Society of Agricultural Engineers; The International Cancer Research Foundation; Retiring Members of the Faculty of the Massachusetts Institute of Technology</i>	658	<i>General Theorems in Dynamics:</i> PROFESSOR EDWARD KASNER. <i>Soil Weights before and after Dispersion:</i> L. B. OLMSTEAD and DR. HORACE G. BYERS	671
<i>Scientific Notes and News</i>	661	<i>Science News</i>	8
<i>Discussion:</i>			
<i>An Experiment in Teaching Public Health Zoology at Rollins College:</i> DR. C. W. STILES. <i>Regarding the C Forms of Kuhn:</i> DR. PHILIP HADLEY. <i>Whaling in Northeastern Japanese Waters:</i> MILES L. PEELE	664		
<i>Scientific Books:</i>			
<i>Rydberg's Flora of the Prairies and Plains of Central North America:</i> DR. FRANK C. GATES	667		

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UPSETTING THE BALANCE OF NATURE, WITH SPECIAL REFERENCE TO KANSAS AND THE GREAT PLAINS¹

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A HUNDRED years ago, the great plains were still largely in their primeval state. A balance of biological life or of organic groups had been set up through the ages and this balance probably then was but little disturbed. The land at that time was in permanent sod. This sod, in Kansas, was made up largely of some 40 species of grasses out of the known 372 species of the state. The plains probably were burned off every few years by fires, started by the Indians or by lightning. In the valleys and gullies, a few scrubby oaks and cottonwoods, honey locusts and elms had escaped the fires and were maintaining

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² Presidential address, delivered before the Kansas Academy of Science, McPherson, Kansas, on April 5, 1932.

a rather difficult existence. Herds of bison roamed the prairies, but they disturbed the vegetation little, since they did not stay long in any one place. Rattlesnakes, bullsnakes, coyotes, wolves, hawks and owls preyed largely upon the rabbits, ground birds, pocket gophers and prairie dogs. Great flocks of carrier pigeons roosted in the trees and, together with prairie-chickens, sage hens and bob-whites, fed upon berries, the seed of many weeds and grasses and many kinds of insects. Swarms of grasshoppers came occasionally, and no doubt at least partly defoliated the grasslands and the trees, but they were dealing with perennial plants then and these withstood the onslaughts of the hoppers.

About one hundred years ago the scene began to change, slowly at first but profoundly, nevertheless.

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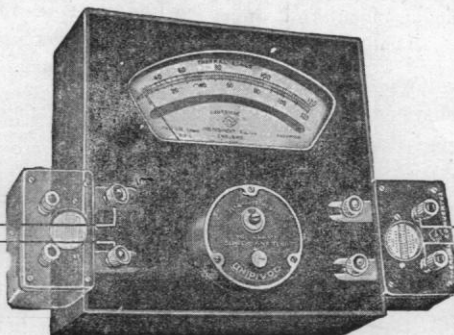
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