

GERALD L. VAN AMBURG

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Educational Background

Ph.D. in Range Science (emphasis in ecology), Texas A&M University, 1969.
M.S. in Botany, Fort Hays Kansas State College, 1965.
B.S. in Botany, Fort Hays Kansas State College, 1964.

Professional Experience

August 1969 to present:

Currently Professor and Chairperson of the Biology Department, Concordia College, teaching courses in introductory biology, ecology, limnology, plant taxonomy and environmental studies. One year of this period (November 1970 to November 1971) was spent in Nigeria as a representative of the International Atomic Energy Agency as an advisor to the Nigerian government in setting up a grassland research project. I have planned and led numerous Biology Travel Seminars during my tenure at Concordia College. The travel seminars have taken students to Australia, New Zealand, Hawaii, Mexico, Belize, San Salvador Bahamas, Kenya, Madagascar, eastern U.S. and western U.S. In 1997 I was the faculty leader for our semester-long program in India, which is an interdisciplinary study of development. This provided an opportunity to examine first-hand the environmental problems associated with the many facets of economic development. In 2003 I was a faculty co-leader for a semester-long honorary academic program in Greece. During this semester I taught an introductory ecology course and a Mediterranean Studies course. Both of these courses allowed myself and the students to gain insight into the ecological challenges facing Greece and the Mediterranean region. Since 1980 my professional priorities have been in the area of watershed management. This has included wetland ecosystem research as well as an active role in public service and policy-making related to water management. In 2000 I helped to establish and obtain funding for the International Water Institute, and serve as the director of one of its two centers. The mission of the institute is to provide a forum for research, public education and information dissemination relating to flood damage reduction and natural resource protection and enhancement in the Red River Basin.

September 1966 to August 1969:

Research Assistant, Department of Range Science, Texas A&M University. Conducting research on the biogeochemical cycling of cesium and potassium.

September 1965 to September 1966:

Sales representative in the agricultural chemistry division of Geigy Chemical Corporation.

June 1965 to September 1965:

Instructor, Department of Biological Sciences, Fort Hays Kansas State College, Hays, Kansas.

September 1960 to June 1965:

Completed B.S. and M.S. degree requirements while working part time as a motel desk clerk and for the Department of Biological Sciences, Fort Hays Kansas State College. Summers were spent going to summer school and working full time for the Biological Sciences Department.

Honorary and Professional Societies

American Institute of Biological Sciences
Beta Beta Beta (National Biological Society)
Ecological Society of America
Gamma Sigma Delta (Agriculture)
International Association for Ecology (INTECOL)
Phi Kappa Phi
Sigma Xi

Awards

River Keeper of the Year, 1996 from
River Keepers, Fargo - Moorhead
Conservation Award, 1996 from Minnesota
Chapter of The Nature Conservancy
Natural Resources Award, 1999 from Minnesota
Department of Natural Resources
Friends of Water Planning, 2000 from
Minnesota Association of Water Planners

Publications

- Dodd, J. D. and G. L. Van Amburg. 1969. Transfer to and distribution of cesium-134 in the soil of two grassland habitats. *Can. J. Soil Sci.* 50: 121-129.
- Dodd, J. D. and G. L. Van Amburg. 1969. Distribution of cesium-134 in *Andropogon scoparium* Michx. clones in two native habitats. *Ecology* 51: 685-689.
- Hulett, G. K., G. L. Van Amburg and G. W. Tomanek. 1969. Soil depth-vegetation relationships on a shallow limy range site in western Kansas. *J. Range Manage.* 22: 196-199.
- Van Amburg, G. L. and J. D. Dodd. 1970. Soil characteristics and grass rooting habits of two soil types in east central Texas. *Southwestern Naturalist* 14: 377-387.
- Van Amburg, G. L. 1971. The soil-plant system in relation to the inorganic nutrition of herbage grasses in Nigerian grassland associations. International Atomic Energy Agency, Vienna, T.A. Report no. 768.
- Van Amburg, G. L. et al. 1975. Environmental assessment of Lake Lac Qui Parle, Minnesota. Tri-College University, Center for Environmental Studies, North Dakota State University, Fargo, North Dakota. 378 pp. (U.S. Army Corps of Engineers contract no. DACW37-74-C-0050)
- Van Amburg, G. L. et al. 1975. Environmental assessment of Lake Traverse. Tri-College University, Center for Environmental Studies, North Dakota State University, Fargo, ND 366 pp. (U.S. Army Corps of Engineers contract no. DACW37-74-C-0050)
- Van Amburg, G. L. et al. 1975. Environmental assessment of Lake Orwell, Minnesota. Tri-College University, Center for Environmental Studies, North Dakota State University, Fargo, ND 252 pp. (U.S. Army Corps of Engineers contract no. DACW37-74-C-0050)
- Van Amburg, G. L. and J. D. Curtis. 1975. Environmental assessment of the proposed municipal water facilities for the communities of Garrison, Harvey and Fessenden, North Dakota. Tri-College University, Center for Environmental Studies, North Dakota State University, Fargo, ND. 66 pp. (Bureau of Reclamation contract no. 14-06-603-2041)
- Van Amburg, G. L. and J. D. Curtis. 1976. Environmental assessment of the proposed municipal and industrial water facilities for the communities of Turtle Lake, Mercer, McClusky, New Rockford, Forman and Cogswell, North Dakota. Tri-College University Center for Environmental Studies, North Dakota State University, Fargo, ND. 81pp. (Bureau of Reclamation contract no. 14-06-603-2058)
- Van Amburg, G. L. and J. D. Curtis. 1977. Environmental assessment of the proposed municipal and industrial water facilities for the communities of Turtle Lake, Mercer, McClusky, New Rockford, Forman, Cogswell, Gwinner and Milnor, North Dakota. (A revision of and addition to the 1976 report. Tri-College University Center for Environmental Studies, North Dakota State University, Fargo, ND. 109 pp. (Bureau of Reclamation contract no. 14-06-603-2058)
- Van Amburg, G. L., James A. Swaby and R. H. Pemble. 1981. Response of arthropods to a spring burn of a tallgrass prairie in north-western Minnesota. In R. L. Stuckey and Karen J. Reese, eds. The prairie peninsula -- in the "shadow" of Transeau: Proc. Sixth North American Prairie Conference, 1979 Columbus, Ohio.
- Pemble, R. H., G. L. Van Amburg and Lyle Mattson. 1981. Intraspecific variation in flowering activity following a spring burn on a northwestern Minnesota prairie. In R. L. Stuckey and Karen J. Reese, eds. The prairie peninsula -- in the "shadow" of Transeau: Proc. Sixth North American Prairie Conference, 1979 Columbus, Ohio.
- Van Amburg, G. L. 1983. The effects of agricultural runoff upon natural wetland ecosystems. Bull. 119, Water Resources Research Center, University of Minnesota, St. Paul. Completion Report for U.S. Department of Interior Grant no. 14-34-0001-2125, A-044.

Publications (cont.)

- Van Amburg, G. L. 1986. Variation in total nonstructural carbohydrate reserves in native warm-season grass varieties. In G. K. Clambey and R. H. Pemble, eds. The prairie: past, present and future: Proc. Ninth North American Prairie Conf., 1984 Moorhead, Minnesota.
- Van Amburg, G. L. 1991. Hamden Slough: A cooperative venture between agencies. Proc. of the Ninth TIC Annual Summit Conference, Grand Forks, ND, November 1991.
- Svedarsky, D. and G. L. Van Amburg. 1996. Integrated management of the Greater Prairie Chicken and livestock on the Sheyenne National Grassland. Special Report to North Dakota Game and Fish Department and U.S. Forest Service. 113 pp.
- Miller, C. et. al. 2001. A user's guide to natural resource efforts in the Red River Basin. Red River Basin flood Damage Reduction Working Group Pub.

Papers Presented at Professional Meetings

- "Soil depth-vegetation relationships." Contributed paper, Kansas Academy of Science, 1965.
- "Distribution of Cs-134 in the soil compartment of two contrasting soil types after two years." Contributed paper, A.I.B.S. meetings, 1969.
- "Fire and flowers in a northwestern Minnesota prairie." Contributed paper, Minnesota Academy of Science, 1973.
- "An initial study of the effects of fire on insects and related arthropods of a northwestern Minnesota prairie." Contributed paper, Minnesota Academy of Science, 1973.
- "Fire and small mammal populations in a northwestern Minnesota prairie." Contributed paper, Minnesota Academy of Science, 1973.
- "1973 natural area survey in six western Minnesota counties." Contributed paper, Minnesota Academy of Science, 1974.
- "Extracellular protein breakdown within Sarracenia purpurea pitchers." Contributed paper, Minnesota Academy of Science, 1975.
- "Some of the important plant species in western Minnesota prairies." Invited paper, Minnesota Prairie Chicken Society Conference, 1975.
- "The differential response of prairie plant species to prescribed burning in northwestern Minnesota." Contributed paper, 6th North American Prairie Conference, 1978.
- "The response of prairie arthropod populations to prescribed burning in northwestern Minnesota." Contributed paper, 6th North American Prairie Conference, 1978.
- "Total nonstructural carbohydrate reserves of selected varieties of warm season native grasses." Contributed paper, 9th North American Prairie Conference, 1984.
- "Emergent macrophyte and submergent plant production on two prairie glacial marshes." Contributed paper, 10th North American Prairie Conference, 1986.
- "The value of wetlands and their place in water management systems." Invited paper, Minnesota Association of Watershed Districts, December 4, 1987, Moorhead, MN.
- "Plant physiology and morphology as related to grass seeding." Invited paper, Native Grass Seeding Technical Workshop, Society for Range Management, July 19, 1988, Minneapolis, Minnesota.

"The role of ecotypic variation in selecting prairie plantings." Invited paper, Landscape Ecology Seminar, January 20, 1989, Department of Architecture and Landscape Architecture, North Dakota State University, Fargo, ND.

"Water conservation and management." Invited paper, Red River Water Supply Meeting, Grand Forks, ND, May 13, 1992, sponsored by The International Coalition.

Consulting Reports

1978. Biomass resource availability feasibility assessment, west-central Minnesota. Contract No. ET 78-G-02-4709.

1978. An analysis of site specific biomass potential and environmental evaluation. Contract No. ET 78-G-02-4709-A001.

Other Community and Professional Activities

Director, Center for Flood Damage Reduction and Natural Resource Studies, International Water Institute, 1805 Research Park Drive, North Dakota State University, Fargo, ND. In this capacity I have had the responsibility of integrating research professionals from various institutions and agencies to cooperate, via research, in solving the critical water management and natural resources issues in the Red River Basin.

Appointed to the Buffalo-Red River Watershed Board of Managers in 1986. Served as Secretary during 1987. Elected President in 1988 and served in that capacity until 1997. Currently serving as Vice President.

Elected to the Board of Directors, Minnesota Association of Watershed Districts, in 1989. Served as President in 1993 - 1994. Served as Vice-President 1995 – 2001.

Appointed by the Governor to the Wetland Heritage Advisory Committee, 1991, State of Minnesota. Reappointed in January 1994, 1997 and 2000.

Past President, Board of Directors, River Keepers, Fargo, ND, Moorhead, MN.

Member of the Advisory Board, Moorhead State University Center for Science, Moorhead State University, Moorhead, MN.

Member of the Technical Advisory Team, Interbasin Water Transfer Studies Program, North Dakota Water Resources Research Institute.

Member of the Local Water Planning Advisory Committee, Clay County, Minnesota.

Served on the Red River Basin Mediation Work Group 1988-1999 and continue to serve on the Red River Basin Flood Damage Reduction Work Group

Active member, past president, Moorhead Midday Lions International.

Active member of the Moorhead Presbyterian Church.