

Vita
William M. Lewis, Jr.

Personal:

Birth: Lexington, Kentucky; May 31, 1945 (U.S. Citizen)

Education:

Bachelor of Science with Honors in Zoology
University of North Carolina at Chapel Hill, 1967
Doctor of Philosophy, Zoology
Indiana University at Bloomington, 1973

Honors:

Phi Beta Kappa (UNC)
Phi Eta Sigma (UNC)
Delta Phi Alpha (Germanics, UNC)
Hamilton Award (Soc. Sci. and Humanities, UNC)
Senior Honors (UNC)
Woodrow Wilson Fellow (IU, 1967-68)
University Fellow (CU, 1980-81)
Guggenheim Fellow (1980-81)
Fellow, Cooperative Institute for Research in Environmental Sciences
(1988-present)
Sustained Achievement Award, Renewable Natural Resources Foundation,
Washington, DC (1996)
Naumann-Thienemann Medal, International Society for Theoretical and Applied
Limnology (1998)
Certificate of Appreciation for Outstanding Service, National Research Council, Water
Science and Technology Board (1999)
Lifetime National Associate, U.S. National Academy of Sciences, Washington, DC (2002)
NAS Sackler Symposium Speaker (2004)
Certificate of Appreciation for Outstanding Service, Board on Environmental Science and
Technology, The National Academies (2004)

Employment:

Instructor, Indiana University (Summer, 1970)
Research Associate, University of Georgia, Savannah River Ecology
Laboratory (1972-1974)
Adjunct Assistant Professor of Zoology, University of Georgia,
Savannah River Ecology Laboratory (1974)
Assistant Professor of Biology, University of Colorado (1974-1978)
Associate Professor of Biology, University of Colorado (1978-1982)
Professor of Biology, University of Colorado (1982-present)
Director, University of Colorado Center for Limnology (1986-present)
Chair, Department of Environmental, Population, and Organismic
Biology (1990-1995)

Associate Director, University of Colorado Cooperative Institute for Research in
Environmental Sciences (2005-present)

Professional Affiliations:

International Society for Theoretical and Applied Limnology
Ecological Society of America
American Society of Limnology and Oceanography
American Association for the Advancement of Science
North American Benthological Society

Professional Service (Selected):

National Academy/National Research Council, Committee on Priorities in Tropical
Research (1977-1979)
National Science Foundation, Advisory Panel for Ecological Sciences (1979-1981)
Board of Directors, American Society of Limnology and Oceanography (1981-1983)
Public Policy Committee, Ecological Society of America (1982-1983)
National Science Foundation, Ecology Advisory Panel (1983)
National Academy/National Research Council, Committee on Conservation of Biological
Diversity in Developing Countries (1985)
State of Colorado, Governor's Acid Deposition Task Force (1985-1986)
National Academy/National Research Council, Committee on Glen Canyon
Environmental Studies (1986-1989)
National Academy/National Research Council, Glen Canyon Environmental Studies
Oversight Committee (1988-1990)
National Academy/National Research Council, Committee on Irrigation-induced Water
Quality Problems (1988-1990)
Board of Directors, Organization for Tropical Studies (1987-1990)
Organizing Committee, American Society of Limnology and Oceanography (1988)
State of Colorado, Governor's Colorado Environment 2000 Task Force (1988-1989)
Board of Directors, American Society of Limnology and Oceanography (1990-1993)
Challenges Committee (Chair), American Society of Limnology and Oceanography
(1991-1995)
Editorial Board, Biotropica (1992-1995)
Board of Directors, Rocky Mountain Hydrologic Research Center (1992-present)
National Academy/National Research Council, Committee to Review the Glen Canyon
Environmental Studies (Chair; 1991-1995)
National Academy/National Research Council, Wetlands Committee (Chair, 1993-1995)
National Academy/National Research Council, Water Science and Technology Board
(1993-1999)
National Academy/National Research Council, Ecosystem Panel (1994-1996)
U.S. Representative, International Society for Limnology (2004-2007)
International Scope Nitrogen Project, Working Group I (1998-2000)
President, American Society of Limnology and Oceanography (2000-2002)
Board of Directors, Council of Aquatic Sciences (2000-2002)
Advisory Panel, Max Planck Institute for Limnology (1999-present)
Advisory Panel, Swiss Federal Institute for Aquatic Science and Technology (2000-

Present; Chair 2005)
President, Rocky Mountain Hydrologic Research Center (2000-present)
Chair, National Academy/National Research Council, Committee on Endangered and
Threatened Fishes in the Klamath River Basin (2001-2003)
Editorial Board, *Limnology and Oceanography Methods* (2003-present)
General Secretary-Treasurer, International Society of Limnology (2005-present; interim)
Associate Editor, *Encyclopedia of Inland Waters* (2005-present)
Member, NRC/NAS Board on Environmental Sciences and Technology, Washington, DC
(2006-present)

Service to the University (Selected):

Ramaley Building Committee (Chair) (1976-1986)
Committee on University Scholarly Publications (1979)
Faculty Council (1981-1983)
University Committee on Privilege and Tenure (1981-1983)
Vice Chancellor's Advisory Committee (1983-1986, 1988-1990)
Internal Review Committee for University Museum (Chair) (1984-1985)
Science and Technology Center Proposal Development Committee (1987-1988)
Dean's Advisory Committee (1988-1990)
Chancellor Search Committee (1988-1989)
President's Committee on Environmental Studies and Global Change (Chair) (1990-1992)
Advisory Board, Natural Resources Law Center, CU Law School (1992-1995)
Co-chair, Council of Chairs, College of Arts and Sciences (1991-1992)
Chair, Council of Chairs, College of Arts and Sciences (1992-1995)
Member, Environmental Sciences Advisory Board (1997-2000)
Acting or Interim Director, Cooperative Institute for Research in Environmental Sciences
(intermittent, 2003-present)

Member, Quigg Newton Chair Selection Committee, Office of the Vice Chancellor for
Research (2006-present)

Publications:

Lewis, W.M. Jr. 1970. **Morphological adaptations of cyprinodontoids for inhabiting oxygen deficient waters.** *Copeia* 1970: 319-326.

Lewis, W.M. Jr. 1973. **The thermal regime of Lake Lanao (Philippines) and its theoretical implications for tropical lakes.** *Limnology and Oceanography* 18: 200-217.

Lewis, W.M. Jr. 1973. **A limnological survey of Lake Mainit, Philippines.** *Internationale Revue der gesamten Hydrobiologie* 58: 801-818.

- Lewis, W.M. Jr. 1974. **Evaluation of heat distribution in a South Carolina reservoir receiving heated water.** Pp. 1-27 *In:* J.W. Gibbons and R.R. Sharitz (eds.). *Thermal Ecology*. TIS, Washington, D.C.
- Lewis, W.M. Jr. 1974. **Running waters of the tropics.** Pp. 90-92 *In:* E. Farnworth and F.B. Golley (eds.) *Fragile Ecosystems*. Springer-Verlag.
- Lewis, W.M. Jr. 1974. **Primary production in the plankton community of a tropical lake.** *Ecological Monographs* 44: 377-409.
- Lewis, W.M. Jr. 1974. **Effects of fire on nutrient movement in a South Carolina pine forest.** *Ecology* 55: 1120-1127.
- Lewis, W.M. Jr. 1974. **An analysis of surface slicks in a reservoir receiving heated effluent.** *Archiv fur Hydrobiologie* 74: 304-315.
- Lewis, W.M. Jr. and J.A. Tyburczy. 1974. **Amounts and spectral properties of dissolved organic compounds from some freshwaters of the southeastern U.S.** *Archiv fur Hydrobiologie* 74: 8-17.
- Lewis, W.M. Jr. 1975. **Distribution and feeding habits of a tropical *Chaoborus* population.** *Verh. Int. Ver. Limnol.* 19: 3106-3119.
- Lewis, W.M. Jr. 1975. **A theoretical comparison of the attenuation of light energy and quanta in waters of divergent optical properties.** *Archiv fur Hydrobiologie* 75:235-296.
- Lewis, W.M. Jr. 1975. **Effects of forest fires on atmospheric loads of soluble nutrients.** Pp. 833-845 *In:* F.G. Howell, J.B. Gentry and M.H. Smith (eds.). *Mineral Cycling in Southeastern Ecosystems*. Tech. Info. Center, USERDA, Washington, D.C.
- Lewis, W.M. Jr. 1975. **Observations on the superficial sediment temperatures of some lakes in the southeastern United States.** *Freshwater Biology* 6: 49-57.
- Lewis, W.M. Jr. and F.H. Weibezahn. 1976. **Chemistry, energy flow, and community structure in some Venezuelan fresh waters.** *Archiv fur Hydrobiologie Supplement* 50:145-207.
- Lewis, W.M. Jr. and D. Canfield. 1977. **Dissolved organic carbon in some dark Venezuelan waters and a revised equation for spectrophotometric determination of dissolved organic carbon.** *Archiv fur Hydrobiologie* 79: 441-45.
- Lewis, W.M. Jr. 1976. **Surface/volume ratio: Implications for phytoplankton morphology.** *Science* 192: 885-887.

- Lewis, W.M. Jr. 1977. **Net growth rate through time as an indicator of ecological similarity among phytoplankton species.** *Ecology* 58:149-157.
- Lewis, W.M. Jr. 1978. **Analysis of succession in a tropical phytoplankton community and a new measure of succession rate.** *The American Naturalist* 112(984): 401-414.
- Lewis, W.M. Jr. 1978. **A compositional, phytogeographical and elementary structural analysis of the phytoplankton in a tropical lake.** *Journal of Ecology* 66: 213-226.
- Lewis, W.M. Jr. 1977. **Feeding selectivity of a tropical Chaoborus population.** *Freshwater Biology* 7: 311-325.
- Lewis, W.M. Jr. 1977. **Comments on zooplankton grazing in Lake Erken.** *Limnology and Oceanography* 22: 966-967.
- Lewis, W.M. Jr. 1977. **Ecological significance of the shapes of abundance-frequency distributions for coexisting phytoplankton species.** *Ecology* 58: 850-859.
- Lewis, W.M. Jr. and M.C. Grant. 1978. **Sampling and chemical interpretation of precipitation for mass balance studies.** *Water Resources Research* 14:1098-1104.
- Lewis, W.M. Jr. and J.F. Saunders, III. 1979. **Two new integrating samplers for zooplankton, phytoplankton, and water chemistry.** *Archiv fur Hydrobiologie* 75: 244-249.
- Lewis, W.M. Jr. 1978. **Comparison of temporal and spatial variation in the zooplankton of a lake by means of variance components.** *Ecology* 59: 666-671.
- Lewis, W.M. Jr. 1980. **Evidence for stable zooplankton community structure gradients maintained by predation.** Pp. 625-634 *In: American Society of Limnology and Oceanography, Special Symposium #3. "The Evolution and Ecology of Zooplankton Communities,"* C. Kerfoot (ed.), The University Press of New England, Hanover.
- Lewis, W.M. Jr. 1979. **Spatial distribution of the phytoplankton in a tropical lake (Lake Lanao, Philippines).** *Internationale Revue der gesamten Hydrobiologie* 63: 619-635.
- Lewis, W.M. Jr. 1978. **Dynamics and succession of the phytoplankton in a tropical lake: Lake Lanao, Philippines.** *Journal of Ecology* 66: 849-880.
- Lewis, W.M. Jr. 1979. **Zooplankton Community Analysis.** Springer-Verlag, New York. 163 p.
- Infante, O., A. Infante, M. Marquez, W.M. Lewis, Jr., and F.H. Weibezahn. 1979. **Conditions leading to mass mortality of fish and zooplankton in Lake Valencia, Venezuela.** *Acta Cientifica* 30: 67-73.

- Lewis, W.M. Jr. and M.C. Grant. 1980. **Acid precipitation in the Western United States.** *Science* 206: 176-177.
- Epp, R.W. and W.M. Lewis, Jr. 1979. **Metabolic responses to temperature change in the tropical freshwater copepod (*Mesocyclops brasiliensis*) and their adaptive significance.** *Oecologia* 43: 123-128.
- Epp, R.W. and W.M. Lewis, Jr. 1979. **Sexual dimorphism in *Brachionus plicatilis* (Rotifera): evolutionary and adaptive significance.** *Evolution* 33: 919-928.
- Grant, M.C. and W.M. Lewis, Jr. 1982. **Chemical loading rates from the precipitation in the Colorado Rockies.** *Tellus* 34: 74-88.
- Lewis, W.M. Jr. and M.C. Grant. 1980. **Changes in the output of ions from a watershed as a result of the acidification of precipitation.** *Ecology* 60: 1093-1097.
- Lewis, W.M. Jr. and M.C. Grant. 1980. **Relationships between stream discharge and yield of dissolved substances from a mountain watershed.** *Soil Science* 128: 353-363.
- Lewis, W.M. Jr. and M.C. Grant. 1980. **Relationship between snow cover and winter losses of dissolved substances from a mountain watershed.** *Arctic and Alpine Research* 12: 11-17.
- Lewis, W.M. Jr. and F.H. Weibezahn. 1982. **Acid rain and major seasonal variation of hydrogen ion loading in a tropical watershed.** *Acta Cientifica* 32: 236-238.
- Lewis, W.M. Jr. 1981. **Precipitation chemistry and nutrient loading by precipitation in a tropical watershed.** *Water Resources Research* 17: 169-181.
- Lewis, W.M. Jr. and F.H. Weibezahn. 1981. **Chemistry of a 7.5-meter sediment core from Lake Valencia, Venezuela.** *Limnology and Oceanography* 26: 907-924.
- Lewis, W.M. Jr. and W. Riehl. 1982. **Phytoplankton composition and morphology in Lake Valencia, Venezuela.** *Internationale Revue der gesamten Hydrobiologie* 67: 297-322.
- Epp, R.W. and W.M. Lewis, Jr. 1980. **The nature and ecological significance of metabolic changes during the life history of copepods.** *Ecology* 61: 259-264.
- Epp, R.W. and W.M. Lewis, Jr. 1980. **Metabolic uniformity over the environmental temperature range in *Brachionus plicatilis* (Rotifera).** P. 145-147 In: H.J. Dumont and J. Green, (eds.). Proceedings of the Second International Rotifer Symposium. Dr. W. Junk, The Hague.
- Lewis, W.M. Jr. and F.H. Weibezahn. 1981. **The chemistry and phytoplankton of the Orinoco and Caroni rivers, Venezuela.** *Archiv fur Hydrobiologie* 91: 521-528.
- Lewis, W.M. Jr. and M.C. Grant. 1981. **Effect of the May-June Mount St. Helens eruptions on precipitation chemistry in central Colorado.** *Atmospheric Environment* 15: 1539-1542.

- Lewis, W.M. Jr. 1982. **Changes in pH and buffering capacity of lakes in the Colorado Rockies.** *Limnology and Oceanography* 27: 167-172.
- Lewis, W.M. Jr. 1983. **Temperature, heat, and mixing in Lake Valencia, Venezuela.** *Limnology and Oceanography* 28: 273-286.
- Lewis, W.M. Jr. and M.C. Grant. 1980. **Effect of urban sources on acid precipitation in the western United States.** *Science* 210: 1043.
- Epp, R.W. and W.M. Lewis, Jr. 1981. **Photosynthesis in copepods.** *Science* 214: 1349-1350.
- Lewis, W.M. Jr. 1982. **Vertical eddy diffusivities in a large tropical lake.** *Limnology and Oceanography* 27: 161-163.
- Bradbury, J.P., B. Leyden, M. Salgado-Labouriau, W.M. Lewis, Jr., C. Schubert, M.W. Binford, D.G. Frey, and D.R. Whitehead. 1981. **Late quaternary environmental history of Lake Valencia, Venezuela.** *Science* 214: 1299-1305.
- Lewis, W.M. Jr. 1983. **Interception of atmospheric fixed nitrogen as an adaptive advantage of scum formation in blue-green algae.** *Journal of Phycology* 19: 534-536.
- Lewis, W.M. Jr. 1983. **Water budget of Lake Valencia, Venezuela.** *Acta Cientifica* 34: 248-251.
- Lewis, W.M. Jr. and F.H. Weibezahn. 1983. **Phosphorus and nitrogen loading of Lake Valencia.** *Acta Cientifica* 34: 345-349.
- Epp, R.W. and W.M. Lewis, Jr. 1984. **Cost and speed of locomotion for rotifers.** *Oecologia* 61: 289-292.
- Lewis, W.M. Jr. 1983. **Interruption of synthesis as a cost of sex in small organisms.** *The American Naturalist* 121: 825-833.
- Lewis, W.M. Jr. 1983. **Collection of airborne materials by a water surface.** *Limnology and Oceanography* 28: 1242-1246.
- Lewis, W.M. Jr. 1983. **A revised classification of lakes based on mixing.** *Canadian Journal of Fisheries and Aquatic Science* 40: 1779-1787.
- Lewis, W.M. Jr. 1984. **The diatom sex clock and its evolutionary significance.** *The American Naturalist* 123: 73-80.
- Lewis, W.M. Jr. 1984. **A five-year record of the thermal and mixing properties of a tropical lake (Lake Valencia, Venezuela).** *Archiv fur Hydrobiologie* 99: 340-346.

- Unger, P.A. and W.M. Lewis, Jr. 1983. **Selective predation in a population of the planktivorous fish, *Xenomelaniris venezuelae* (Atherinidae).** *Ecology* 64: 1136-1144.
- Cressa, C. and W.M. Lewis, Jr. 1984. **Growth and development patterns in a tropical *Chaoborus* species and their ecological significance.** *Archiv fur Hydrobiologie* 100: 21-28.
- Levine, S.N. and W.M. Lewis, Jr. 1984. **Diel variation of nitrogen fixation in Lake Valencia, Venezuela.** *Limnology and Oceanography* 29: 887-893.
- Lewis, W.M. Jr. and S.N. Levine. 1984. **The light response of nitrogen fixation in Lake Valencia, Venezuela.** *Limnology and Oceanography* 29: 894-900.
- Lewis, W.M. Jr., M.C. Grant, and J.F. Saunders, III. 1984. **Chemical patterns of bulk atmospheric deposition in the State of Colorado.** *Water Resources Research* 20: 1691-1704.
- Lewis, W.M. Jr., J.F. Saunders, III. 1984. **Cross-sectional variation in the chemistry and suspended sediment load of the Orinoco River at Ciudad Bolivar.** *Acta Cientifica* 35: 382-385.
- Lewis, W.M. Jr., J.F. Saunders, III, D.W. Crumpacker, Sr., and C. Brendecke. 1984. **Eutrophication and Land Use: Lake Dillon, Colorado.** Springer-Verlag, New York. 202 p.
- Lewis, W.M. Jr. 1986. **Phytoplankton succession in Lake Valencia, Venezuela.** *Hydrobiologia* 138: 189-203.
- Unger, P.A., W.M. Lewis, Jr., and D.H. McClearn. 1984. **Nonvisual feeding in a visual planktivore, *Xenomelaniris venezuelae*.** *Oecologia* 64: 280-283.
- Lewis, W.M. Jr., M.C. Grant, and S.K. Hamilton. 1985. **Evidence that filterable phosphorus is a significant atmospheric link in the phosphorus cycle.** *Oikos* 45: 428-432.
- Lewis, W.M. Jr. 1985. **Nutrient scarcity as an evolutionary cause of haploidy.** *The American Naturalist* 125: 692-701.
- Lewis, W.M. Jr. 1985. **Protozoan abundances in the plankton of two tropical lakes.** *Archiv fur Hydrobiologie* 104: 337-343.
- Levine, S.N. and W.M. Lewis, Jr. 1985. **The horizontal heterogeneity of nitrogen fixation in Lake Valencia, Venezuela.** *Limnology and Oceanography* 30: 1240-1245.
- Lewis, W.M. Jr., T. Frost, and D. Morris. 1986. **Studies of planktonic bacteria in Lake Valencia, Venezuela.** *Archiv fur Hydrobiologie* 106: 289-305.
- Lewis, W.M. Jr. 1986. **Evolutionary interpretations of allelochemical interactions in phytoplankton algae.** *The American Naturalist* 127: 184-194.

- Levine, S.N. and W.M. Lewis, Jr. 1986. **A numerical model of nitrogen fixation and its application to Lake Valencia, Venezuela.** *Freshwater Biology* 17: 265-274.
- Lewis, W.M. Jr., J.F. Saunders, III, F.H. Weibezahn, and S.N. Levine. 1986. **Organic carbon in the Caura River, Venezuela.** *Limnology and Oceanography* 31: 653-656.
- Lewis, W.M. Jr. and D.P. Morris. 1986. **Toxicity of nitrite to fish: a review.** *Transactions of the American Fisheries Society* 115: 183-195.
- Lewis, W.M. Jr. and J.F. Saunders, III. 1985. **Ammonia dynamics in two Colorado streams.** *Water Research* (Submitted).
- Saunders, J.F. III and W.M. Lewis, Jr. 1986. **A perspective on the use of cohort analysis to obtain demographic data for copepods.** *Limnology and Oceanography* 32: 511-513.
- Cressa, C. and W.M. Lewis, Jr. 1986. **Ecological energetics of *Chaoborus* in a tropical lake.** *Oecologia* 70: 326-331.
- Lundberg, J.G., W.M. Lewis, Jr., J.F. Saunders, III, and F. Mago-Leccia. 1987. **A major food web component in the Orinoco River channel: Evidence from planktivorous electric fishes.** *Science* 237: 81-83.
- Lewis, W.M. Jr., S.K. Hamilton, S. L. Jones, and D.D. Runnels. 1987. **Major element chemistry, weathering and element yields for the Caura River drainage, Venezuela.** *Biogeochemistry* 4: 159-181.
- Saunders, J.F. III and W.M. Lewis, Jr. 1988. **Zooplankton abundance in the Caura River, Venezuela.** *Biotropica* 20: 206-214.
- Hamilton, S.K. and W.M. Lewis, Jr. 1987. **Causes of seasonality in the chemistry of a lake on the Orinoco River floodplain, Venezuela.** *Limnology and Oceanography* 32: 1277-1290.
- Saunders, J.F. III and W.M. Lewis, Jr. 1988. **Dynamics and control mechanisms in a tropical zooplankton community (Lake Valencia, Venezuela).** *Ecological Monographs* 48: 337-353.
- Saunders, J.F. III and W.M. Lewis, Jr. 1988. **Zooplankton abundance and transport in a tropical white-water river.** *Hydrobiologia* 162: 147-155.
- Twombly, S. and W.M. Lewis, Jr. 1987. **Zooplankton abundance and species composition in Laguna la Orsinera, a Venezuelan floodplain lake.** *Archiv fur Hydrobiologie Supplement* 79: 87-107.
- Lewis, W.M. Jr. 1988. **Primary production in the Orinoco River.** *Ecology* 69: 679-692.

- Lewis, W. M. Jr. 1987. **The cost of sex.** P. 33-57 *In:* S. Stearns (ed.) *The Evolution of Sex and its Consequences.* Birkhauser Verlag.
- Morris, D.P. and W.M. Lewis, Jr. 1988. **Phytoplankton nutrient limitation in Colorado mountain lakes.** *Freshwater Biology* 20: 315-327.
- Lewis, W.M. Jr., J.F. Saunders, III and R. Dufford. 1990. **Suspended organisms and biological carbon flux along the lower Orinoco River.** Pp. 269-300 *In:* F. Weibezahn, H. Alvarez, and W.M. Lewis, Jr. (eds). *The Orinoco River as an Ecosystem.* Impresos Rubel, Caracas. 430 p.
- Lewis, W.M. Jr. and J.F. Saunders III. 1990. **Chemistry and element transport of the Orinoco main stem and lower tributaries.** Pp. 211-240 *In:* F. Weibezahn, H. Alvarez, and W.M. Lewis, Jr. (eds). *The Orinoco River as an Ecosystem.* Impresos Rubel, Caracas. 430 p.
- Saunders, J.F. III and W.M. Lewis, Jr. 1988. **Transport of phosphorus, nitrogen, and carbon by the Apure River, Venezuela.** *Biogeochemistry* 5: 323-342.
- Mitton, J.B. and W.M. Lewis, Jr. 1989. **Relationships between genetic variability and life-history features of bony fishes.** *Evolution* 47: 1712-1723.
- Mitton, J.B. and W. M. Lewis, Jr. 1992. **Response to Waples's comment on heterozygosity and life-history variation in bony fishes.** *Evolution* 46: 576-577.
- Twombly, S. and W.M. Lewis, Jr. 1989. **Factors regulating cladoceran dynamics in a Venezuelan floodplain lake.** *Journal of Plankton Research* 11: 317-333.
- Lewis, W.M. Jr. 1987. **Tropical limnology.** *Annual Review of Ecology and Systematics* 18: 159-184.
- Saunders, J.F. III and W.M. Lewis, Jr. 1988. **Composition and seasonality of the zooplankton community of Lake Valencia, Venezuela.** *Journal of Plankton Research* 10: 957-985.
- Saunders, J.F. III and W.M. Lewis, Jr. 1989. **Zooplankton abundance in the lower Orinoco River, Venezuela.** *Limnology and Oceanography* 34: 397-409.
- Rodríguez, M.A., S.E. Richardson, and W.M. Lewis, Jr. 1990. **Nocturnal behavior and aspects of the ecology of a driftwood catfish, *Entomocorus gameroi* (Auchenipteridae).** *Biotropica* 22: 435-438.
- Lewis, W.M. Jr. and J.F. Saunders, III. 1989. **Concentration and transport of dissolved and suspended substances in the Orinoco River.** *Biogeochemistry* 7: 203-240.
- Unger, P.A. and W.M. Lewis, Jr. 1990. **Population ecology of the pelagic fish, *Xenomelaniris venezuelae* (Atherinidae), in Lake Valencia.** *Ecology* 72: 440-456.
- Meade, R.H., F.H. Weibezahn, W.M. Lewis, Jr., and D.P. Hernandez. 1990. **Suspended-sediment budget for the Orinoco River.** Pp. 55-80 *In:* F. Weibezahn, H. Alvarez, and

- W.M. Lewis, Jr. (eds.). *The Orinoco River as an Ecosystem*. Impresos Rubel, Caracas. 430 p.
- Lewis, W.M. Jr. 1989. **Further evidence for anomalous size scaling of respiration in phytoplankton.** *Journal of Phycology* 25: 395-397.
- Saunders, J.F. III and W.M. Lewis, Jr. 1989. **Transport of major solutes and the relationship between solute concentrations and discharge in the Apure River, Venezuela.** *Biogeochemistry* 8: 101-113.
- Weibezahn, F., H. Alvarez, and W.M. Lewis, Jr. (eds.). 1990. **The Orinoco River as an Ecosystem.** Impresos Rubel, Caracas. 430 p.
- Lewis, W.M. Jr. 1988. **Uncertainty in pH and temperature corrections for ammonia toxicity.** *Journal of Water Pollution Control Federation* 60: 1922-1929.
- Hamilton, S.K., S.J. Sippel, W.M. Lewis, Jr., and J.F. Saunders, III. 1990. **Zooplankton abundance and evidence for its reduction by macrophyte mats in two Orinoco floodplain lakes.** *Journal of Plankton Research* 12: 345-363.
- Hamilton, S.K. and W.M. Lewis, Jr. 1990. **Physical characteristics of the fringing floodplain of the Orinoco River, Venezuela.** *Interciencia* 15: 491-500.
- Rodríguez, M.A. and W.M. Lewis, Jr. 1990. **Diversity and species composition of fish communities of Orinoco floodplain lakes.** *National Geographic Research* 6: 319-328.
- Lewis, W.M. Jr. 1991. **Comparisons of phytoplankton biomass in temperate and tropical lakes.** *Limnology and Oceanography* 35: 1838-1845.
- Hamilton, S.K. and W.M. Lewis, Jr. 1990. **Basin morphology in relation to chemical and ecological characteristics of lakes on the Orinoco River floodplain, Venezuela.** *Archiv für Hydrobiologie* 119: 393-425.
- Lewis, W.M. Jr., F.H. Weibezahn, J.F. Saunders, III, and S.K. Hamilton. 1990. **The Orinoco River as an ecological system.** *Interciencia* 15: 346-357.
- Lewis, W.M. Jr., S.K. Hamilton, and J.F. Saunders, III. 1995. **Rivers of Northern South America.** Pp. 219-256 *In*: C. Cushings and K. Cummins (eds.) *Ecosystems of the World: Rivers*. Elsevier, NY.
- Hamilton, S.K., J.M. Melack, M.F. Goodchild, and W.M. Lewis, Jr. 1991. **Estimation of the fractal dimension of terrain from lake size distributions.** Pp. 145-163 *In*: P.A. Carling and G.E. Petts (eds.). *Lowland Floodplain Rivers: Geomorphological Perspectives*. Wiley & Sons, Ltd.
- Rodríguez, M.A. and W.M. Lewis, Jr. 1994. **Regulation and stability in of fish assemblages of neotropical floodplain lakes.** *Oecologia* 99: 166-180.

- Hamilton, S.K., W.M. Lewis, Jr., and S. Sippel. 1992. **Energy sources for aquatic animals in the Orinoco River floodplain: Evidence from stable isotopes.** *Oecologia* 89: 324-330.
- Morris, D.P. and W.M. Lewis, Jr. 1992. **Nutrient limitation of bacterioplankton growth in Lake Dillon, Colorado.** *Limnology and Oceanography* 37: 1179-1192.
- Smith, L.K. and W.M. Lewis, Jr. 1992. **Seasonality of methane emissions from five lakes and associated wetlands of the Colorado Rockies.** *Global Biogeochemistry Cycles* 6: 323-358.
- Hamilton, S.K. and W.M. Lewis, Jr. 1992. **Stable carbon and nitrogen isotopes in algae and detritus from the Orinoco River floodplain, Venezuela.** *Geochimica et Cosmochimica Acta* 56: 4237-4246.
- Lewis, W.M. Jr. 1996. **Defining the riparian zone: Lessons from the regulation of wetlands.** Pp. 6-14 *In*: S.B. Laursen (ed.). *At the Water's Edge: The Science of Riparian Forestry.* Proceedings from a conference held in Duluth, MN, June 19-20, 1995. U. of Minnesota Distribution Center, Duluth, MN.
- Lewis, W.M. et al. (9 authors). 1995. **Challenges for limnology in North America: an assessment of the discipline in the 1990's.** *Bulletin of the American Society of Limnology and Oceanography* 4:1-20.
- Friedman, J.M., M.L. Scott, and W.M. Lewis, Jr. 1995. **Restoration of riparian forest using irrigation, artificial disturbance, and natural seedfall.** *Environmental Management* 19: 547-557.
- Lewis, W.M. Jr. 1994. **The ecological sciences and the public domain.** *University of Colorado Law Review* 65: 279-292.
- Lewis, W.M. Jr. 1996. **Tropical lakes: how latitude makes a difference.** Pp. 43-64 *In*: F. Schiemer and K.T. Boland (eds.). *Perspectives in Tropical Limnology.* SPB Academic Publishers, Amsterdam, the Netherlands.
- Lewis, W.M. Jr. and J.F. Saunders, III. 1995. **Improvements in stream ammonia models by simultaneous computation of extremes in flow and water chemistry.** *Environmental Science and Technology* 29: 1796-1801.
- Friedman, J.M., W.R. Osterkamp, and W.M. Lewis, Jr. 1996. **The role of vegetation and bedlevel fluctuations in the process of channel narrowing.** *Geomorphology* 14: 341-351.
- Friedman, J.M., W.R. Osterkamp, and W.M. Lewis, Jr. 1996. **Channel narrowing and vegetation development following a Great Plains flood.** *Ecology* 77: 2167-2181.
- Arenz, R.F. Jr., W.M. Lewis, Jr., and J.F. Saunders, III. 1996. **Determination of chlorophyll and dissolved organic carbon from reflectance data for Colorado reservoirs.** *International Journal of Remote Sensing* 17: 1547-1566.

- Lewis, W.M. Jr. 1995. **Limnology, as seen by limnologists.** *Water Resources Update* 98: 4-8.
- Rodríguez, M.A. and W.M. Lewis, Jr. 1997. **Structure of fish assemblages along environmental gradients in floodplain lakes of the Orinoco River.** *Ecological Monographs* 67: 109-128.
- Smith, L.K., W.M. Lewis, Jr., J.P. Chanton, G. Cronin, and S.K. Hamilton. 2000. **Methane emissions from the Orinoco River floodplain, Venezuela.** *Biogeochemistry* 51: 113-140.
- Lewis, W.M. Jr. et al. (12 authors; National Research Council). 1995. **Wetlands: Characteristics and Boundaries.** National Academy Press, Washington, DC. 306 p.
- Lewis, W.M. Jr. et al (8 authors; National Research Council). 1996. **River Resource Management in the Grand Canyon.** National Academy Press, Washington, DC. 226 p.
- Sjodin, A., W.M. Lewis, Jr., and J.F. Saunders, III. 2001. **Analysis of groundwater exchange for a large plains river in Colorado (USA).** *Hydrological Processes* 15: 609-620.
- Sjodin, A., W.M. Lewis, Jr., and J.F. Saunders, III. 1997. **Denitrification as a component of the nitrogen budget for a large plains river.** *Biogeochemistry* 39: 327-342.
- Vavilova, V.V. and W.M. Lewis, Jr. 1999. **Temporal and altitudinal variations in the attached algae of mountain streams in Colorado.** *Hydrobiologia* 390: 99-106.
- McCutchan, J.H. Jr. and W.M. Lewis, Jr. 2001. **Seasonal variation in stable isotope ratios of stream algae.** *Verh. Internat. Verein. Limnol.* 27: 3304-3307.
- McCutchan, J.H. Jr., W.M. Lewis, Jr., and J.F. Saunders, III. 1998. **Uncertainty in the estimation of stream metabolism from open-channel oxygen concentrations.** *Journal North American Benthological Soc.* 17: 155-164.
- Lewis, W.M. Jr. 1998. **Aquatic environments of the Americas: basis for rational use and management.** *Proceedings of the 4th International Congress on Environmental Issues* 4: 250-257.
- Lewis, W.M. Jr., J.M. Melack, W.H. McDowell, M. McClain, and J.E. Richey. 1999. **Nitrogen yields from undisturbed watersheds in the Americas.** *Biogeochemistry* 46: 149-162.
- Skaggs, R.L., M.L. Aquin, W.M. Lewis, Jr. and J.W. Birks. 1998. **Detection of argon by penning ionization and competitive absorption using a sensitized photoionization detector.** *Analytical Chemistry* 70: 3493-3497.

- Niyogi, D.K., D.M. McKnight, and W.M. Lewis, Jr. 1999. **Influences of water and substrate quality for periphyton in a montane stream affected by acid mine drainage.** *Limnology and Oceanography* 44: 804-809.
- Downing, J.A., M. McClain, R. Twilley, J.M. Melack, J. Elser, N.N. Rabalais, W.M. Lewis, Jr., R.E. Turner, J. Corredor, D. Soto, A. Yanez-Arancibia, R.W. Howarth. 1999. **The impact of accelerating land-use change on the N-cycle of tropical aquatic ecosystems: current conditions and projected changes.** *Biogeochemistry* 47: 109-148.
- McCutchan, J.H. Jr., J.F. Saunders, III, W.M. Lewis, Jr. and Matthew C. Hayden. 2002. **Effects of groundwater flux on open-channel estimates of stream metabolism.** *Limnology and Oceanography* 47: 321-324.
- Lewis, W.M. Jr., S.K. Hamilton, M.A. Lasi, M. Rodriguez, and J.F. Saunders, III. 2000. **Ecological determinism on the Orinoco floodplain.** *Bioscience* 50: 681-692.
- Lewis, W.M. Jr. 2000. **Basis for the protection and management of tropical lakes.** *Lakes and Reservoirs: Research and Management* 5: 35-48.
- McCutchan, J.H. Jr., W.M. Lewis, Jr., and C. Kendall. 2003. **Variation in trophic shift for stable isotope ratios of carbon, sulfur, and nitrogen.** *Oikos* 102: 348-390.
- Lewis, W.M., Jr., S.K. Hamilton, M.A. Lasi, M. Rodriguez, and J.F. Saunders, III. 2001. **A foodweb analysis of the Orinoco floodplain based on production estimates and stable isotope data.** *Journal of the North American Benthological Society* 20: 241-254.
- Niyogi, D.K., W.M. Lewis, Jr., and D.M. McKnight. 2001. **Litter breakdown in mountain streams affected by mine drainage: biotic mediation of abiotic controls.** *Ecological Applications* 11: 506-516.
- Lewis, W.M., Jr. 2002. **Yield of nitrogen from minimally disturbed watersheds of the United States.** *Biogeochemistry* 57/58: 375-385.
- Niyogi, D.K., W.M. Lewis, Jr., and D.M. McKnight. 2002. **Effects of stress from mine drainage on diversity, biomass, and function of primary producers in mountain streams.** *Ecosystems* 5: 554-567.
- Lewis, W. M. Jr. 2001. **Wetlands Explained. Wetland Science, Policy, and Politics in America.** Oxford University Press, New York, NY.
- Niyogi, D.K., D. McKnight, and W.M. Lewis, Jr. 2002. **Effects of mine drainage on breakdown of aspen litter in mountain streams.** *Water, Air, and Soil Pollution: Focus* 2: 329-341.
- Niyogi, D.K., W.M. Lewis, Jr., and D.M. McKnight. 2003. **Direct and indirect effects of mine drainage on bacterial processes in mountain streams.** *Journal of the North American Benthological Society* 22: 276-291.
- Vavilova, V.V., W.M. Lewis, Jr., and R.G. Dufford. 2002. **Coupling of attached and suspended algae in a mountain stream (In review).**

- Saunders, J. F. III and W. M. Lewis, Jr. 2003. **Implications of climate variability for regulatory low flows in the South Platte Basin, Colorado.** *Journal of the American Water Resources Association* 39: 33-45.
- McCutchan, J.H. Jr. and W.M. Lewis, Jr. 2002. **Relative importance of carbon sources for macroinvertebrates in a Rocky Mountain stream.** *Limnology and Oceanography* 47: 742-752.
- Kaushal, S. and W.M. Lewis, Jr. 2003. **Patterns in the chemical fractionation of organic nitrogen in Rocky Mountain streams.** *Ecosystems* 6: 483-492.
- Lewis, W. M. Jr. 2002. **Causes for the high frequency of nitrogen limitation in tropical lakes.** *Verh. Internat. Verein. Limnol.* 28: 210-213.
- McCutchan, J.H. Jr., J.F. Saunders, III, A. Pribyl, and W.M. Lewis, Jr. 2003. **Open-channel estimation of denitrification.** *Limnology and Oceanography Methods* 1: 74-81.
- Niyogi, D.K., D. M. McKnight, and W. M. Lewis, Jr. 2002. **Fungal communities and biomass in mountain streams affected by mine drainage.** *Archiv fur Hydrobiologie* 155: 255-271.
- Lewis, W.M. Jr. 2002. **Biology and water science.** Pp. 127-146. *In:* Carl Kisslinger (ed.) CIRES, 1967-2002: Pioneering a Successful Partnership. Cooperative Institute for Research in Environmental Sciences. University of Colorado. Boulder, CO. 183 pp.
- Pribyl, A.L., J.H. McCutchan, Jr., W.M. Lewis, Jr., and J.F. Saunders, III. 2005. **Whole-system estimation of denitrification in a plains river: a comparison of two methods.** *Biogeochemistry* 73: 439-455.
- Lewis, W.M. Jr. 2003. **Klamath basin fishes: argument is no substitute for evidence.** *Fisheries* 28: 20-25.
- Lewis, W.M. Jr. (ed.) 2003. **Water and Climate in the Western United States.** University Press of Colorado. Boulder, CO. 286 p.
- Ortiz-Zayas, J.R., W.M. Lewis, Jr., J.F. Saunders, III, and F. N. Scatena. 2005. **Metabolism of a tropical rainforest stream.** *Journal of the North American Benthological Society* 24(4): 769-783.

- Lewis, W.M. Jr. 2007. **Analysis of relationships between runoff and mass transport in watersheds** (in progress).
- Saunders, J.F. III, M.S. Murphy, M.P. Clark, and W.M. Lewis, Jr. 2004. **The influence of climate variation on the estimation of low flows used to protect water quality: a nationwide assessment.** *Journal of the American Water Resources Association* 45: 1339-1349.
- Kaushal, S.S. and W.M. Lewis, Jr. 2005. **Fate and transport of organic nitrogen in minimally disturbed montane streams of Colorado, USA.** *Biogeochemistry* 74: 303-321.
- Lewis, W.M. Jr. et al. 2004. NRC. **Endangered and Threatened Fishes in the Klamath River Basin: Causes of Decline and Strategies for Recovery.** National Academies Press, Washington, D.C.
- Kaushal, S.S., W.M. Lewis, Jr., and J.F. McCutchan, Jr. 2006. **Land Use Change and Nitrogen Enrichment of a Rocky Mountain Watershed.** *Ecological Applications* 16(1): 299-312.
- Lewis, W.M. Jr. 2007. **American Wetlands: Protecting and Restoring a Disappearing Resource.** ABC-CLIO (in review).
- Lewis, W.M. Jr., J. S. Saunders, III, and J.H. McCutchan, Jr. 2007. **Application of a nutrient saturation concept to the control of algal growth in lakes.** (in review)
- Lewis, W.M. Jr. 2007. **The Klamath Basin as a Proving Ground for the Endangered Species Act.** In S. Collinge (editor) *Healing the West* (in press).
- Cronin, G., W.M. Lewis, Jr., and M.A. Schiehser. 2006. **The influence of freshwater macrophytes on the littoral ecosystem structure and function of a young Colorado reservoir.** *Aquatic Botany* 85: 37-43.
- Rodríguez, M.A., Lewis, W. M. Jr., Winemiller, K.O. Taphorn, D. 2007. **The freshwater habitats, fishes, and fisheries of the Orinoco River basin.** In: *Aquatic Ecosystem Health and Management Society, Canada.* (in press).
- Lewis, W.M. Jr. 2004. **Evaluating the importance of aquatic ecosystems.** Arthur M. Sackler Colloquia of the National Academy of Sciences. Washington, DC.
<http://progressive.playstream.com/nakfi/progressive/Sackler/Water/lewis/HTML/index.htm>
- Lewis, W.M. Jr. 2007. **Physical and Chemical Features of Tropical Flowing Waters.** In: D. Dudgeon (ed.). *Tropical Stream Ecology.* Elsevier-Academic Press, New York (in press).

Lewis, W.M. Jr. 2005. **Publishing Limnology, Now and Then.** *Limnology and Oceanography Bulletin* 14: 25-30.

Lewis, W.M. Jr. 2005. Water-quality bugs and water-management buffalos.
Colorado Water: 2005 (8): 11-12.

Cronin, G., J.H. McCutchan, Jr., W.M. Lewis, Jr., J. Pitlick. 2007. **Use of Shields Stress to Reconstruct and Forecast Ecological Effects of Water Management and Climate Change on Streams and Rivers.** (in review).

McCutchan, J.H. Jr., and W.M. Lewis, Jr. 2006. **Groundwater flux and open channel estimation of stream metabolism: response to Hall and Tank.** *L&O* 4: 213-215.

Lewis, W.M. Jr. 2007. **Lakes as Ecosystems.** *Encyclopedia of Inland Waters.* (in press).

01/19/07