

## From the Frontier to the Biosphere

### A brief history of the USIBP Grasslands Biome program and its impacts on scientific research in North America.

By David C. Coleman, David M. Swift and John E. Mitchell

The Grasslands Biome, part of the U.S. International Biological Program (IBP), the largest, most successful program of its kind, had its early beginnings in Great Britain. Building from the success of the International Geophysical Year, which occurred in 1957, a group of ecologists and environmental scientists in Europe proposed an international program on the environment, which they called the International Biological Programme, or IBP (18).

The program was interpreted broadly to include all aspects of biological productivity in relation to human welfare. Numerous governmental agencies in Europe provided funding for studies that began in the early 1960s. There was considerable interest in the United States for the IBP concept, but no significant funding mechanism existed for such a program. Regardless, with the assistance of senior scientists in the biological community, including W. Frank Blair from the University of Texas, George M. Woodwell from the Brookhaven National Laboratory, and Arthur D. Hasler from the University of Wisconsin, a series of planning meetings were held during 1966, including a pivotal one in August, held in Williamstown, Massachusetts, chaired by Eugene Odum. An action plan was created to establish a series of IBP sites in each of the major biomes of North America, beginning with a Grasslands Biome, followed by several others, including forests and deserts (1).

In the final months of the Lyndon Johnson administration, several million dollars were authorized and appropriated by Congress, enabling an Ecosystems Studies program office to be estab-

lished in the National Science Foundation (NSF). As planned, biome research programs were begun, with the Grasslands Biome being established first at Colorado State University (CSU), Fort Collins. This was truly an example of preparation meeting opportunity, because the principal investigator, Dr. George M. Van Dyne, was primed and ready for this large program. A brief history of Van Dyne follows. His life encompassed the transition from the old frontier to the current era of concerns about global biology as epitomized by the term, biosphere.

#### A Biosphere Pioneer

George M. Van Dyne grew up on a ranch south of Trinidad, Colorado, almost on the New Mexican border. George, an accomplished horseman who worked on the ranch as a hand, was enamored about all aspects of the West. George earned his B.S. degree in Animal Science at CSU, and then went on for his Master's degree in Range Science at South Dakota State University under Mr. James K. (Tex) Lewis, undertaking a total system study of rangeland ecology. Van Dyne then received his Ph.D. degree from the University of California at Davis, working with Dr. Harold Heady, developing mathematical models of rangeland systems.

George looked carefully for somewhere to launch his career, and settled on Oak Ridge National Laboratory (ORNL), Tennessee, where Stan Auerbach led the Environmental Sciences Section. Jerry Olson and Bernard Patten had already formed a Systems Ecology group there. George joined them in 1963, and the three of them taught the first Systems Ecology course in the USA at the University of Tennessee in Knoxville. At that time,