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Interviewee (print) Interviewer (print)

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The University of Georgia

on the date(s) of 5/13/94

for the oral history collection being compiled by Dr. Marshall.

Richard G. Wiegert  
Interviewee's signature

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Date 5/13/94

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# Table of Contents

for this interview of

**Richard G. Wiegert, PhD.**

interview held May 13, 1994

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- Introduction
- Background information (see Interviewee Background Information sheet)
- Received Bachelor of Science degree in Biology and Mathematics from Adrian College 1950-54, major professor: Miles Peele.
- Master of Science degree from Michigan State University 1956-58, major professor: Don Hayne, a biometrician and ecologist.
- Doctorate at the University of Michigan 1958-62, major professor: Frances Evans.
- Discusses course of study in graduate school, studied meadow voles for his Master's degree, and what led him to ecology.
- Change in environmental thought began in 1970 with the first EarthDay.
- Describes development of and changes in ecology.
- Discusses research that he has conducted and the people he has worked with:
  - cyanobacterium *Synechococcus* at Yellowstone,
  - Dr. Eugene P. Odum at the Savannah River Ecology Laboratory (SREL),
  - Dr. Lawrence Pomeroy to develop models for the marshes of Sapelo Island, Georgia.
- Enjoys nature for several reasons, and believes it should be protected for several reasons. Attracted to coastal marshes because some have not been significantly altered by humans.
- Currently assisting the United States Environmental Protection Agency (U.S.E.P.A.) develop an Ecosystem Risk Assessment protocol. Has also done Economic Risk Assessment in a Spanish estuary which was funded through the National Oceanic and Atmospheric Administration (N.O.A.A.).
- Discusses the future of the environment and the importance of population control.
- The science of ecology has a big future. Areas, such as, ecosystem management and ecological modelling, are going to be very important.

## Interview Questions

1. Where did you receive your education?
2. Who did you study under?
3. What got you interested in ecology?
4. How long have you been in the field of ecology?
5. What changes in environmental thought of the general public have occurred during your life? Why?
6. How has our understanding of nature and ecology changed during your life?
7. What major areas has your research focused on?
8. Please describe work that is/was particularly pertinent to the furthering of ecology?
9. How has your work added to or changed our modern views on the environment and ecology?
10. What are your personal thoughts and feelings about nature and the environment?
11. Have you ever taken part in a social or political movement for the environment (i.e. environmental legislation, demonstrations, rallies, etc.).
12. What do you think the future holds for environmental thought and the environment in general?
13. What does the future hold for ecology?

RICHARD G. WIEGERT  
CURRICULUM VITAE

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Biographical Information

Birthdate:	9 September 1932	Date:	22 February 1993
Marital Status:	Married, 2 children	Office:	Biological Sciences
Service Record:	U.S. Army 1954-1956		Rm. 706 Ph. 542-1661

Education Institutions and Degrees

Adrian College, 1950-1954, B.S.

Michigan State University, 1956-1958, M.S Thesis "Oxygen Consumption and Activity Patterns in the Meadow Vole, *Microtus pennsylvanicus* (Ord.)". 1958.

University of Michigan, 1958-1962, Ph.D., Thesis "The Effects of Periodic Destruction of Habitat on the Energetics of the Meadow Spittlebug *Philaenus spumarius* L." 1962.

Special Courses

University of Oregon, 1958, Summer, Marine Ecology.

Oak Ridge Institute of Nuclear Studies, Radiation Ecology Summer Courses, 1962.

Ohio State Institute of Acarology, Summer, 1964.

Honors and Awards

Honorary Doctor of Science Degree - Adrian College - 1976.

Research Recognition Award - University of Georgia - 1979.

Creative Research Award - University of Georgia - 1984.

Professional Experience

Professor - Zoology, University of Georgia, 1971-

Associate Professor - Zoology, University of Georgia, 1966-1971.

Visiting Professor - Biology, Michigan State University, 1965 and 1966.

Assistant Professor - Zoology, University of Georgia, 1962-1966.

Instructor - Zoology, University of Michigan, 1961-1962.

Teaching Fellow - University of Michigan, 1959-1960.

Research Assistant - University of Michigan, 1958-1959.

Teaching Assistant - Michigan State University, 1956-1958.

## Professional and Honorary Societies

American Society of Mammalogists  
Ecological Society of America  
American Society of Limnology and Oceanography  
Fellow of American Association for the Advancement of Science  
Sigma Xi  
Phi Kappa Phi  
American Institute of Biological Sciences  
British Ecological Society  
American Society of Naturalists  
Certified Senior Ecologist, Ecological Society of America.

## Current Research Interests

1. Systems analysis and modeling of energy and material fluxes in the producer and consumer populations of thermal spring communities.
2. The dynamics of carbon and nitrogen flows in coastal salt marshes.
3. Theoretical investigations of competition and predation using models.
4. Modeling mariculture in a Spanish estuary.
5. Theoretical investigations of plant-herbivore interactions.

## Research Grants

National Science Foundation. 1965-67. Bioenergetics of Detritus Decomposer Food Chains. \$27,000.

Herman Frasch Foundation. 1966-68. A radionuclide tracer study of mineral cycling in experimental cultivated and fallow fields. \$20,000 (E. P. Odum and C. D. Monk Co-PIs).

National Science Foundation. 1968-70. The Trophic Dynamics of Thermal Spring Ecosystems. \$45,000.

National Science Foundation. 1970-72. Trophic Dynamics of Thermal Spring Ecosystems. \$63,000.

National Science Foundation. 1972-74. Trophic Dynamics of Thermal Spring Ecosystems. \$70,000.

National Science Foundation. 1974-76. Trophic Dynamics of Thermal Spring Ecosystems. \$73,000.

Participant in the N.S.F. Coherent Area Grant under the direction of L. R. Pomeroy. 1973-75. \$19,470.

National Science Foundation. 1976-77. Trophic Dynamics of Thermal Spring Ecosystems. \$21,700.

National Science Foundation. 1975-78. Intermediary Metabolism of a Salt Marsh. \$490,000. (L. R. Pomeroy Co-PI).

Electric Power Research Institute. 1978-80. Development, Modeling and Experimental Manipulation of a Thermal Microecosystem. \$53,000.

- National Science Foundation 1980-1981. Analysis of spatial relationships between organisms: An NSF Equipment proposal (J. C. Avise, M. S. Blum, C. F. Jordan, D. T. Lindsay, J. T. Meyer, B. C. Patten, L. R. Pomeroy, J. W. Porter, K. G. Porter, J. B. Wallace Co-PIs). \$34,100
- Environmental Protection Agency. 1979-1982. Storm Mediated Carbon Transport from a Coastal Salt Marsh. \$263,000. (A. G. Chalmers Co-PI).
- National Science Foundation. 1982-1986. Community Position and Pattern along a Continuous Thermal Gradient: Physical versus Biological Constraints. \$151,996.
- National Science Foundation. 1983-1985. Controls on Primary Productivity of *Spartina alterniflora* in a Georgia Salt Marsh: Field Experimentation (A. G. Chalmers and W. J. Wiebe Co-PIs). \$318,279.
- Spanish-United States Research Program. 1984-1989. Oceanography of the Galician Coast off NW Spain in Relation to Demersal and Pelagic Fisheries. Sub-contract to Wiegert at UGA is \$15,000 a year for five years.
- Georgia Sea Grant Program. 1984-1987. The Utilization of a Salt Marsh by the Blue Crab, *Callinectes sapidus*. \$139,900.
- National Science Foundation. 1987-1990. Stability characteristics of an intertidal marsh: effects of variation in microbial degradation of organic carbon. (William J. Wiebe Co-PI). \$252,267.
- National Science Foundation. 1987-1990. Microbial Mediation of Organic Carbon Transformations in Emergent Macrophyte Habitats of the Okefenokee Swamp Ecosystem. (Robert Hodson and Charles Hopkinson Co-PIs). \$450,000.
- U. S. Department of Energy. 1989-1992. Theoretical models of the impact of climate change on natural populations, communities and ecosystems. (Dr. H.R. Pulliam and Dr. B.E. Taylor Co-PIs). \$238,003.
- Georgia Sea Grant Program. 1992. Postlarval recruitment and juvenile abundance/growth of blue crabs in a coastal Georgia estuary. \$113,304.

#### Pending Proposals

- National Science Foundation. 1992. LMER: A comparative study of the transport and transformation of materials from rivers through the land-sea margin. (Drs. A.G. Chalmers, D.C. Coleman, R.E. Hodson, M.A. Moran, and W.J. Wiebe Co-PIs). Pending. \$1,997,102.

#### Current Professional and Governmental Service

- Advisory Board - Luquillo Experimental Forest LTER. San Juan, Puerto Rico. 1988-1993.
- Advisory Board - Institute of Ecosystem Studies of the New York Botanical Garden. 2nd term - 1987-1991.
- Advisory Board - Konza Prairie Long Term Ecological Research Program - Kansas State University, 1987-1990.
- Advisory Board - Barrier Island Long Term Ecological Research Program - University of Virginia, 1987-1992.
- Member - EPA Science Advisory Board Subcommittee to advise Administrator, Mr. Lee Thomas, on priority environmental research needs of EPA.

Consulting Editor for Ecology and Conservation - McGraw Hill Encyclopedia of Science and Technology. Since 1977 - Contract Renewed 1987.  
 Member N.S.F. General Ecology Panel (June 1987 - April 1990).  
 Member - Review Committee for DOE on the Luquillo Experimental Forest Program, San Juan, P.R. 1986-1991.  
 Co-Chairman - Association S.E. Biologists 50th Anniversary Meeting, Athens, GA, April 1987.  
 Chairman - S.E. Chapter of Ecological Society of America, 1986-1988.  
 Member of IUCN Commission on Ecology. 1988-1991.  
 Elected Vice-President of the International Society for Ecological Modeling. 1990-1993.

#### Presentations and/or Workshops (1989-1992)

- Bishop, R.D., W.J. Wiebe and R.G. Wiegert. 1991. Respiration of the tidally-deposited floc/microbe complex from a Georgia saltmarsh. 11th Biennial International Estuarine Research Federation Conference. San Francisco, Ca. 10-14 Nov. 1991.
- Bishop, T.D., R.G. Wiegert and W.J. Wiebe. 1991. Rates of tidal deposition of flocculent material in a Georgia saltmarsh. 11th Biennial International Estuarine Research Federation Conference. San Francisco, Ca. 10-14 Nov. 1991.
- Fitz, H.C. and R.G. Wiegert. 1989. Blue crabs in a Georgia salt marsh I): who's there, where they go and what they eat. 10th Biennial International Estuarine Research Federation Conference; Baltimore, Md.; 8-12 October 1989.
- Hopkinson, C.S. Jr. and R.G. Wiegert. 1990. The effects of system closure on ecosystem dynamics. V International Congress of Ecology. Yohohoma, Japan; 25 August 1990.
- Wiebe, W.J., R.G. Wiegert, T.D. Bishop and J.A. McDaniel. 1989. Material fluxes and characterization of the flocculent layer on the surface of a Georgia saltmarsh. ASLO Winter Meeting. 1989.
- Wiegert, R.G. and C.S. Hopkinson Jr. 1990. Modeling effects of system closure on the dynamics of ecosystem productivity, biomass accumulation and nutrient cycling. V International Congress of Ecology. Yohohoma, Japan; 25 August 1990.
- Wiegert, R.G. 1991. EPA - Environmental Monitoring and Assessment Program (EMAP); Invited discussant on near coastal ecosystems. AIBS-ESA. August, 1991. Utah State University - Logan, Utah.
- Wiegert, R.G. 1991. Invited discussant on National Science Foundation procedural review. AIBS - ESA. August, 1991. Utah State University - Logan, Utah.
- Wiegert, R.G. 1990. EPA - EMAP invited discussant. November, 1990. Washington, D.C.
- Wiegert, R.G. 1989. Modeling mussel production in a Spanish estuary. November. University of Delaware - Lewes, Delaware.
- Wiegert, R.G. 1990. Presented a modeling workshop. University of Delaware - Lewes, Delaware.
- Wiegert, R.G. 1990. Long-term studies of a dragonfly population in a thermal stream. April. University of Illinois - Chicago, Chicago, Illinois.
- Wiegert, R.G. 1990. Trophic levels, turnover rates and model system stability. April 19. University of California - Davis.
- Wiegert, R.G. 1990. Long-term population dynamics of a dragonfly as top predator in a thermal stream. April 20. University of California - Davis.

- Wiegert, R.G. Organized (with Dr. C.S. Hopkins) the symposium: Modeling effects of system closure on the dynamics of ecosystems. V International Congress of Ecology. August, 1990. Yokohoma, Japan.
- Wiegert, R.G. Organized (with Dr. R.L. Wetzel) the symposium: Longterm Ecological Research. Association of Limnology and Oceanography Conference, 1990.
- Ecological Risk Assessment Strategic Planning Workshop. Environmental Protection Agency Risk Assessment Forum. 30 April - 2 May 1991.
- Theoretical Ecology: Progress and Prospects. U.S. Department of Energy - Theoretical Ecology Program Meeting. Gaithersburg, Md. 29 April - 1 May 1991.
- Wiegert, R.G. 1992. Salt-marsh ecosystem modeling:chemical fluxes and animal habitats. Current Approaches for Modeling Estuarine Ecosystem Processes Workshop. Chesapeake Research Consortium. Solomons, Md. May, 1992.
- Wiegert, R.G. 1992. Some theoretical consequences of separating exploitative and interference competitive controls in ecological models. Mathematical/Statistical Ecological Conference. Amicolola Falls Lodge, Dawsonville, Ga. April, 1992.
- Wiegert, R.G. 1992. Recruitment, abundance, and growth of postlarval and juvenile blue crabs in a southeastern coastal estuary. COBIA Southeast U.S. Coastal Workshop. Charleston, S.C. June, 1992.
- Wiegert, R.G. 1992. Modeling the economic tradeoff between culturing mussels vs. oysters in a spanish estuary. I.S.S.S. Boulder, Co. July, 1992.
- Ecological Risk Assessment Strategic Planning Workshop. Environmental Protection Agency Risk Assessment Forum. February, 1992.
- Wiegert, R.G. Presentation of literature review. Environmental Protection Agency-OPPT Modeling Workshop on Population Modeling. Washington, D.C. July, 1992.
- Wiegert, R.G. Urban Wetlands Risk Assessment; Scientific and Risk Assessment Issues. Environmental Protection Agency Ecological Risk Assessment Case Study Workshop. Environmental Research Laboratory. Narragansett, R.I. September, 1992.
- Wiegert, R.G. Environmental Protection Agency Global Change Research Program. All Investment Workshop. February, 1992.
- Designing Tomorrow's Sustainable Environment Today. University System of Georgia Research Symposium. University of Georgia. Athens, Ga. May 1992.
- AIBS Conference. Environmental Protection Agency. Honolulu, Hawaii. August, 1992.

## Publications

### A. Books

1. Ecological Energetics. 1976. Bench Mark Papers in Ecology, Vol. 9, XV: 457 p. Dowden, Hutchinson and Ross; Stroudsburg, Pa.
2. The Ecology of a Salt Marsh. 1981. L. R. Pomeroy and R. G. Wiegert, Eds. Springer-Verlag, New York.



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## B. Other Publications

1. Rufous hummingbird feeding on sap of English Walnut at Sapsucker holes. 1959. *The Auk*, Vol 76:526-527.
2. Respiratory energy loss and activity patterns in the meadow vole, *Microtus pennsylvanicus pennsylvanicus*. 1961. *Ecology*, 42(2): 245-253.
3. A simple apparatus for measuring density of insect population. 1961. *Ann. Ent. Soc. Am.* 54(6):926-927.
4. Nest construction and oxygen consumption of *Condylura*. 1961. *J. Mammal.*, 42(4):528-529.
5. The selection of an optimum quadrat size for sampling the standing crop of grasses and forbs. 1962. *Ecol.*, 43(1):125-129.
- 6.\* Balanced polymorphism in the meadow spittlebug, *Philaenus spumarius*. 1962. *Am. Nat.*, 1006 (891):353-359. With D. F. Owen.
7. A "stem well" method of introducing radioisotopes into plants to study food chains. 1964. *Ecol.*, 45(2):406-410. With R. G. Lindeborg.
8. The ingestion of xylem sap by meadow spittlebugs, *Philaenus spumarius* (L.). 1964. *Am. Mid. Nat.*, 71(2):422-428
9. Population energetics of meadow spittlebugs (*Philaenus spumarius* L.) as affected by migration and habitat. 1964. *Ecol. Mono.*, 34:217-241.
10. Primary production and the disappearance of dead vegetation on an old field in southeastern Michigan. 1964. *Ecol.*, 45(1):49-63. With Francis C. Evans.
- 11.\* Excretion of orally administered zinc-65 by wild small mammals. 1965. *Health Physics*, 11:719-722. With F. B. Golley and R. W. Walter.
12. Energy dynamics of the grasshopper populations in old field and alfalfa field ecosystems. 1965. *Oikos*, 16:161-176.
13. Intraspecific variation in calories/g of meadow spittlebugs (*Philaenus spumarius* L.). 1965. *BioScience*, 15(8):543-545.
14. Distribution and trap response of a small wild population of cotton rats (*Sigmodon h. hispidus*). 1966. *J. Mamm.*, 47(1):118-120.
15. Forb-arthropod food chains in a one-year experimental field. 1967. *Ecol.*, 48(1):76-83. With E. P. Odum and J. H. Schnell.
- 16.\* 32-Phosphorous tracer studies of a horseweed-aphid-ant food chain. 1967. *Am. Midland Nat.*, 77(2):501-509. With A. de la Cruz.
- 17.\* A simple, inexpensive temperature integrator. 1967. *BioScience*, 17(7):481-482. With D. C. Coleman.
- 18.\* Radionuclide measurement of food web diversity in nature. 1969. *Proceedings of Second National Symposium of Radioecology*. Pp. 709- 710. With E. P. Odum.
- 19.\* Accumulation and transfer of 45 Calcium by the biota of a tagged cornfield. 1969. *Proc. of Second National Symposium of Radio-ecology*. Pp. 672-677. With G. B. Rose and C. D. Monk.
20. Investigations of secondary productivity in grasslands. 1967. *Proceedings of Warsaw I.B.P. meeting on Methods of Measuring Secondary Productivity in Grasslands*. Pp. 499-518. With F. C. Evans.
21. Radioecology. 1968. In: *McGraw-Hill Yearbook of Science and Technology, 1968*. Pp. 328-332.

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22. Thermodynamic considerations in animal nutrition. 1968. *Am. Zoologist*, 8:71-81.
23. Agricultural Ecology. 1968. Book Review. *Ecology*, 49(6).
- 24.\* Feeding by *Paracoenia* and *Ephydra* (Diptera: Ephydriidae) on the microorganisms of hot springs. 1969. *Ecology*, 50(2):192-199. With M. L. Brock and T. D. Brock.
- 25.\* Ecological significance of low oxygen consumption and high fat accumulation by *Nasutitermes costalis* (Isoptera: Termitidae). *BioScience*, 20:663-665.
26. Energy transfer in ecological systems. 1970. A.I.B.S. BSCS Pamphlet Series. Rand McNally. Pp. 1-34.
27. Effect of season, species and location on the disappearance rate of leaf litter on a Puerto Rican rain forest. 1970. *A Tropical Rain Forest, A Study of Irradiation and Ecology at El Verde, Puerto Rico*. Howard T. Odum, Editor, Div. of Tech. Inform., USAEC TID 24270 (PRNC-138). Pp. 101-104. With Peter Murphy.
28. Energetics of the nest-building termite, *Nasutitermes costalis* (Holmgren), in a Puerto Rican forest. 1970. In: *A Tropical Rain Forest, A Study of Irradiation and Ecology at El Verde, Puerto Rico*. Howard T. Odum (ed.). Div. of Tech. Infor., USAEC TID 24270 (PRNC-138). Pp. 57-64.
29. Effects of ionizing radiation on leaf fall, decomposition, and litter microarthropods of a Montane rain forest. 1970. In: *A Tropical Rain Forest, A Study of Irradiation and Ecology at El Verde, Puerto Rico*. Howard T. Odum (ed.). Div. of Tech. Infor., USAEC TID 24270 (PRNC-138). Pp. 89-100.
30. Energetics of the litter-soil subsystem. 1970. In: *Proc of the Symp.: Methods for the Study of Soil Ecology*. IBP UNESCO, J. Phillipson, (ed). Pp. 93-98. With D. C. Coleman and E. P. Odum.
31. Radioecology. 1970. *Encyclopedia of Science and Technology*. Third Revised Edition, Vol. 11. McGraw-Hill. Pp. 310-314.
32. Trophic structure, available resources and population density in terrestrial vs. aquatic ecosystems. 1971. *J. Theor. Biol.* 30: 69-81. With D. F. Owen.
33. A minimum program for grassland studies. 1970. *Proc. of First Meeting of the PT Grassland Working Group IBP, Saskatoon, Canada*. In: *Grassland Ecosystems: Reviews of Reviews of Research*. R. T. Coupland and G. M. Van Dyne (ed.). Range Sci. Dept. Sci. Series. #7. Colorado State University, Fort Collins.
- 34.\* Effects of naphthalene application on a coastal plain broomsedge (*Andropogon*) community. 1971. *Pedobiologia* 11:58-65. With James E. Williams.
35. Animal populations in relation to their food resources. Book Review. 1972. *J. Wildlife Manage.* 36(2):676-677.
36. Population dynamics of cotton rats (*Sigmodon hispidus*) and meadow voles (*Microtus pennsylvanicus*) in field enclosures in South Carolina. 1972. *Bull. Ga. Acad. Sci.* 30:103-110.
37. Letter to the Editors. 1971. *Bull. Brit. Ecol. Soc.* II: 4.
38. Litter production and energy accumulation in three plantations of longleaf pine (*Pinus palustris* Mill). 1972. *Ecology* 53(5): 949-953. With Carl Monk.
39. Ecology of Yellowstone thermal effluent systems: net primary production and species diversity of a successional blue-green algal mat. 1972. *Limnology & Oceanogr.* 17(2):215-228. With Peter Fraleigh.
40. Avian versus mammalian predation on a population of cotton rats. 1972. *J. Wildlife Mange.* 36 (4): 1322-1327.

41. Ecology of Yellowstone thermal effluent systems: intersects of blue-green algae, grazing flies (*Paracoenia*, *Ephydriidae* and water mites (*Partnuniella*, *Hydrachnellae*). 1973. *Hydrobiologia* 41(2):251-271. With Roger Mitchell.

42. A general ecological model and its use in simulating algal-fly energetics in a thermal spring community. 1973. In: *Insects: Studies in Population Management*. Geir, Clark, Anderson and Nix (ed.). *Ecol. Soc. Aust. (memoirs 1)*: Canberra. Pp. 85-102.

43. Simulation modeling of the algal-fly components of a thermal ecosystem: effect of spatial heterogeneity, time delays and model condensation. 1975. In: *Systems Analysis and Simulation in Ecology*. B. C. Patten (ed.). Vol. 3. Academic Press, N.Y. Pp. 157-181.

44. Litterbag studies of microarthropod population in three South Carolina old fields. 1974. *Ecology* 55(1):94-102.

45. A general mathematical representation of ecological flux processes: description and use in ecosystem models. 1974. *Proc. 6th Ann. S.E. Systems Symp.* R. Kinney (ed.). TP-2. Baton Rouge, La. 15 pp.

46. A preliminary ecosystem model of coastal Georgia *Spartina* marsh. 1975. In: *Estuarine Research, Vol. 1, Chemistry, Biology and the Estuarine System*. Academic Press, Inc. Pp. 583-601. With R. R. Christian, J. L. Gallagher, J. R. Hall, R. D. H. Jones, and R. L. Wetzel.

47.\* Energetics of a spotted sandpiper feeding on brine fly larvae (*Paracoenia*; Diptera; Ephydriidae) in a thermal spring community. 1973. *The Wilson Bull.* 85(4):473-476. With Wayne J. Kuenzel.

48. Competition: a theory based on realistic, general equations of population growth. 1974. *Science* 185:539-542.

49.\* A model explaining successional change in standing crop of thermal blue-green algae. 1975. *Ecology* 56(3):656-664.

50. Annual production and disappearance of detritus on three South Carolina old fields. 1975. *Ecology* 56(1):129-140. With John T. McGinnis.

51. The effect of numerical integration technique on the simulation of carbon flow in a Georgia salt marsh. 1974. *Proc. Summer Computer Simulation Conf., Houston*. Vol 2:575-577. With R. L. Wetzel.

52. Mathematical representation of ecological interactions. 1975. In: *Ecosystem Analysis and Prediction*. *Proc. SIAM-SIMS Conf., Alts, Utah*. S. A. Levin, (ed.). Philadelphia: Soc. Ind. and Appl. Math Pp 43-53.

53.\* Bacterial types and interactions in a thermal blue-green algae-ephydrid fly ecosystem. 1977. In: *Aquatic Microbial Communities*. Cairns (ed.). Garland Publishing, Inc. Pp. 205-241. With R. W. Gorden.

54. Simulation models of ecosystems. 1975. *Ann. Rev. Ecol. & Syst.* 6:311-338.

55. Population models: experimental tools for analysis of ecosystems. 1979. In: *Analysis of Ecological Systems*. Horn (ed.). Ohio State University Press. Pp. 233-278.

56.\* Do consumers maximize plant fitness? 1976. *Oikos* 27:488-492. With D. Owen.

57.\* Energetics of an insect predator, *Tachyrechus angustipennis* (Diptera). 1977. *Oikos* 28:201-209. With W. J. Kuenzel.

58.\* Functional analysis of a thermal spring ecosystem with an evaluation of the role of consumers. 1976. *Ecology* 57(6):1221-1232. With N. C. Collins and Rodger Mitchell.

59. A model of a thermal spring food chain. 1977. In: *Ecosystem Modeling in Theory and Practice: An Introduction with Case Histories*. C. Hall and J. Day (ed.). J. Wiley and Sons. Pp. 290-315.
- 60.\* Flux of organic matter through a salt marsh. 1977. In: *Estuarine Processes*, Vol. II. Academic Press, Inc. Pp. 270-279. With L. R. Pomeroy, Keith Bancroft, John Breed, R. R. Christian, Dirk Frankenberg, J. R. Hall, L. G. Maurer, W. J. Wiebe and R. L. Wetzel.
61. Ecology of Yellowstone thermal effluents: the blue-green algae-brine fly community. 1977. *Proc. of the First National Conference on Research in the National Parks*. Pp. 27-30.
62. Developing theory at the ecosystem level. 1976. In: *Ecological Theory and Ecosystem Models*. Simon Levin (ed.). Pp. 29-30.
63. Simulation experiments with a 14-compartment model of a *Spartina* saltmarsh. 1979. In: *Marsh Estuarine System Simulation*. R. Dame (ed.). University of South Carolina Press. Pp. 7-39.
64. Ecological processes characteristic of coastal *Spartina* marshes of the Southern USA. 1979. In: *Ecological Processes of Coastal Environments*. Davy and Jefferies (Ed.). Blackwell Scientific Publications. Pp. 467-490.
65. Simulation models of ecosystems. 1977. In: *McGraw-Hill Yearbook of Science and Technology*. McGraw-Hill. Pp. 39-47.
66. Modeling coastal, estuarine, and marsh ecosystems: state-of-the-art. 1979. In: *Contemporary Quantitative Ecology and Related Ecometrics*. Patil and Rosenzweig (ed.). International Co-operative Publishing House. Pp. 319-341.
67. Modeling salt marshes and estuaries: Progress and problems. 1980. In: *Estuarine and Wetland Processes with Emphasis on Modeling*. Hamilton and Macdonald (ed.). Plenum Press. Pp. 527-540.
- 68.\* Response of thermal algal-bacterial mat to grazing by brine flies. 1980. *Microbial Ecology* 6:303-315. With Conrad Wickstrom.
- 69.\* Effect of brine fly grazing on thermal algal-bacterial mats of Yellowstone National Park. 1980. in: *Proceedings of the 2nd Conference on Scientific Research in the National Parks held at San Francisco, California on November 26-30, 1979*. Volume 2. National Park Services, Washington, D.C. Pp. 55-70. With Conrad Wickstrom.
70. Ecological bioenergetics. Book Review. 1979. *BioScience* 29(10):618.
71. Simulation models of ecosystems. 1980. In: *McGraw Hill Encyclopedia of Environmental Science*. McGraw Hill. Pp. 244-250.
- 72.\* Microcosms in ecological modeling. 1980. In: *Microcosms in Ecological Research*. J. P. Giesy (ed.), DOE Symposium Proceedings Augusta, Georgia, November 8-9, 1978 (Avail. NTIS, 1980). With James Hill IV.
- 73.\* Mutualism between grass and grazers: an evolutionary hypothesis. 1981. *Oikos* 36(3):376-378. With D. Owen.
74. Ecology of salt marshes: an introduction. 1981. In: *The Ecology of a Salt Marsh*. Pomeroy and Wiegert (ed.). Springer-Verlag. Pp. 3-19. With L. R. Pomeroy and W. J. Wiebe.
- 75.\* Grazers on *Spartina* and their predators. 1981. In: *The Ecology of a Salt Marsh*. Pomeroy and Wiegert (ed.). Springer-Verlag. Pp.87-112. With W. J. Pfeiffer.
76. A model view of the marsh. 1981. In: *The Ecology of a Salt Marsh*. Pomeroy and Wiegert (ed.). Springer Verlag. Pp. 183-218. With R. R. Christian and R. L. Wetzel.
77. The salt-marsh ecosystem: a synthesis. 1981 In: *The Ecology of a Salt Marsh*. Pomeroy and Wiegert (ed.) Springer-Verlag. Pp.219-230. With L. R. Pomeroy.

- 78.\* Grasses vs. grazers: is there a mutualism? 1981. *Oikos* 38:258-259. With D. Owen.
- 79.\* Beating the walnut tree: more on grass/grazer mutualism. 1982. *Oikos* 39(1):115-116. With D. Owen.
- 80.\* Relation of soil water movement and sulfide concentration to *Spartina alterniflora* production in a Georgia salt marsh. 1982. *Science* 218(4567):61-63. With G.M. King, M.J. Klug and A.G. Chalmers.
- 81.\* Coprophagous nutrition in a population of *Paracoenia bisetosa* (Ephydriidae) from Yellowstone National Park, USA. 1982. *Oikos* 39:251-255. With C.E. Petersen.
82. Energy transfer in insects. 1983. *Ann. Rev. Entomol.* 28:455-86. With C.E. Petersen.
83. Population dynamics. Book Review. 1982. *Behavioral Science* 27 (4): 403-405.
- 84.\* The influence of water motion on the distribution and transport of materials in a salt marsh estuary. 1983. *Limnol. Oceanogr.*, 28 (2):201-214. With J. Imberger, T. Berman, R.R. Christian, E.B. Sherr, D.E. Whitney, L.R. Pomeroy and W.J. Wiebe.
- 85.\* On the role of chance in biology: the stochastic-deterministic continuum. 1983. *J. Theor. Biol.*, 102: 464-467. With J.W. Glasser.
86. Productivity gradients in salt marshes: the response of *Spartina alterniflora* to experimentally manipulated soil water movement. 1983. *Oikos* 41: 1-6. With A.G. Chalmers and P.F. Randerson.
87. Optimal exploitation, by mussel rafts, of the Ria de Arosa, Spain: predictions of a first-generation model. 1983. In: *Marine Ecosystem Modeling*. Kenneth W. Turgeon (ed.), Proceedings from a workshop held April 6-8, 1982, Frederick, Md. U.S. Department of Commerce, National Oceanic and Atmospheric Administration. Pp. 159-171. With Ernesto Penas-Lado.
- 88.\* Darwin's "abominable mystery" and the need for speculation in evolutionary ecology. 1983. *Oikos* 41(1):154-155. With D. Owen.
- 89.\* Ecosystem simulation models: Tools for the investigation and analysis of nitrogen dynamics in coastal and marine ecosystems. 1983. In: *Nitrogen in the Marine Environment*. E.J. Carpenter and D.G. Capone (eds.) Academic Press, New York. With R.L. Wetzel.
90. Indirect causality in ecosystems. 1984. *Am. Nat.*, 124:293-298. With Jan Kozlowski.
91. Book review of *Systems Ecology: An Introduction* by H.T. Odum. 1984. *Nature* 310:706.
- 92.\* Litter decomposition and nutrient enrichment. 1984. In: *The Mangrove Ecosystem Research Methods*. Samuel C. Snedaker and Jane G. Snedaker (eds.). UNESCO, Paris With Jack W. Fell and I.M. Master.
- 93.\* Simulation of simple food chains. 1983. In: *Analysis of Ecological Systems: State of the Art in Ecological Modelling*. Lavenroth, W.K., G.V. Skogerboe and M. Flug. (eds.) Elsevier Publishing Co. With E.T. Elliot and H.W. Hunt.
- 94.\* Aphids and plant fitness: 1984. 1984. *Oikos* 43:3. With Denis Owen.
95. A southward movement of the painted lady butterfly in Wyoming. 1985. *SW Naturalist* 30(1):158-159. With Denis Owen.
96. Ecosystem Structural and Functional Analysis. 1985. In: *The Suitability and Applicability of Risk Assessment Methods for Environmental Applications of Biotechnology*. In: *Biotechnology Risk Assessment*. Covello, V.T. and J.R. Fiksel, (eds.) Pergamon Press p. 129-143.

- 97.\* Carbon balance in a salt marsh: Interactions of diffusive export, tidal deposition and rainfall-caused erosion. 1985. *Estuarine Coastal Shelf Science*. 21:757-771. (with A.G. Chalmers and P.L. Wolf).
- 98.\* Optimal allocation of energy to growth and reproduction. 1986. *Theoretical Population Biology*, 29:16-37. With Jan Kozlowski.
99. Modeling spatial and temporal variability in a salt marsh: sensitivity to rates of primary production, tidal migration and microbial degradation. 1986. In: *Estuarine Variability*. D.A. Wolfe (ed.). Academic Press, Inc. Pp. 405-426.
100. Past, present and future of ecological energetics. 1988. In: *Concepts of Ecosystems Ecology: A Comparative View*. L.R. Pomeroy and J.J. Alberts (eds.) Springer-Verlag, New York. Pp. 29-55.
- 101.\* Leaf-eating as mutualism. 1987. In: *Insect Outbreaks*. P. Barbosa and J. Schultz (eds.) Academic Press, Inc., New York. Pp. 81-95.
102. Salt marshes of Florida. 1990. In: *Ecosystems of Florida*. R. Meyers and J. Ewel (eds.) Univ. of Central Florida Press. Pp. 481-516. With Clay Montague.
- 103.\* Documenting completeness, species-area relations and the underlying species-abundance distribution of a regional flora. 1989. *Ecology* 70(1):16-22. With Ronald L. Miller.
- 104.\* Optimal age and size at maturity in annuals and perennials with determinate growth. 1987. *Evolutionary Ecology* 1:231-244. With Jan Kozlowski.
105. Holism and reductionism in ecology: Hypotheses, scale and systems models. 1988. *Oikos* 53(2):267-269.
106. Environmental biotechnology. 1989. In: *McGraw-Hill Yearbook of Science and Technology: 1989*. McGraw-Hill Book Company. New York.
107. Intertidal marshes of the SE: A community profile. US Fish & Wildlife Service. 1990. With B. Freeman.
108. Ecosystem model selection criteria. Sept., 1987. *Ecological Risk Assessment Report*. U.S. E.P.A. With T. Hallam, R. Park, and H. Shugart.
109. Future Risk: Research Strategies for the 1990's. The report of The Research Strategies Committee. Sept., 1988. Science Advisory Board. U.S. E.P.A. SAB-EC-88-040.
- 110.\* Tagging juvenile blue crabs, *Callinectes sapidus*, with microwire tags: retention, survival and growth through multiple molts. 1991. *Jour. of Crustacean Bio.* 11(2): 229-235. With H.C. Fitz.
- 111.\* Utilization of the intertidal zone of a salt marsh by the blue crab, *Callinectes sapidus*: density, return frequency and feeding habits. 1991. *Marine Ecol. Prog. Ser.* 76:249-260. With H.C. Fitz.
112. Book Review of: *Microbial Mediation of Plant-Herbivore Interactions*. *ASB Bull.* 39(1):25-26.
- 113.\* Local population dynamics of estuarine blue crabs: abundance, recruitment and loss. *Marine Ecol. Prog. Ser.* In Press. With H.C. Fitz.
114. Multicompartmental Models. Chapter 9 In: *Biological Data Analysis: A Practical Approach*. J.C. Fry (ed.), Oxford Univ. Press. In Press.
115. *Ecological Modeling*. In: *Encyclopedia of Science and Technology*. 7th Edition. McGraw Hill Book Co., New York.
116. Book Review of: *Food and Natural Resources*. D. Pimentel and C.W. Hall (eds.), Academic Press. 1991. *Quarterly Review of Biology*.

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117. Section introduction for: Barrier Islands and Estuaries. *In: Georgia, Images of Wildness.*  
Westcliffe Publishers, Englewood, Ca.

\*Not senior author on these publications.



INTERVIEWEE BACKGROUND INFORMATION

Name: Richard G. Wiegert M/F Male  
 Address: Institute of Ecology BioScience Office UGA Athens GA 30602-  
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 Approximate age or date of birth: 9/9/32  
 Mother's Name: Helen Bremfordder  
 Father's Name: Arthur Wiegert  
 Places lived and when: Since 1966 in Athens, GA.  
1962-1966 faculty at Savannah River Ecology Lab, Aiken, SC.  
 Education: H.S. Michigan Biology + Math at Adrian College Army 5456  
 Religion: none Mich MS, state  
 Business, political and social memberships (past and present) no Business,  
political, or social; Ecological Society of America British Ecological Society, U. of Ecology  
 Present occupation: Professor of Ecology and Marine Science at UGA Mich  
 Former occupations: Summer Visiting Prof. at Mich. State, Visiting Prof Ph.D.  
 Special Skills: Wood working and metal working, fishing at Mich  
 Major Accomplishments: Development of the Construction of Ecological models (General and Predictive) and Ecological Energetics  
 National Events in which interviewee has participated: keynote Address at International Society of Ecological Modelling, various workshops, Environ, water Protection Agency  
 Local Events in which interviewee has participated: Protest against Vietnam War in 1970 Several Earth Day Lectures  
 National born U.S. citizen?  Yes  No  
 Naturalized Citizen: Yes/No Date: \_\_\_\_\_  
 Country from which he/she emigrated: \_\_\_\_\_  
 Documents, photographs, and artifacts which are in the possession of the interviewee: \_\_\_\_\_

Individuals recommended by the interviewee who might be candidates for an oral history interview: Frank Golley, Robert Platt, Dac Crossley, Robert Wetzel  
 Additional information: Bernie Patton