

ARTHUR GIBSON VESTAL

1888-1964

Dr. A. G. Vestal devoted more than half a century to the study of plant and animal ecology and phytogeography. He died on June 5, 1962, just three months before his 76th birthday and seven years after becoming Professor Emeritus of Botany at the University of Illinois. He is survived by his widow, Wanda Pfeiffer Vestal, also a botanist, and by three children: John of Chicago, Phoebe (Mrs. Simon Otterbury) of Seattle, and David of New York City. Dr. Vestal will be remembered by his friends, colleagues, and former students as a kindly gentleman and an able, lifelong student of vegetation.

Born at La Grange, Ill. on Sept. 10, 1888, he grew up and attended high school in Chicago. Summer visits to Pentwater, Michigan, an area of bogs and lake dunes, stimulated an early interest in biology which he pursued by attending the University of Illinois (1907-1911).

Encouraged to study both plant and animal ecology by H. A. Gleason and Charles C. Adams, Vestal wrote a bachelor's thesis (something rarely done these days) on sand prairie communities along the Illinois River. This study was the basis of a theoretical paper in 1914 proclaiming the unity of biotic associations comprising both plant and animal assemblages and recognizing regional complexes of plants and animals which he named "biotic provinces".

As an instructor and student at the University of Colorado, Vestal became interested in doing a regional study of the Great Plains. Since most of his traveling was done on foot or by bicycle, he confined his attention to the eastern border of the Rocky Mountains from New Mexico to central Wyoming. These studies were geobotanical in nature and led Vestal to the University of Chicago where he studied with H. C. Cowles and earned his Ph.D. in 1915.

Then followed five years (1915-1920) of teaching at Eastern Illinois State Normal School and nine years (1920-1929) at Stanford University. During the last five years of his residence at Stanford, Dr. Vestal was actively associated with F. E. Clements and wrote many short papers concerning the relationship between environmental factors (physiography, soil texture, soil moisture, maritime winds, etc.) and the geographical distribution of grassland, chaparral and forest in California.

After moving to the University of Illinois in 1929, Dr. Vestal devoted a great deal of his time and effort to a wide-ranging exploration of the literature of plant ecology and regional plant geography. This resulted in a collection of references, excerpts, and notes which fill more than sixty drawers of card files. Especially treasured were excerpts from the writings of early naturalists, conveying many ecological ideas which have been recurrently rediscovered and renamed (by more recent, more self-conscious ecologists.)

During his tenure as Professor of Botany (1929-1957) at the University of Illinois, Dr. Vestal published numerous papers and abstracts dealing with various aspects of plant ecol-

ogy and plant geography in Illinois and elsewhere. He and his students made valuable contributions toward the development of concepts and statistical methods to be used in describing and classifying plant communities and regional vegetation complexes from a phytosociological point of view. His definitive monograph (1949) on the use and limitations of species-area curves is probably the most thoroughly documented work of its kind in existence today, and it should serve as a model which any serious student of phytosociology would do well to follow.

In his teaching and in his conversations with students, Dr. Vestal usually conveyed an attitude of friendly skepticism toward formalized systems of ecological research and interpretation. He once stated his general attitude somewhat as follows: "Ecology and plant geography may now be in a state of some confusion, but this is a happier state than might result from prematurely imposed standardization."

During his long career, Dr. Vestal published more than 60 papers dealing with a wide variety of ecological and phytogeographical subjects, and he remained active after his retirement in 1957. At the time of his last illness, he was writing a technical monograph on the grasslands of California and a non-technical book for general readers on the plant geography of North America. He had planned eventually to write a book describing the vegetation regions of the world. It is indeed unfortunate that Dr. Vestal was unable to complete these projects. We shall miss him and his unfinished work.

W. E. Martin

MAJOR PUBLICATIONS

1913. An associational study of Illinois sand prairie. *Bull. Ill. State Lab. Nat. History*. **10**: 1-96.
1913. Local distribution of grasshoppers in relation to plant associations. (in Michigan). *Biol. Bull.* **25**: 141-180.
1914. Prairie vegetation of a mountain-front area in Colorado. *Bot. Gaz.* **58**: 377-400.
1914. Internal relations of terrestrial associations. *Amer. Nat.* **48**: 413-445.
1914. A black-soil prairie station in northeastern Illinois. *Bull. Torr. Bot. Club* **41**: 351-363.
1917. Foothills vegetation in the Colorado Front Range. *Bot. Gaz.* **64**: 353-385.
1918. Local inclusions of prairie within forest. *Trans. Ill. Acad. Sci.* **11**: 122-128.
1919. Phytogeography of the eastern mountain front in Colorado. *Bot. Gaz.* **68**: 153-193.
1919. Preliminary account of the forests in Cumberland County, Illinois. *Trans. Ill. Acad. Sci.* **12**: 234-245.
1924. Correlations between plant communities and grasshopper assemblages. (in Colorado). *Carn. Inst. Yrbk.* **23**: 267-268.
1925. Physiographic control in the distribution of California grassland. *Carn. Inst. Yrbk.* **24**: 337-338.
1926. Soil factors in California grassland. *Carn. Inst. Yrbk.* **25**: 348-350.
1927. Limiting factors of forest, chaparral, and grassland. (with F. E. Clements and J. V. Simon). *Carn. Inst. Yrbk.* **26**: 320-331.
1931. A preliminary vegetation map of Illinois. *Trans. Ill. Acad. Sci.* **23**: 204-217.
1932. Strategic habitats and communities in Illinois. *Trans. Ill. Acad. Sci.* **24**: 80-85.
1935. A bibliography of the ecology of Illinois. *Trans. Ill. Acad. Sci.* **27**: 163-261.
1937. Barrens vegetation in Illinois. *Trans. Ill. Acad. Sci.* **29**: 79-80.
1938. A subject index for communities, including vegetation components. *Ecology* **19**: 107-125.
1943. Unequal scales for rating species in communities. *Amer. Jour. Bot.* **30**: 305-310.
1944. Use of terms relating to vegetation. *Science* **100**: 99-100.
1945. The literature of Illinois natural history and geography. *Trans. Ill. Acad. Sci.* **37**: 63-65.
1945. Size requirements for reference areas in mixed forest. (with Mary F. Heermans). *Ecology* **26**: 122-134.
1949. Minimum areas for different vegetations: their determination from species area curves. *Ill. Biol. Monogr.* **20**: 1-129. Univ. Ill. Press.

1954. Composition diagrams for forests. *Trans. Ill. Acad. Sci.* **46**: 31–41.
1956. Rock ledge vegetation in southern Illinois. (with G. S. Winterringer). *Ecol. Monogr.* **26**: 105–130.