

Curriculum Vitae - Dr. John F. Schalles

1. Personal

Born: March 14, 1949 in Pittsburgh, PA
Married: August 26, 1972 to Nancy Ruth Edwards

2. Schools Attended and Degrees Earned

Ph.D. in Biology (December, 1979). Emory University, Atlanta, GA
M.S. in Zoology (August, 1973). Miami University, Oxford, OH
B.S. in Biology (June, 1971). Grove City College, Grove City, PA

3. Professional Employment

Professor of Biology, Creighton University, Omaha, NE (member of faculty since 1979)
Chair of the Biology Department (1998-2006)
Director of the Environmental Science Program (1991-1998; 2006-present)
Biology Graduate Program Director (1982-1987; 1990-1992)
Chair of Faculty Search Committees (2001-2002, 1994-95)
Visiting Scientist. University of Georgia Marine Institute, Sapelo Island, GA (one year sabbatical leave appointment, 2006-2007)
Visiting Scientist. Center for Advanced Land Management Information Technologies School of Natural Resource Sciences, University of Nebraska-Lincoln (one year sabbatical leave appointment, 1999-2000)
Biologist. U.S. Department of Agriculture/Agricultural Research Service National Agricultural Water Quality Laboratory, Durant, OK (one year sabbatical Leave appointment, 1992 - 1993; part-time, 1993 - 1995)
Visiting Associate Professor of Civil Engineering - University of Nebraska-Omaha (Spring Semester, 1990)
Instructor of Biology, Department of Biology, Emory University, Atlanta, GA. (1978-1979)

4. Courtesy Appointments

Graduate Faculty. Florida A&M University (2004 - present; participation on graduate thesis committees)
Visiting Professor. South Carolina State University (2004; instructor in Savannah River Environmental Institute wetlands ecology course)
Faculty Fellow. Center for Advanced Land Management Information Technologies, School of Natural Resource Sciences, University of Nebraska-Lincoln (2002 - present)
Visiting Scientist. University of Georgia Marine Institute, Sapelo Island, GA. (1997 - present)
Visiting Professor. Iowa State University - Iowa Lakeside Laboratory (1997-2002)
Research Associate. Institute of Agriculture and Natural Resources, Univ. of Nebraska, Lincoln, NE. (1986 - 1999)
Visiting Faculty Researcher. Savannah River Ecology Laboratory - University of Georgia and U.S. Dept. of Energy, Aiken, SC. (1979 - 1982, 1987 - 1996)

5. Professional Organizations

American Society of Limnology and Oceanography
Alliance for Marine Remote Sensing
Ecological Society of America (Organizer for Sapelo Island Field Trip at 2003 Annual Meetings)
Great Plains Limnologists (Organizer for Annual Meeting - 1991; 2001)
Nebraska Academy of Sciences (Creighton Univ. Representative - Executive Board; 1991-2001)
Sigma Xi - Omaha Club (President of Omaha Chapter, 1990 -1991)
Phi Sigma Biology Honorary
Beta Beta Beta Biology Honorary.

6. Government Panels

National Research Council. Committee on Archiving and Accessing Environmental and Geospatial Data at NOAA. NOAA Data User-Manager Forum. Washington, D.C. (October, 2006)

National Atmospheric and Oceanographic Administration. Working group on standardization of remote sensing data acquisition and research in the National Estuarine Research Reserves (U.S. Department of Commerce), National Coastal Services Center, Charleston Naval Yards, Charleston, SC (August, 2002)

U.S. Man and Biosphere Human Dominated Systems - Ecological Endpoints Workshop. University of Miami and M.A.B. (U.S. Department of State), Miami, FL. May, 1992.

Review Panel - Ecological Risk Assessment Feasibility Study. University of Miami School of Marine and Atmospheric Science and U.S. Environmental Protection Agency. Miami, FL. April/May 1991.

Platte River Joint Management Study. Hydrology Work Group. Bureau of Land Management. Grand Island, NE. 1986-89.

Review Study of Faculty Research Participation at U.S. Dept of Energy Laboratories. Argonne and Oak Ridge National Laboratories. Washington, D.C. November, 1988.

Workshop on Ecological Effects from Environmental Stresses. Comparative Risk Project, Ecological Risk Workgroup. Cornell University and U.S. Environmental Protection Agency. Washington, D.C. November, 1987.

Workshop to Evaluate a Proposed Environmental Scoring Methodology. Cornell University and U.S. Environmental Protection Agency. Gulfbreeze Environmental Laboratory, Pensacola, FL. August, 1985.

7. Grants Received

National Science Foundation. J.F. Schalles. 2006-2007. Hyperspectral Imagery for Salt Marshes Mapping. Subproject of Georgia Coastal Ecosystems LTER Bridge Funding Supplement – Duplin River, Groundwater Input and Plant Production, Award No. NSF 99-82133 [\$25 K]

National Oceanographic and Atmospheric Administration. 2006-2011. J.F. Schalles, co-PI. Remote Sensing and Geospatial Analyses for NOAA's National Estuarine Research Reserves Subproject. NOAA Environmental Science Cooperative Center, Award No. NA060AR4810164 (L.T. Robinson, P.I.). [\$351.2K subcontract to Creighton University; total award (8 participating universities) \$12.5 million]

National Oceanographic and Atmospheric Administration. 2004-2007 (renewal). Remote Sensing and Geospatial Analyses for NOAA's National Estuarine Research Reserves. J.F. Schalles and D.C. Rundquist (co-PI's). Subproject V11. Regional studies in sustainable management of coastal and marine habitats for policy decision making. Award No. NOAA NA17AE1624 (L.T. Robinson, P.I.). [\$143 K over two years to Center For Advanced Land Management Information Technologies, University of Nebraska-Lincoln; and an additional \$80 K to Schalles for participation in other sections of the grant; total award (8 participating universities) \$5 million]

National Aeronautics and Space Administration. 2004. Close Range and Aerial Hyperspectral Remote Sensing of the Central Missouri River: Model Development for Monitoring Riverine Suspended Sediments, Phytoplankton Chlorophyll, and Ice Flows. J. Schalles (PI). [5.5 K, funded student researchers and small equipment purchase]

National Aeronautics and Space Administration. 2003. Characterizing landscapes of the Winnebago Reservation using high spectral resolution images. M.A. Vinton (PI), J.Schalles, and J. Ramage [8K]

National Aeronautics and Space Administration. 2003. Airborne imaging spectrometry and image processing facilities for teaching, research, and outreach. J.F. Schalles (PI), J. Ramage, and M.A. Vinton. Seed grant from the Nebraska Space Grant Office of the NASA National Space Grant College and Fellowship Program [\$9.8K]

National Oceanographic and Atmospheric Administration. 2002-2004. Remote Sensing for NOAA's National Estuarine Research Reserves. 2002-2004. J.F. Schalles (PI) and D.C. Rundquist. Subproject V11. Regional studies in sustainable management of coastal and marine habitats for policy decision making (L.T. Robinson, P.I.). [\$100K over two years; and an additional 20 K to Schalles for participation in other sections of the grant; total award (8 participating universities) is \$7.5 million]

National Aeronautics and Space Administration - EPSCoR Program. "Radiation Transfer and Reflectance in Aquatic Systems" (1996 - 2001). J.F. Schalles and J.S. Peake, co-PI's. Subproject of Nebraska Initiative for Aerospace Research and Industrial Development NASA Grant #NCC5-169. [\$141K]

U.S.-Israel Binational Science Foundation (1995 - 1998). "Remote sensing of water quality" (Gitelson, A., J.F. Schalles, Y.Z. Yacobi, D.C. Rundquist, and F.R. Schiebe, co-PI's). BSF Grant 9400087 [\$120K]

U.S. Environmental Protection Agency (1991 - 1993). Aquatic field spectroscopy joint experiments in remote sensing of water quality (D.R. Rundquist, J.F. Schalles, F.J. DeNoyelles, and J.S. Peake, co-PI's; a subproject of the Non-point Agricultural Water Pollution Regional Study, awarded to University of Kansas, University of Nebraska, and Iowa State University EPA Grant #X007526-01. [\$89K]

National Aeronautics and Space Administration (1992 - present). Applied remote sensing and geographic information systems (D.C. Rundquist, J.S. Peake, and J.F. Schalles, co-investigators; Grant to the University of Nebraska-Omaha, University of Nebraska-Lincoln, Creighton University, and the University of Nebraska Medical Center by the NASA National Space Grant College and Fellowship Program. [\$75K to Creighton]

Oak Ridge Associated Universities Faculty Research Award (ORAU Contract # S-3267). "Chemical limnology of Carolina Bay wetlands located across a topologic/geologic gradient and comparison of groundwater and atmospheric loadings in Carolina bay wetlands in South Carolina". (In collaboration with M.C. Newman and Charles Jagoe, Savannah River Ecology Laboratory; (1987 - 1995); [\$18.3K]

Ginger Limited Partnership. Contract for: "A seasonal water quality study of Ginger Cove Lake, Valley, NE". (J.F. Schalles, 1990 - 1992). [\$2.7K]

University of Nebraska and Kansas Biological Survey Cooperative Agreement. (1989 - 1991). Close range spectroradiometry of water quality in manipulated pond mesocosms (J.F. Schalles, D.R. Rundquist, and J.F. DeNoyelles, co-PIs) [Creighton share \$18K]

Creighton University Faculty Summer Research Fellowship (1983). J.F. Schalles. Consumer Trophic Structure Within Iowa Glacial Prairie Marshes. [\$3.5K]

U.S. Department of Energy - National Environmental Research Park Program. (1979 - 1980, 1982). Summer faculty research grants for comparative studies of Carolina bays wetlands at the Savannah River Plant in South Carolina and preparation of a comprehensive report on these ecosystems. [stipend and travel support, \$9.6K]

Creighton University Faculty Research Grant (1981). J.F. Schalles. Remote Sensing and Physical - Chemical Limnology Studies of Missouri River Floodplain Marshes. [\$0.5K]

8. Courses taught (Creighton University)

Ecology, Environmental Science; Environmental Toxicology; Field Biology in the Southeastern U.S.; Freshwater Ecology Laboratory; Life in Lakes (at Iowa Lakeside Laboratory); Limnology; Marine and Freshwater Ecology; Marine Ecology Laboratory; Physiological Ecology; The Ecology, Geography, and Health of Lakes; Zoology

9. General research interests

Ecological Remote Sensing: Algorithms for Chlorophyll Retrieval in Turbid Coastal and Inland Waters, Phytoplankton Reflectance, Suspended Sediments and Littoral Benthos; Coral Reef and Seagrass Community Assessments; Wetland Vegetation - Community Composition and Biomass; Sensors

Marine Ecology: Estuarine Mixing Gradients and Material Transformations; Salt Marsh Community Structure and Production

General Limnology: Eutrophication in Midwestern Lakes and Reservoirs; Spatial Gradients in Reservoir Systems; Littoral-Pelagic Zone Interactions

Wetland and Lake Littoral Ecosystems: Plant and Invertebrate Production; Trophic Structure and Efficiencies; Biogeochemistry; Regional Comparisons; Hydrologic Control

10. Articles, Chapters, and Reports

Wang, H., C.M. Hladik, H. Wuang, K. Milla, L. Edmiston, M. Harwell, and J. Schalles. Mapping Chlorophyll-*a* and TSS in Apalachicola Bay, Florida Using MODIS Terra 250 m Imagery. (submitted to International Journal of Ecology & Development)

Gitelson, A.A., J.F. Schalles, and C.M. Hladik. Remote chlorophyll-*a* retrieval in turbid, productive estuarine waters: Chesapeake Bay Case Study. International Journal of Remote Sensing (accepted, in revision)

Schalles, J.F., C.M. Hladik, L. Whitehurst, and P. Merani. 2006. Hyperspectral imaging of wetlands and estuarine waters of National Estuarine Research Reserves in the Southeastern and Mid-Atlantic Regions of the United States. Extended Abstract. Ocean Optics 18 Conference, Montreal, Canada. (14 p)

Schalles, J. F. 2006. Optical remote sensing techniques to estimate phytoplankton chlorophyll *a* concentrations in coastal waters with varying suspended matter and CDOM concentrations. In: (L. Richardson and E. Ledrew, editors) Remote Sensing of Aquatic Coastal Ecosystem Processes: Science and Management Applications. Springer. pp. 27-79.

Takacs, M. , J.J. Alberts, and J.F. Schalles. 2004. Ultraviolet-visible and fluorescence spectral evidence of natural organic matter (NOM) changes along an estuarine salinity gradient. Estuaries 27: 297-311.

Schalles, John F., and C.M. Hladik. 2004. Remote chlorophyll estimation in coastal waters with tripton and CDOM interferences. Extended abstract. Ocean Optics XVII. Freemantle, Australia.

Schalles, J.F. J.A. Maeder, D.C. Rundquist, S. Narumalani, and J. Keck. 2003. Close range, hyperspectral reflectance measurements of corals and other reef substrates. Proceedings of the 9th International Coral Reef Symposium, Bali, Indonesia. International Society for Reef Studies. V. 2: 1017-1024.

Maeder, J., S. Narumalani, J. Schalles, D. Rundquist, K. Hutchins, and W. Bradley. 2003. Remote sensing of coral reefs using high-resolution satellite data. Proceedings of the 9th International Coral Reef Symposium, Bali, Indonesia International Society for Reef Studies. V. 2: 1007-1016.

Maeder, J., S. Narumalani, D. Rundquist, R. Perk, J. Schalles, K. Hutchins, and J. Keck. 2002. Classifying and mapping general coral reef structure using Ikonos data. *Photogrammetric Engineering and Remote Sensing* 68(12): 1297-1305.

Schalles, J.F., D.C. Rundquist, and F.R. Schiebe. 2001. The influence of suspended clays on phytoplankton reflectance signatures and the remote estimation of chlorophyll. *Verein Internationale Verein Limnologie Vehr. Internat. Verein. Limnol.* 27: 3619-3625.

Schalles, J.F., and Y.Z. Yacobi. 2000. Remote detection and seasonal patterns of phycocyanin, carotenoid, and chlorophyll pigments in eutrophic waters. *Archives fur Hydrobiologia - Special Issues Advancements in Limnology*, 55: 153-168.

Gitelson, A.A., Y.Z. Yacobi, J.F. Schalles, D.C. Rundquist, L. Han, R. Stark, and D. Etzion. 2000. Remote estimation of phytoplankton density in productive waters. *Archives fur Hydrobiologia - Special Issues Advancements in Limnology*, 55: 121-136.

Schalles, J.F., D.C. Rundquist, A. Gitelson, and J. Keck. 2000. Close range hyperspectral reflectance measurements of healthy Indo-Pacific and Caribbean corals. *Proceedings of the Sixth International Conference on Remote Sensing for Marine and Coastal Environments*. University of Michigan Press, Ann Arbor, Vol. I: 431-439.

Gitelson, A.A., J.F. Schalles, D.C. Rundquist, F.R. Schiebe, and Y.Z. Yacobi. 1999. Comparative reflectance properties of algal cultures with manipulated densities. *Journal of Applied Phycology*, 11: 345-354.

Schalles, J.F., A.T. Sheil, J.F. Tycast, J.J. Alberts, and Y.Z. Yacobi. 1998. Detection of chlorophyll, seston, and dissolved organic matter in the estuarine mixing zone of Georgia coastal plain rivers. *Proceedings of the Fifth International Conference on Remote Sensing for Marine and Coastal Environments*. University of Michigan Press. Ann Arbor, MI. V. 2: 315-324.

Schalles, J.F., A.A. Gitelson, Y.Z. Yacobi, and A.E. Kroenke. 1998. Estimation of chlorophyll a from time series measurements of high spectral resolution reflectance in a eutrophic lake. *Journal of Phycology* 34: 383-390.

Schalles, J.F., F.R. Schiebe, P.J. Starks, and W.W. Troeger. 1997. Estimation of algal and suspended sediment loads (singly and combined) using hyperspectral sensors and experiments. *Proc. of the Fourth International Conf. on Remote Sensing of Marine and Coastal Environments*. University of Michigan Press, Ann Arbor, MI. V. 1: 247-258.

Rundquist, D.C., L. Han, J.F. Schalles, and J.S. Peake. 1996. Remote measurement of algal chlorophyll in surface waters: the case for the first derivative of reflectance near 690 nm. *Photogrammetric Engineering and Remote Sensing*. 62(2): 195-200..

Rundquist, D.C., J.F. Schalles, and J.S. Peake. 1995. The response of upwelling light to both manipulated chlorophyll concentrations and bright and dark bottoms at varying depths. *Geocarto International*. 10(4): 1-10.

Starks, P.J., F.R. Schiebe, and J.F. Schalles. 1995. Characterization of the accuracy and precision of spectral measurements by a portable, silicon diode array spectrometer. *Photogrammetric Engineering and Remote Sensing*. 61(10): 1239-1246.

Han, L., D.C. Rundquist, L.L. Liu, R.N. Fraser, and J.F. Schalles. 1994. The spectral responses of algal chlorophyll in water with varying levels of suspended sediment. *International Journal of Remote Sensing*. 15(18): 3707-3718.

- S.K. Majumbar, F.J. Brenner, J.E. Lovich, J.F. Schalles, and E.W. Miller, editors. 1994. *Biological Diversity: Problems and Challenges*. The Pennsylvania Academy of Science, Easton, PA. 461 p.
- Schalles, J.F. 1994. The Platte River: A conflict between a managed water resource and regional biodiversity . In: S.K. Majumbar, F.J. Brenner, J.E. Lovich, J.F. Schalles, and E.W. Miller, editors. *Biological Diversity*. The Pennsylvania Academy of Science, Easton, PA. pp. 423-443.
- Goodin, D.G., L. Han, R.N. Fraser, D.C. Rundquist, J.F. Schalles, and W.A. Stebbins. 1993. Analysis of suspended sediments in water using remotely sensed high resolution derivative spectra. *Photogrammetric Engineering and Remote Sensing*. 59(4): 505-510.
- Schalles, J.F. and D.A. Doll. 1992. The Platte River - a treasure at risk. *Windows Magazine*. Creighton University. 7(3): 4-13.
- Newman, M.C., and J.F. Schalles. 1990. The water chemistry of Carolina bays: A regional survey. *Archives fur Hydrobiologia* 118(2): 147-168.
- Schalles, J.F., and D.J. Shure. 1989. Hydrology, community structure, and productivity of a dystrophic Carolina bay wetland. *Ecological Monographs* 59(4): 620-641.
- Schalles, J.F. 1989. Comparative chemical limnology of Carolina Bay wetlands on the upper coastal plain of South Carolina. In: R.R. Sharitz and J.W. Gibbons, editors. *Freshwater Wetlands and Wildlife*. D.O.E. Conf. 8603101, DOE Symposium Series 61. USDOE Office of Scientific and Technical Information, Oak Ridge, TN. pp. 89-111.
- Schalles, J.F. 1989. The chemical environment of wetlands. In: S.K. Majumdar, R.P. Brooks, F.J. Brenner, and R.W. Tiner, Jr., editors. *Wetland Ecology and Conservation: Emphasis on Pennsylvania*. The Pennsylvania Academy of Science, Easton, Pa. pp. 75-92.
- Schalles, J. F., R. R. Sharitz, J. W. Gibbons, J.N. Knox, and G.J. Leversee. 1989. Carolina Bays of the Savannah River Plant, SC National Environmental Research Park Program Publication SRO-NERP-18, Savannah River Ecology Laboratory, Aiken, SC, 78 p.
- Brenner, F.J., W. Snyder, J.F. Schalles, J.P. Miller, and C. Miller. Primary productivity of deep-water habitats on reclaimed mine lands. pp. 199-209. In: R.P. Brooks, D.E. Samuel, and J.B. Hill, editors. *Wetlands and Water Management on Mined Lands*. The Pennsylvania State University Press, State College, PA. pp. 199-209.
- Shields, J.D., N.D. Woody, A.S. Dicks, G.J. Hollod, J.F. Schalles, and G.J. Leversee. 1982. Locations and areas of ponds and Carolina Bays at the Savannah River Savannah River Plant. Savannah River Laboratory, Report DP-1525. National Technical Information Service, Springfield, VA. 19 p
- Schalles, J.F. and T.E. Wissing. 1976. Effects of dry pellet diets on the metabolic rates of bluegill sunfish (*Lepomis macrochirus*). *Journal of the Fisheries Research Board of Canada* 33(11): 2443-2449.

11. Abstracts and Presentations

- Volkmer, M.M., J.F. Schalles, C.M. Hladik, and S.C. Pennings. Coastal wetland and surface water classifications using hyperspectral aerial imagery. American Society of Limnology and Oceanography Winter Meetings. Sante Fe, New Mexico. February, 2007.
- Schalles, J.F. Habitat mapping at NERR sites with AISA hyperspectral imagery. Mapping and GIS Forum in the Texas Coastal Bend and MANERR. University of Texas Marine Science Institute, Port Aransas, Texas. January, 2007.

Schalles, J.F., C.M. Hladik, L. Whitehurst, and P. Merani. Hyperspectral imaging of wetlands and estuarine waters of National Estuarine Research Reserves in the Southeastern and Mid-Atlantic Regions of the United States. Ocean Optics 18 Conference, Montreal, Canada. October, 2006.

Hladik, Christine, and J.F. Schalles. Developing and applying chlorophyll algorithms for hyperspectral remote sensing of coastal waters. American Society of Limnology and Oceanography Summer Meeting, Victoria, BC, June, 2006.

Hladik, Christine, and J.F. Schalles. New chlorophyll algorithm approaches for hyperspectral remote sensing of coastal waters. Nebraska Academy of Sciences Annual Meeting. Lincoln, NE. April, 2006.

Hladik, C.M., and J.F. Schalles. Chlorophyll algorithms for hyperspectral remote sensing and mapping of coastal waters, Fourth Annual NOAA-CREST Symposium, Mayaguez, Puerto Rico, February, 2006.

Schalles, J.F., C.M. Hladik, and M. L. Machmuller. Chlorophyll patterns and bloom states in inland and coastal waters. Great Plains Limnology Conference. University of Kansas, Lawrence, KS. October, 2005.

Schalles, John F., and C.M. Hladik. Remote assessment of chlorophyll patterns in estuarine and coastal waters. Ecological Society of America Annual Meeting. Montreal, Canada (August, 2005)

Schalles, John F., and C.M. Hladik. Remote chlorophyll estimation in coastal waters with tripton and CDOM interferences. Ocean Optics XVII. Fremantle, Australia, October, 2004. (Talk & Poster)

Hladik, C., J. Schalles, and K. Dillon. Remote chlorophyll estimation in coastal waters with tripton and CDOM interferences NOAA Educational Partnership Program Education and Science Forum. City College of New York, New York City, October, 2004.

Schalles, J., C. Hladik, R. Perk, C. Fan, M. Harwell, K. Dillon. Airborne Hyperspectral Imagery to Assess Marsh and Seagrass Vegetation, Water Quality, and Invasive Plant Species in Coastal Ecosystems. 7th International Marine Environmental Modelling Seminar. Washington, D.C., October, 2004. (Talk)

Hladik, C. M., and J.F. Schalles. An improved algorithm for remote estimation of chlorophyll in optically complex coastal waters. American Society of Limnology and Oceanography Annual Meeting, Savannah, GA. June, 2004. (Poster)

Hladik, C. M., and J.F. Schalles. A comparison of algorithms for remote estimation of chlorophyll in coastal waters. Nebraska Academy of Science Annual Meeting. Nebraska Wesleyan University, April, 2004. (Talk)

Schalles, J.F. Chlorophyll algorithms for coastal remote sensing: Rationale and perspectives from mesocosm experiments and *in situ* observations in productive inland waters and Southeastern estuaries. NOAA-wide Seminar. NOAA Headquarters, Silver Spring, MD. November, 2003 (Invited).

Hladik, C.M. and J.F. Schalles. Phytoplankton signals in Southeastern estuaries: Spectral libraries for calibration of airborne imagery with close range measurements. Ecological Society of America Annual Meeting. Savannah, GA. August, 2003.

Schalles, J.F. Organic carbon, hydrologic optics, and remote sensing in Georgia rivers. University of Georgia Marine Institute Field Trip. Ecological Society of America Annual Meeting. Sapelo Island, GA. August, 2003.

Hladik, C.M., J.F. Schalles, and T. Schleicher. Winter bio-optical conditions in the estuarine mixing zones of three coastal Georgia Rivers. Nebraska Academy of Science Annual Meeting, Nebraska Wesleyan University, Lincoln, NE. April, 2003.

Schalles, J.F. Airborne Hyperspectral imagery for habitat analysis in the National Estuarine Research Reserves. Environmental Cooperative Science Center Annual Meeting. Islamorada, FL January, 2003.

Schalles, J.F. The ECSC aerial remote sensing project and initial results from the flight mission at Apalachicola Bay National Estuarine Research Reserve. NOAA-ECSC Ecological Risk Assessment Workshop for the Grand Bay NERR, Biloxi, MS. November, 2002. Invited.

Schalles, J.F., Y.Z. Yacobi, J. Alberts, and M. Takacs. Organic carbon pathways, water column optics, and remote sensing in coastal Georgia waters. Great Plains Limnology Conference, University of Oklahoma, Lake Texoma Field Station, OK. October, 2002.

Schalles, J.F. The ECSC aerial remote sensing project and planning for the initial flight mission at Apalachicola Bay National Estuarine Research Reserve. NOAA-ECSC Ecological Risk Assessment Workshop for the Maryland Chesapeake Bay NERR. Smithsonian Environmental Research Center, Edgewater, MD September, 2002. Invited

Schalles, J.F. From grits to shrimp: organic carbon processing, hydrological optics, and remote sensing in Georgia coastal waters. School of Natural Resource Sciences, University of Nebraska, Lincoln, NE. September, 2002. Invited.

Schalles, J.F. The Airborne Spectrometry Program Subproject of the NOAA-Environmental Cooperative Science Center. Workshop on standardization of remote sensing data acquisition and research in the National Estuarine Research Reserves. NOAA Coastal Services Center, Charleston Naval Yards, Charleston, SC. July, 2002. Invited.

Schalles, J.F. The ECSC aerial remote sensing project and close-range spectroscopy results from Georgia coastal rivers. NOAA-ECSC Ecological Risk Assessment Workshop for the Delaware Bay NERR. Jones Creek Coastal Visitors Center - Delaware Bay NERR, Dover, DE. July, 2002. Invited.

Schalles, J.F. The ECSC aerial remote sensing project and close-range spectroscopy results from Georgia coastal rivers. NOAA-ECSC Ecological Risk Assessment Workshop for the ACE Basin NERR. Ace Basin NERR, Bennett's Point, SC, June, 2002. Invited.

Schalles, J.F., Y.Z. Yacobi, J. Alberts, and M. Takacs. Field reflectance spectra from coastal Georgia – classification and algorithm issues for remote sensing. American Society of Oceanography and Limnology Annual Meeting, University of British Columbia, Victoria, British Columbia, Canada. June, 2002.

Abrahams, M., J. Schalles, T. Schleicher, and M. Karl. Close-range reflectance measurements of live corals at the Doorly Zoo Aquarium. Nebraska Academy of Science Annual Meeting, Nebraska Wesleyan University, Lincoln, NE. April, 2002.

Schalles, J.F. The ECSC aerial remote sensing project and close-range spectroscopy results from Georgia coastal rivers. NOAA-ECSC Ecological Risk Assessment Workshop for the Apalachicola Bay National Estuarine Research Reserve. St. George Island, FL March, 2002 (Invited)

Whitman, K.J., and J. F. Schalles. Remote estimation of chlorophyll *a* in aquatic macrophytes. 16th International Estuarine Research Federation Conference. Saint Petersburg, FL. November, 2001.

Schalles, J.F. Remote sensing approaches to analyze estuarine health and human impacts. Initial Planning Conference and Public Information Meeting. National Oceanic and Atmospheric Administration's Environmental Cooperative Science Center. Florida A&M University, Tallahassee, FL, November, 2001

Schalles, J.F., D.C. Rundquist, Y.Z. Yacobi, A. Gitelson, J.A. Alberts, and F.R. Schiebe. Hyperspectral Reflectance From Phytoplankton and Seston in Experimental Mesocosms and Turbid Inland and Coastal Waters: Lessons for Signal Interpretation and Algorithm Workshop on Remote Sensing of Inland and Coastal Waters Alliance for Marine Remote Sensing. Wolfville, Nova Scotia, Canada, October, 2001.

Gitelson, A., J.F. Schalles, Y.Z. Yacobi, and D.C. Rundquist. Algorithms for the estimation of algal pigments in productive inland waters. Workshop on Remote Sensing of Inland and Coastal Waters. Alliance for Marine Remote Sensing. Wolfville, Nova Scotia, Canada, October, 2001.

Schalles, J.F. The Iowa Great Lakes: Glacial origins and the geomorphological setting. Plenary Session. Great Plains Limnology Conference, Iowa Lakeside Laboratory, Milford, Wahpeton, IA, September, 2001.

Maeder, J., S. Narumalani, D. Rundquist, J. Schalles, J. Keck, K. Hutchins, and B. Bradley, 2001. Remote Sensing of a Caribbean Coral Reef: Roatan, Honduras. American Society of Photogrammetry and Remote Sensing Annual Meeting, St. Louis, MO, April, 2001. Invited.

Schalles, J., J. Maeder, D. Rundquist, J. Keck, and S. Narumalani. Spectral reflectance measurements of corals and other reef substrates at close range and near the surface. Ninth International Coral Reef Symposium. Denpasar, Bali, Indonesia. October, 2000.

Maeder, J., S. Narumalani, J. Schalles, D. Rundquist, and K. Hutchins. Remote sensing of corals reefs using a high-resolution satellite data. Ninth International Coral Reef Symposium. Denpasar, Bali, Indonesia. October, 2000.

Whitman, K.J., and J.F. Schalles, The optics, pigments, and phenology of water lily leaves. Ecological Society of America Annual Meeting, Snowbird, UT. August, 2000.

Takacs, M., J.J. Alberts, and J.F. Schalles. Fluorescence spectral changes of natural organic matter (NOM) along a riverine salinity gradient. 10th International Meeting – International Humic Substances Society, Toulouse, France. August, 2000.

Schalles, J.F., Y. Z. Yacobi, M. Takacs, and J.J. Alberts. Reflectance spectroscopy and patterns of optically active constituents in turbid and high DOC river and coastal waters of Georgia (USA), American Society of Limnology and Oceanography Aquatic Sciences Meeting, Copenhagen, Denmark. June, 2000.

Brezonik, P.L., and J.F. Schalles. Applications of remote sensing and satellite imagery in limnology: basic concepts and techniques (Tutorial for session SS03: Astrolimnology). American Society of Limnology and Oceanography Aquatic Sciences Meeting, Copenhagen, Denmark. June, 2000.

Schalles, J., D. Rundquist, A. Gitelson, J. Maeder, and J. Keck. Close range hyperspectral reflectance measurements of healthy Indo-Pacific and Caribbean corals. Sixth International Conference on Remote Sensing for Marine and Coastal Environments, Charleston, SC. May, 2000.

Schalles, J.F. Remote sensing of algal pigments, clays, and dissolved organic matter in turbid inland and coastal waters. Water Resources Center, University of Minnesota, St. Paul, MN. October, 1999 (Invited)

Whitman, K., and J. Schalles. Optical properties of water lily leaves and remote estimation of chlorophyll. Ecological Society of America Annual Meeting, Spokane, WA. August, 1999.

Schalles, J.F. and Y.Z. Yacobi. Detection and seasonal patterns of phycocyanin and carotenoid accessory pigments in eutrophic waters. Kinneret Laboratory Anniversary Symposium - Limnology and Lake Management 2000+. Tiberias, Israel. September, 1998 (Invited)

Schalles, J.F., D.C. Rundquist, and F.R. Schiebe. The influence of clay particles on phytoplankton reflectance signatures and remote estimation of chlorophyll. International Association of Theoretical and Applied Limnology XXVII Congress, University College, Dublin, Ireland, August, 1998. Schalles, J.F., and M.C. Newman. Spatial and temporal patterns of physical-chemical properties as geochemical indicators in Carolina Bay wetlands of the southeastern U.S., In: Ecology of Temporary Freshwater Habitats. American Society of Limnology and Oceanography Annual Meeting, St. Louis, MO, June, 1998. (Invited)

Tycast, J.F., J.F. Schalles, A. L. Sheil, J.J. Alberts, and Y.Z. Yacobi. Chlorophyll and dissolved organic carbon gradients and spectral properties of the St. Marys and Satilla Rivers on the Georgia coast. American Society of Limnology and Oceanography Annual Meeting, St. Louis, MO, June, 1998.

Schalles, J.F., F.R. Schiebe, P.J. Starks, and W. Troeger. Calibration of algal and suspended sediment loads using hyperspectral sensors and integrated mesocosm experiments. Fourth International Conference on Remote Sensing for Marine and Coastal Environments. Environmental Research Institute - University of Michigan and National Oceanographic and Atmospheric Administration. Orlando, FL. March, 1997. (Invited Plenary Speaker)

Schalles, J.F., L.A. Hughes, M.R. Maginn, C.D. Michaud, Y.Z. Yacobi, and A. Gitelson. Analysis of diagnostic pigment features within the reflectance spectra from hypereutrophic Carter Lake. Amer. Society of Limnology and Oceanography Annual Meeting. Sante Fe, NM. February, 1997.

Schalles, J.F., Y. Yacobi, A. Gitelson, M. McGinn, C. Michaud, D. Pascual, and L. Hughes. Pigment induced features in the light reflectance spectra of hypereutrophic Carter Lake. Great Plains Limnology Meetings, University of Kansas, Lawrence, KS. September, 1996.

Yacobi, Y.Z., A. Gitelson, V. Gerhardt, A. Sukenik, and J.F. Schalles. The use of delayed fluorescence excitation spectroscopy as a probe of phytoplankton pigments for ground truth determination. American Society of Limnology and Oceanography Annual Meeting, Milwaukee, WI, June 1996.

Schalles, J.F., J. Haefner, and G. Wolken. Limnology of high altitude lakes on Boulder Mountain, Aquarius Plateau, Utah. American Society of Limnology and Oceanography Annual Meeting, Milwaukee, WI, June 1996.

Kroenke, A., J. Schalles, Y. Yacobi, C. Hiemstra, D. Pascual, and A. Sheil. Spectral reflectances of Iowa lakes with moderate to high algal productivity and low mineral turbidity. American Society of Limnology and Oceanography Annual Meeting, Milwaukee, WI, June 1996.

Schalles, J.F., D.C. Rundquist, F. R. Schiebe, Y.Z. Yacobi, and A. Gitelson. How manipulations of particulate and dissolved substances affect light reflectance signals from water bodies. Nebraska Academy of Science Annual Meeting, Nebraska Wesleyan University, Lincoln, NE. April, 1996.

Schalles, J.F. Carolina bay wetlands: biogeographic islands in space and time on the weathered Southeastern Atlantic Coastal Plains. Carolina Bay Wetland Symposium. Association of Southeastern Biologists and Wetland Society of America. Georgia Southern University, Statesboro, GA. March, 1996. (Invited)

- Schalles, J.F., J. Haefner, and G. Wolken. Limnology of high altitude lakes on Boulder Mountain, Utah. Great Plains Limnology Conference, Chadron State University, Chadron, NE. September, 1995.
- Hiemstra, C., A. Kroenke, D. Pascual, A. Sheil, and J. Schalles. Spectral reflectance of five Iowa lakes with moderate to high algal productivity. Great Plains Limnology Conference, Chadron State University, Chadron, NE. September, 1995.
- Schalles, J.F., F.R. Scheibe, and D.A. Kennedy. Measurements of upwelling and downwelling irradiance in experimental mesocosms with manipulated levels of phytoplankton and suspended sediment. American Society of Limnology and Oceanography Annual Meeting. University of Nevada Reno, Reno, NV. June, 1995.
- Kroenke, A., D. Downey, and J. Schalles. Seasonal changes in the light reflectance of Carter Lake, IA/NE, a hypereutrophic lake. Nebraska Academy of Science Annual Meeting, Nebraska Wesleyan University, Lincoln, NE. April, 1995.
- Schalles, J.F., A. Kroenke, and D. Downey. High spectral resolution reflectance measurements from Carter Lake, IA/NE, a hypereutrophic system with sustained cyanobacteria blooms. Geological Society of America – Central Section Annual Meeting, University of Nebraska, Lincoln, NE. April, 1995. (Invited)
- Schalles, J.F., M.C. Newman, R. Lide. Geochemical perspectives of Carolina Bay wetlands on the Southeastern Atlantic Coastal Plain. Great Plains Limnology Conference. Oak Lake Field Station, South Dakota State University. October, 1994.
- Schalles, J.F., D.C. Rundquist, and F.R. Schiebe. Mesocosm experiments to investigate the effect of sediment on phytoplankton reflectance. American Society of Limnology and Oceanography Annual Meeting. Miami, FL. June, 1994.
- Lind, O.T., L. Davalos-Lind, J.F. Schalles, and F.R. Schiebe. A reflectance ratio to discern chlorophyll in a highly clay turbid tropical lake. American Society of Limnology and Oceanography Annual Meeting. Miami, FL. June, 1994.
- Schalles, J.F. A review of tank mesocosms in optical remote sensing studies (Workshop Presentation). American Society of Limnology and Oceanography Annual Meeting. Miami, FL. June, 1994.
- Kennedy, D.K., J.F. Schalles, and F.R. Schiebe. Hyperspectral measurements of an algal dilution and enrichment in large mesocosms. Nebraska Academy of Sciences Annual Meeting, Nebraska Wesleyan University, Lincoln, Nebraska. April, 1994.
- Schalles, J.F., F.R. Schiebe, P.J. Starks, and W.W. Troeger. Algal chlorophyll and the NIR/red spectral feature. Great Plains Limnology Conference. University of Arkansas, Lake Weddington State Park, AR. October, 1993.
- Schalles, J.F. Remote sensing of water quality in turbid inland waters. Applied Sciences Institute, University of North Texas, Denton, TX. October, 1993 (Invited)
- Dewey, S.L., F. deNoyelles, Jr., K. Price, J. Schalles, and A. Clements. Predicting stream periphyton biomass from spectral reflectance using a high-resolution, hand-held spectroradiometer. Ecological Society of America Annual Meeting, University of Wisconsin, Madison, WI. August, 1993.
- Schalles, J.F., and F.R. Schiebe. Hyperspectral measurements of reflectance and downwelling and upwelling irradiance in mesocosms with manipulated algal and sediment concentrations. American Society of Limnology and Oceanography Annual Meeting. University of Alberta, Edmonton, Alberta, Canada. June, 1993.

Schalles, J.F., F.R. Schiebe, and W.W. Troeger. Hyperspectral measurements of water reflectance as a tool for monitoring lake and reservoir eutrophication. Oklahoma Clean Lakes Association/North American Lake Management Society State Chapter Meeting, Lake Texoma State Park, Oklahoma. April, 1993.

Schalles, J.F., D.C. Rundquist, J. Arnhold, R. Horner, C. Mayne, and P. McConnell. The effects of different suspended sediments on phytoplankton reflectance. Great Plains Limnology Meetings, Lake of the Ozarks State Park, MO. October, 1992.

Rundquist, D.C., L. Han, R.N. Fraser, L. Lui, J.F. Schalles, J.S. Peake, and F.J. DeNoyelles. High spectral resolution remote sensing for monitoring the community structure and stress responses of ponds, lakes, and reservoirs. Great Plains - Rocky Mountain Division / Association of American Geographers Annual Meeting. Kansas State University, Manhattan, KS. October, 1992.

Schalles, J.F. and M.C. Newman. Temporal and spatial biogeochemistry patterns in Carolina bays: A regional survey of acid, dystrophic wetlands in a weathered, coastal plain landscape. INTECOL's IV International Wetlands Conference, Ohio State University, Columbus, OH. September, 1992.

D'Angelo, M.F. and J.F. Schalles. Assessing littoral habitat structure based on classification of solar reflectance spectra. Nebraska Academy of Science Annual Meeting, Nebraska Wesleyan University, Lincoln, NE. April, 1992.

Fraser, R.N., J.F. Schalles, L. Han, F.J. DeNoyelles, and D.C. Rundquist. Detection and monitoring of atrazine toxic effects on phytoplankton communities by remote sensing. Nebraska Academy of Science Annual Meeting, Nebraska Wesleyan University, Lincoln, NE. April, 1992.

Schalles, J.F. Close range spectroradiometry measures of algae, suspended sediment, and benthic constituents using manipulated pond mesocosms. Department of Agricultural Meteorology, University of Nebraska, Lincoln, NE. February, 1992. (Invited)

Schalles, J.F., D.C. Rundquist, L. Han, and J.S. Peake. Detection of algal pigment when suspended sediment is present. ASLO Aquatic Sciences Meeting, Sante Fe, NM. February, 1992.

Schalles, J.F., and B.A. Hayes. Limnology of a Platte Valley quarry lake. Platte River Annual Research Meeting, U.S. Fish and Wildlife Service, Grand Island, NE, November, 1991.

Schalles, J.F. The Platte River Valley - Introduction and Geographic Orientation. Plenary Session: "Ecology and Management of the Platte River", Great Plains Limnology Meetings, Creighton University, Omaha, NE, October, 1991.

Schalles, J.F., D. C. Rundquist, F. J. DeNoyelles, and J. S. Peake. The use of spectroradiometry and black and white targets to probe solar reflectance relationships to unit volume and unit area algal chlorophyll abundance. JEcolological Society of America Annual Meeting, San Antonio, TX, August, 1991. Abstract: Bull Ecol. Soc. 72(2): 240.

Rundquist, D.C., J.F. Schalles, and J.S. Peake. The effect of turbidity and chlorophyll concentration on reflectance from submerged targets. American Society of Photogrammetry and Remote Sensing Annual Meeting. Baltimore, MD, March, 1991.

Schalles, J.F., and D. C. Rundquist. High spectral resolution remote sensing for monitoring water quality indicators. Society for Environmental Toxicology and Chemistry Annual Meeting, Washington, D.C., November, 1990. (Invited)

Schalles, J.F., and B.A. Hayes. Limnology of Platte River Valley sandpit lakes. Platte River Research Seminar, U.S. Fish and Wildlife Service, Grand Island, NE. Nov. 1990

Schalles, J.F., D.C. Rundquist, and F.J. DeNoyelles. The use of field spectroscopy to measure algal chlorophyll. Great Plains Limnology Meetings, Oklahoma State University, Stillwater, OK. October, 1990.

Schalles, J.F., D.C. Rundquist, F.J. DeNoyelles, and B. A. Hayes. High spectral resolution remote sensing measurements of chlorophyll and suspended sediments using pond dilution manipulations. Ecological Society of America Annual Meeting. Snowbird, UT, August, 1990. Abstract: Bull. Ecol. Soc. 71(2): 315.

Rundquist, D.C., J.F. Schalles, F.J. DeNoyelles, and D. Goodin. Visible and near-infrared spectroradiometry of turbidity and chlorophyll conditions in manmade ponds. American Society of Photogrammetry and Remote Sensing Annual Meeting. Denver, CO. March, 1990.

Schalles, J.F., B.A. Hayes, D.C. Rundquist, and F.J. DeNoyelles. High spectral resolution remote sensing of midwestern waters. Great Plains Limnology Meetings. Pittsburg State University, Pittsburg, KS. October, 1989.

Schalles, J.F. High spectral resolution remote sensing of suspended sediments and algal chlorophyll in midwestern ponds and lakes. Institute of Agriculture and Natural Resources, University of Nebraska, Lincoln, NE. October, 1989. (Invited)

Schalles, J.F.. Classification of a large set of Nebraska Sandhill lakes using Landsat, SPOT, TM, and AIS Multispectral Data. Ecological Society of America Annual Meeting (with AIBS). University of Toronto, Toronto, Canada. August, 1989. Abstract: Bull. Ecol. 70(2): 214.

Schalles, J.F. Detection of gradients, discontinuities, and other landscape patterns of varying landscape scale using remote sensing data. Ecological Society of America Annual Meeting (with AIBS). University of California at Davis, Davis, CA. August, 1988. Abstract: Bull. Ecol. Soc. 69(2): 286.

Newman, M.C., and J.F. Schalles A regional water chemistry survey of Carolina bay wetlands. American Society of Limnology and Oceanography Annual Meeting. University of Colorado, Boulder, CO. June, 1988.

Schalles, J.F., Analysis of airborne imaging spectrometer (AIS) remote sensing data from wetland vegetation and shallow lakes in the Nebraska Sandhills. Ecological Society of America Annual Meeting (with AIBS). Ohio State University, Columbus, OH. August, 1987. Abstract: Bull. Ecol. Soc. 68(3): 408.

Schalles, J.F., The use of high spectral resolution remote sensing in classification of lakes and wetlands of the Nebraska Sandhills. Savannah River Ecology Laboratory. Aiken, SC. July, 1987. (Invited)

Schalles, J.F., Analysis of airborne imaging spectrometer data from lakes and wetlands at the the Crescent Lake National Wildlife Refuge. Prairie States Annual Ecology Conclave, Platte River State Park, Louisville, NE. May, 1987.

Schalles, J.F. Macroinvertebrate distribution and abundance in freshwater wetlands. University of Nebraska at Lincoln, March, 1987. (Invited)

Schalles, J.F., and G.J. Leversee., Comparative chemical limnology of Carolina bay wetlands on the Upper Coastal Plain of South Carolina Savannah River Ecology Laboratory Symposium - "Freshwater Wetlands: Perspectives on Natural, Managed, and Degraded Ecosystems. Charleston, SC. March, 1986.

Schalles, J.F. The structure of macroinvertebrate communities in freshwater wetlands. School of Life Science, University of Nebraska, Lincoln, NE. March, 1986. (Invited)

Schalles, J.F., Distribution and biomass of aquatic invertebrates and small vertebrates in two northwest Iowa marshes. J.F. Schalles. Ecological Society of America Annual Meeting (with AIBS). Colorado State University, Fort Collins, CO. August, 1984. Abstract: Bull. Ecol. Soc. 65(2): 131-132.

Schalles, J.F. California Bend: the ecology of a remnant Missouri River marsh. Department of Biology, University of Nebraska-Omaha, Omaha, NE. October, 1983. (Invited)

Schalles, J.F., P.J. Gurk, and C.E. Harper. An automated, continuous flow respirometer system for aquatic metabolism studies. Nebraska Academy of Sciences Annual Meeting, Nebraska Wesleyan University, Lincoln, NE. April, 1983.

Bankers, D.M., and J.F. Schalles. Digital analysis of aerial infrared photography to study wetlands. Nebraska Game and Parks Commission and the University of Nebraska Remote Sensing Laboratory. Lincoln, NE. February, 1983. (Invited)

Schalles, J.F., T. Holliday, and T. Annuziatio. Chemical limnology of a Missouri River marsh. . Great Plains Limnology Meetings, University of Oklahoma Biological Station, Lake Texoma, OK. October, 1982.

Bankers, D.M., and J.F. Schalles, Wetland biomass correlations between digitized color infrared aerial photographs and quadrat sample data. Ecological Society of America Annual Meeting (with AIBS). Penn State University, State College, PA. August, 1982. Abstract: Bull. Ecol. Soc. 63(2): 138.

Bankers, D.M., and J.F. Schalles. Plant biomass and remote sensing studies in a Missouri River marsh. Nebraska Academy of Science Annual Meeting, Nebraska Wesleyan University, Lincoln, NE. April, 1982.

Schalles, J.F., and T. Holliday. Groundwater and open water chemical limnology in a Missouri River marsh. Nebraska Academy of Science Annual Meeting, Nebraska Wesleyan University, Lincoln, NE. April, 1982.

Schalles, J.F., Carolina bay pond ecosystems. J.F. Schalles. Departments of Botany and Animal Ecology, Iowa State University, Ames, IA. March, 1982. (Invited)

Schweig, B.M., J. Scott, and J.F. Schalles Predator-prey model of the life insurance replacement problem. . Midwest Business Administration Meeting. Chicago, IL. March, 1982.

Bankers, D.M., and J.F. Schalles. Marsh plant biomass and remote sensing studies at California Bend marsh. Great Plains Limnology Meetings. Iowa State University, Ames, IA. October, 1981.

Schalles, J.F. and D.J. Shure. Carolina bays at the Savannah River Plant, South Carolina. Pocosin Wetlands Conference. Duke University Maine Laboratory, Beaufort, NC. January, 1980.

Schalles, J.F., Macroinvertebrates and vertebrates in a coastal plain pond in South Carolina: spatial distributions. Ecological Society of America Annual Meeting (with AIBS). University of Arizona, Tucson, AZ. August, 1980. Abstract: Bull. Ecol. Soc. 61(2): 97.

Schalles, J.F., Comparative limnology and ecosystem analysis of Carolina bay ponds. Department of Biology, University of Nebraska-Omaha, Omaha, NE. October, 1979. (Invited)

Schalles, J.F., and D.J. Shure. Macroinvertebrates and vertebrate predator estimates for a softwater, acid pond on the upper coastal plain of South Carolina: turnover and trophic transfer implications. Ecological Society of America Annual Meeting (with AIBS). Oklahoma State University, Stillwater OK. August, 1979. Abstract: Bull. Ecol. Soc. 60(2): 78.

Schalles, J.F., Organic budget of a softwater, acid Carolina bay pond on the upper coastal plain of South Carolina. American Society of Limnology and Oceanography Annual Meeting. State University of New York, Stony Brook, NY. June, 1979.

- Schalles, J.F. Comparative limnology and ecosystem analysis of Carolina bay pond ecosystems at the Savannah River Plant. Environmental Sciences Division, Oak Ridge National Laboratories, Oak Ridge, TN. April, 1979. (Invited)
- Schalles, J.F., Ecology of three salamander populations in a Carolina bay pond on the upper coastal plain of South Carolina. Association of Southeastern Biologists Annual Meeting. University of Tennessee-Chattanooga, Chattanooga, TN. April, 1979.
- Schalles, J.F. Ecosystem analysis and partial organic budget for a Carolina bay pond ecosystem. The Institute of Ecology, University of Georgia, Athens, GA. March, 1979. (Invited)
- Schalles, J.F., Primary and secondary production in a Carolina bay ecosystem. Geology Department, Dickinson College, Carlisle, PA. March, 1979. (Invited)
- Schalles, J.F., Comparative limnology and ecosystem analysis of Carolina bay pond ecosystems at the Savannah River Plant. J.F. Schalles. Savannah River Ecology Laboratory, Aiken, SC. February, 1979. (Invited)
- Schalles, J.F., Comparative limnology and ecosystem analysis of Carolina bay pond ecosystems. Biology Department, Wright State University, Dayton, OH. April, 1978. (Invited)
- Schalles, J.F., Community structure and productivity of a Carolina bay ecosystem. Department of Biology, Notre Dame University, South Bend, IN. March, 1978. (Invited)
- Schalles, J.F., Water chemistry and primary producer dynamics in a Carolina bay pond. Workshop on Aquatic Ecology of the Southeast. Southeastern Chapter of the Ecological Society of America. Augusta, GA. October, 1977.
- Schalles, J.F., and D.J. Shure. Primary production in a shallow Carolina bay pond. Ecological Society of America Annual Meeting (with AIBS). Michigan State University, East Lansing, MI. August, 1977. Abstract: Bull. Ecol. Soc. 58(2): 27.
- Schalles, J.F., T.E. Wissing, and R.J. Pierce, Energy cost of food utilization in bluegill sunfish (*Lepomis macrochirus*). Ecological Society of America Annual Meeting (with AIBS). Michigan State University, East Lansing, MI. August, 1976. Abstract: Bull. Ecol. Soc. 58(2): 27.
- Schalles, J.F., and D.J. Shure. Limnology of Carolina bays of the Savannah River Plant area in South Carolina., American Society of limnology and Oceanography Annual Meeting. Skidaway Institute of Oceanography, Savannah, GA. June, 1976.
- Schalles, J.F., and D.J. Shure. Limnological aspects of Carolina bays of the Savannah River Plant area in South Carolina. Southeastern Wetlands Workshop. University of Florida, Gainesville, FL. January, 1976.
- Schalles, J.F., and T.E. Wissing. The effects of pellet diets on the energy cost of food utilization in bluegill sunfish. Ohio Academy of Science Annual Meeting. John Carroll University, Cleveland, OH. April, 1973.
- Schalles, J.F. Primary productivity of three strip mine ponds. American Institute of Biological Sciences Regional Meeting. Gannon College, Erie, PA. April, 1971.
- Schalles, J.F., and F.J. Brenner. Plankton productivity in Mercer County strip mine ponds. Annual Meeting of Aquatic Biologists of Northwestern Pennsylvania. Meadville, PA. March, 1971.

12. Graduate Student Thesis Committees and Advising; Post-Doctoral Researchers

M.S. Thesis advisor for:

Christine Hladik. Close range Hyperspectral Remote Sensing of Southeastern Estuaries and an Evaluation of Phytoplankton Chlorophyll *a* Predictive Algorithms. Department of Environmental Science and Atmospheric Science, Creighton University; September, 2004.

Kim Whitman. The Relationship Between the Pigments and Optics of Floating-Leaved Hydrophytes and Remote Estimation of Chlorophyll *a*. Department of Environmental Science and Atmospheric Science, Creighton University, August, 2000.

David M. Bankers The Relationship Between Standing Crop and Color Film Density for a Missouri River Wetland. Biology Department, Creighton University, May, 1983.

Assisted the following graduate and post-doctoral researchers (thesis committees, supervised research projects; consultations and collaborations):

Patrick A'hearn (one semester). Hyperspectral measurements of algal communities in manipulated tank mesocosms at the USDA/ARS Water Quality Lab in Durant, Oklahoma [NASA graduate student fellowship - 1992]

Dr. Charles Baube (Dr. Baube was a post-doctoral fellow in the Biology Department from 1994-1996; served as an informal advisor and consultant for his NSF-EPSCoR research project on color detection and behavioral responses to color in fish and implementation of spectroradiometer system at Creighton.

Pedro Gonzalez-Cabrera (M.S., Biology Department, Creighton University; served on thesis committee)

Don Christian (M.A., Geography-Geology Department, Univ. of Nebraska - Omaha)

Dr. Sharon Dewey- served on committee for Dr. Dewey's NSF Postdoctoral Fellowship project at the University of Kansas- Research topic: light reflectance from stream benthic algae

Giorgio Dall'Olmo (Ph.D. - School of Natural Resource Sciences, University of Nebraska-Lincoln); consultant and collaborator for coastal field spectroscopy and aerial imaging spectroscopy

Michael Dombcek (M.S., Animal Ecology Department, Iowa State University - served as an advisor in an informal capacity)

Margaret Finney (M.S., Biology Department, Creighton University). Supervised project - Heavy metal distribution in biotic and abiotic components of Carter Lake.

Rolland Fraser (Ph.D., Geography Department, University of Nebraska - Lincoln; served as an informal advisor and collaborator)

Peter Gurk (M.S., Biology Department, Creighton University). Research supervisor for two projects: (1) Winter limnology of Carter Lake, and (2) Zooplankton abundance in two Iowa glacial pothole marshes.

Thomas Holliday (M.S., Biology Department, Creighton University). Groundwater and open-water chemical limnology in a Missouri River marsh

Luoheng Han (Ph.D., Geography Department, University of Nebraska - Lincoln; served as an informal advisor and collaborator)

Robert Lide (M.S., Geography Department, University of Georgia; served as an informal advisor and collaborator)

Mahtab Lodi (Ph.D., Geography Department, University of Nebraska - Lincoln; served as an informal advisor)

Shelly Matthews (M.S. program., Biology Department, Creighton University). Supervised research - A comparison of macroinvertebrates in Desoto Bend NWR wetland plots with differing hydrologic regimes.

Jill Maeder (M.S., Geography Department, University of Nebraska; thesis committee and research collaboration on coral reef remote sensing at Roatan Island, Honduras)

Diana Rejoorn (M.S., Geography-Geology Department, University of Nebraska - Omaha; thesis committee)

Bobbi Lee Shima (M.S., Biology Department, Creighton University). Supervised research: A study of intertidal mollusc distribution in the Puget Sound and coastal habitats in Washington.

Robi Stark (Ph.D., Ben Gurion University, Israel) Reader for doctoral dissertation; collaboration in freshwater lake and coral reef field spectroscopy and remote sensing)

Junesse Viril (M.S., Biology Department, Creighton; thesis committee)

Brian Wentzel (M.S., Biology Department, Creighton; thesis committee)

Latrincy Whitehurst (M.S., Environmental Science Institute, Florida A&M University; thesis committee)

Susan Widdicombe (M.S., Biology Department, Creighton- thesis committee)

Ann Woodall (M.A. Geography-Geology Department, Univ. of Nebraska - Omaha)

Lori Yamada (M.S., Biology Department, Creighton University). Relative buffering capacities of Nebraska and Iowa soils to simulated acid rain exposures.

Robert Young (M.S., Biology Department, Creighton University). Effects of simulated acid rain on the rate of nutrient leaching from a range of soil types in Nebraska and northern Iowa watersheds.

13. Undergraduate Directed Research and Study (BIO and EVS 495, 497)

Patrick A'Hearn (two semesters, summer). A. The effects of different types and concentrations of suspended sediments on phytoplankton reflectance in manipulated pond mesocosms. B. Development of data analysis software for spectroradiometer measurements of water reflectance.

Mike Abrahams (two semesters) Close range spectroscopy measurements of live coral species at the Doorly Zoo Aquarium

Eric Allen (one semester, one summer) Spectroscopy and phytoplankton biomass in northern Iowa and eastern Nebraska lakes.

Jennifer Arnhold (three semesters, summer). A. Groundwater and surface water biogeochemistry patterns in Carolina bay wetlands. B. The effects of different types and concentrations of suspended sediments on phytoplankton reflectance in manipulated pond mesocosms. [EPA Summer Fellowship - 1992]

Thomas Annunziato (one semester, one summer). The chemical limnology of Missouri River marshes.

Mike Berringer (one semester). A case study of environmental policy: the USEPA Superfund program

Thomas Brooks (two semesters). Macroinvertebrate abundance in Iowa glacial pothole marshes, with emphasis on sphaerid clams.

Patrick Brown (summer). Dissolved silica patterns in surface and adjacent groundwater of Carolina bay wetlands in South Carolina.

Thomas Casey (two semesters). Macroinvertebrate estimates for a vegetated pond at the Allwine Prairie research site.

Joseph Chignoli (two semesters). Comparison of water reflectance signals in Carter Lake and Desoto Bend Lake.

Mary Cleary (one semester, two summers). Water reflectance and remote sensing algorithms from manipulated pond mesocosms in Kansas and Nebraska. [EPA Summer Fellowships - 1990, 1991]

Kevin Coonan (three semesters). Regional water chemistry survey of Carolina bay wetlands with and emphasis on dissolved trace metals.

Randy Crnkovich (one semester). Carter Lake laboratory mesocosm plankton metabolism study.

Michael D'Angelo (two semesters). Combined effects of suspended sediments and phytoplankton on water reflectance signals in manipulated pond mesocosms.

Peter Doig (two semesters). A comparison of Carter Lake, the Missouri River, and local floodplain groundwater chemistries.

David Downey (two semesters). Seasonal changes of water reflectance signals in hypereutrophic Carter Lake.

Richard Falter (two semesters). Analysis of nutrient chemistry and plankton abundance in Carter Lake.

Barry Ford (one semester). Macroinvertebrate abundance in Iowa glacial pothole marshes, with an emphasis on gastropods.

Edward Gilligan (one semester). Impact of Eppley Airfield effluents on the benthic macroinvertebrates of Carter Lake.

- Steven Glockenmeier (one semester). A comparison of Carter Lake, the Missouri River, and local floodplain groundwater chemistries.
- John Gross (one semester). Carter Lake algal blooms and reflectance spectroscopy – has the lake changed state?
- Shirley Guma (one semester). Case studies in environmental health.
- Peter Gurk (two semesters). Energy cost of food utilization estimates for crayfish in an automated respirometer system.
- Jason Haefner (two semesters, summer). A. Phytoplankton and suspended sediment reflectances in manipulated tank mesocosms. B. Limnology of high altitude lakes on Boulder Mountain - Aquarius Plateau, Utah. [NASA Summer Fellowship - 1994; Outstanding EVS Student Research Project]
- Joseph Hammeke (two semesters). A preliminary study of the coastal and terrestrial habitat distributions on Roatan Island, Honduras using LANDSAT MSS imagery.
- Charles Harper (two semesters). Design of an automated respirometer system and use of the system to examine the role of substrate surface area on periphyton metabolism in microcosms.
- Steven Haskett (one semester). Carter Lake spectroscopy and the estimation of algal accessory pigments.
- Stacy Hauser (one semester). Red mangrove cultivation in the Creighton Biology Greenhouse.
- Barbara Hayes (two semesters, summer; College of Saint Mary student). Water reflectance and remote sensing algorithms from manipulated pond mesocosms in Kansas and Nebraska.
- Christopher Hiemstra (two semesters, summer). Comparative studies of light reflectance and water quality in manipulated tank mesocosms and turbid, eutrophic midwestern lakes. [NASA summer fellowship - 1995; Outstanding EVS Seminar Award]
- Eric Hoffman (one semester). Phytoplankton abundance and production in Carter Lake.
- Marguerite Holtz (one semester). Groundwater/surface water interactions at the Thunder Bay wetland site in South Carolina.
- Rhonda Horner (two semesters, summer). The effects of different types and concentrations of suspended sediments on phytoplankton reflectance in manipulated pond mesocosms. [NASA Summer Fellowship - 1992].
- Michael Hosking (two semesters). A comparison of Carter Lake, the Missouri River, and local floodplain groundwater chemistries.
- Lisa Hughes (two semesters, summer). Comparative studies of light reflectance and water quality in manipulated tank mesocosms and turbid, eutrophic midwestern lakes.
- Barry Kaup (one semester, one summer). Reflectance spectroscopy in Georgia coastal rivers and near ocean water.
- David Kennedy (two semester, summer). Hyperspectral measurements of algal communities in manipulated tank mesocosms at the USDA/ARS Water Quality Lab in Durant, Oklahoma [NASA Summer Fellowship - 1993]

Amy Kroenke (four semesters, three summers). Comparative studies of light reflectance and water quality in manipulated tank mesocosms and turbid eutrophic midwestern lakes. [NASA summer fellowships - 1994, 1995; Outstanding EVS Student Research Project Award]

Kevin Kuta (one semester). Nutrient loading monitoring at a regulated weir on Boxelder Creek above the Damsite 18 reservoir project.

Christopher Loyke (two semesters). Macroinvertebrate and small vertebrate abundance in Iowa glacial pothole marshes, with emphasis on chironomid larvae and fish.

William Luce (one semester). Macroinvertebrate abundance in Iowa glacial pothole marshes, with emphasis on tipulid larvae.

Megan Machmuller (one semester). Carter Lake algal blooms and reflectance spectroscopy – has the lake changed state?

Diane Mahoney (two semesters). Herbaceous macrophyte and macroinvertebrate distributions in Iowa glacial pothole marshes.

Matthew Maginn (one semester, summer). Comparative studies of light reflectance and water quality in turbid, eutrophic midwestern lakes. [NASA Summer Fellowship - 1996]

Scott Magnuson (one semester). Macroinvertebrate abundance in Iowa glacial pothole marshes, with emphasis on the amphipod, *Hyallolela azteca*.

Christopher Mayne (three semesters, one summer). A. The effects of different types and concentrations of suspended sediments on phytoplankton reflectance in manipulated pond mesocosms. B. Comparative limnology of three limestone quarry lakes in Nebraska and Iowa; note I closely advised him for this project by correspondence and telephone while on my sabbatical in Oklahoma. Ted Burk served as his direct advisor. Chris's work was published in 1995 as a paper in Transactions of the Nebraska Academy of Science. [Biology Department Summer Fellowship - 1992].

Shelley Matthew (two semesters). Regional survey of water chemistry in Carolina bay wetlands, with an emphasis on dissolved silica.

Patrick McConnell (one semester, summer). The effects of different types and concentrations of suspended sediments on phytoplankton reflectance in manipulated pond mesocosms. [EPA Summer Fellowship - 1992].

Michael McFarlane (one semester). Groundwater and surface water biogeochemistry patterns in Carolina bay wetlands

Stuart McNally (two semesters and two summers) Directed Independent Research. (1) Georgia coastal river optics and field spectroscopy. (2) Estimation of water lily leaf pigments with close range reflectance and transmittance measurements in indoor tanks and outdoor pond mesocosms (NASA Summer Research Fellowship- 2001)

Christine Michaud (three semesters, summer). Taxonomic differences in algal phytoplankton light reflectance [NASA summer fellowship - 1996]

Troy Michaud (one semester). Seston loads and comparison to water reflectance in hypereutrophic Carter Lake.

Matthew Muenchrath (one semester). A. Groundwater and surface water biogeochemistry patterns in Carolina bay wetlands.

Venu Nair (three semesters). A. Analysis of Airborne Imaging Spectrometer data from the Nebraska sandhills. B. Analysis of chemical nutrients and plankton abundance along depth gradients in Carter Lake.

Denise Lani Pascual (two semesters, two summers). Comparative studies of light reflectance and water quality in manipulated tank mesocosms and turbid, eutrophic midwestern lakes. [NASA summer fellowship - 1996]

Heather Peterson (two semesters and two summers) Estuarine and coastal spectroscopy. (NASA Summer Fellowship - 1998)

Kelli Peterson (two semester, two summers). Water reflectance and remote sensing algorithms from manipulated pond mesocosms in Kansas and Nebraska. [EPA Summer Fellowships - 1990, 1991]

Nicholas Ricono (one semester). Winter limnology of three Platte Valley sandpit lakes.

Eric Ronk (one semester, ongoing). Optical properties and chlorophyll and seston estimation algorithms for the middle reach of the Missouri River.

Joseph Rock (three semesters). A. A preliminary study of the coastal and terrestrial habitat distributions on Roatan Island, Honduras using LANDSAT MSS imagery. B. Comparison of water reflectance signals in Carter Lake and Desoto Bend Lake.

Tymeri Schleicher (three semesters). (1) Close range spectroscopy and optical variables of live corals at the Doorly Zoo Aquarium; (2) Gradients of optically active phytoplankton and total seston fractions and their relation to nutrient stocks along the longitudinal flow axis Cunningham Lake in the Little Papillion Creek drainage.

Patrick Shanahan (one semester). A case study of anthropogenic chemical damage to the stratospheric ozone layer.

Amy Sheil (two semesters, summer). Comparative studies of light reflectance and water quality in manipulated tank mesocosms and turbid, eutrophic midwestern lakes. [NASA summer fellowship - 1994]

Kristin Sieperda (summer). The effects of different types and concentrations of suspended sediments on phytoplankton reflectance in manipulated pond mesocosms.

Jill Skorupa (two semesters and two summers). Lake and estuarine spectroscopy and chlorophyll estimation (NASA Summer Fellowship, 1999)

Patrick Smith (two semesters). Seasonal survey of Carter Lake zooplankton populations.

Lori Sokol (one semester, summer). Water reflectance and remote sensing algorithms from manipulated pond mesocosms in Kansas and Nebraska.

James Tycast (three semesters and two summers). Lake and estuarine gradients of chlorophyll and seston and remote algorithms. (NASA Summer Fellowship, 1997)

John Veale (two semesters). Phytoplankton and zooplankton abundance in open water habitats of a Missouri River marsh.

Joseph Vicari (two semesters). Analysis of data on macroinvertebrate biomass in two Iowa glacial pothole marshes.

Maria Volkmer (two semesters, one summer). Salt marsh vegetation mapping at the Sapelo Island National Estuarine Research Reserve with AISA Eagle hyperspectral imagery [Feric Summer Research Scholar, 2006]

Robert Wankmuller (one semester, summer). Herbaceous macrophyte and macroinvertebrate abundance in two Iowa glacial pothole marshes.

Todd Weber (two semesters). Seasonal changes of water reflectance signals in hypereutrophic Carter Lake and analysis of limnology ground truth data.

Eron Welchans (one semester). Winter limnology of three Platte Valley sandpit lakes.

Deborah Winarski. (one semesters). Carter Lake phytoplankton and close-range reflectance measures - (one semester)

Gabriel Wolken (one semester, summer). Limnology of high altitude lakes on Boulder Mountain - Aquarius Plateau, Utah.