

VITAE

BILL RIPPLE
8430 NW Starview Drive
Oregon State University
Corvallis, Oregon 97331

U.S. Citizen
Office Phone: 503-754-3056
Home Phone: 503-754-9086

EDUCATION

- Ph.D. Oregon State University, Major - Physical Geography,
Minor (integrated) Remote Sensing/Geographic Techniques - Rangeland
Resources, 1984.
Ph.D. Thesis: "Relationships Between Grass Canopy Characteristics and
Landsat Thematic Mapper Bands."
- M.S. University of Idaho, College of Mines and Earth Resources, Major - Geography,
1978.
M.S. Thesis: "Integration of Remotely Sensed Data with Soils and Slope Maps
for Erosion Predictions."
- B.S. South Dakota State University, Brookings, South Dakota, Major - Geography,
1974.

PROFESSIONAL EXPERIENCE

1984, November to present
Department of Geography, Oregon State University, Corvallis, Oregon
Adjunct Professor Member of the Oregon State Graduate Faculty. This appointment
allows for the teaching of graduate level courses, and serving on thesis committees.

1984, June to present
Environmental Remote Sensing Applications Laboratory, Oregon State University,
Corvallis, Oregon
Research Scientist Faculty research appointment serving as project manager for
research involving: 1) diurnal reflectance of competing shrub species in the
Siskiyou Mountains, Oregon, 2) the study of remote sensing and computer mapping
techniques to monitor elk impacts on the vegetation of Mount Rainier National
Park, 3) wildlife habitat mapping in Olympic National Park and the Warm Springs
Indian Reservation, 4) remote sensing of plant water stress.

1984, February to July
Department of Fisheries and Wildlife, Oregon State University, Corvallis, Oregon
Consultant Responsible for testing computerized methods for analyzing and mapping
vegetation and stream data collected for a riparian study sponsored by the National
Science Foundation.

1984, January to June
Department of Geography, Oregon State University, Corvallis, Oregon
Co-manager of Cartographic Service Management duties include client interviews,
fiscal accounting, and supervising employees. The capabilities of the Cartographic
Service include a full range of modern techniques including photographic and
automated mapping operations.

PROFESSIONAL EXPERIENCE (continued)

1983, September to December

Department of Geography, Oregon State University, Corvallis, Oregon
Instructor of Geography Responsible for teaching a graduate level course in "Automated Geographic Data Handling." Lectures included both theoretical and applied concepts in automated cartography, machine processing of remotely sensed data, and geographic information systems.

1983, May to September

Environmental Remote Sensing Applications Laboratory, Oregon State University, Corvallis, Oregon
Field Research Assistant Utilized a multiband radiometer to remotely sense plant canopies for a NASA research project. The objective was to spectrally monitor phenological changes in vegetation.

1981, September to June, 1983

Department of Geography, Oregon State University, Corvallis, Oregon
Teaching Assistant Responsible for laboratory instruction in graduate level Aerial Photography Interpretation, Geographic Information Systems, Computer Cartography, Remote Sensing, and Vegetation Geography (undergraduate) coursework.

1981, January to May

South Dakota State Planning Bureau, Planning Information Section, Pierre, South Dakota
Director of the Planning Information Section Responsible for employee supervision (staff of 5), fiscal budgeting (\$229,000), contract negotiations, computer system management, and remote sensing project work.

1977, December to January, 1981

South Dakota Planning Bureau, Land Resource Information System, Pierre, South Dakota
Natural Resource Data Analyst Coordinator for South Dakota's remote sensing and geographic information system projects, including the supervision of two employees. Projects included: 1) EPA 208 Water Quality - assessing nonpoint sources of pollution from the land using soils data, the universal soil loss equation, and land cover information obtained from digital Landsat data and U-2 high altitude aerial photography. 2) South Dakota Land Cover Inventory - work on the state-wide inventory using digital Landsat imagery to classify and map land cover types. 3) Land capability studies - utilization of a computerized geographic information system for land suitability analysis (i.e., agricultural productivity, ground water recharge areas, wildlife habitat, etc.).

1977, September to December

Department of Agricultural Engineering, University of Idaho, Moscow, Idaho
Researcher Half-time employment on a 208 water quality planning project. The job supported thesis level research concerning soil loss and erosion modeling using a computer mapping data base.

1977, May to August

EROS Data Center, Technicolor Government Services Inc., Sioux Falls, South Dakota
Summer Assistant Employment with the applications branch. The research involved the composite mapping of remotely sensed vegetation data with soils and slope data for sedimentation analysis.

PROFESSIONAL EXPERIENCE (continued)

1977, January to May

Department of Planning, City of Moscow, Moscow, Idaho

Planning Technician Collected and illustrated data for the planning commission.

Remote sensing and cartographic techniques were used in the development of a comprehensive plan.

1976, April to July

South Dakota State Planning Bureau, Pierre, South Dakota

Consultant Worked on the South Dakota Land Resource Inventory Project. The assignment was to collect and map land cover data for use in verifying the results of remote sensing analysis.

1974 & 1975, Summers

Custer State Park, Department of Game, Fish, and Parks, Hermosa, South Dakota

Interpretative Programs Director Developed and presented slide shows on the flora, fauna, and geological features in the park.

SPECIAL SKILLS

Digital Landsat data analysis; statistical methods; field research techniques; field methods for vegetation ecology; computerized spatial data analysis; cartographic techniques; aerial photo interpretation; FORTRAN programming; plant water stress analysis.

COMPUTER HARDWARE EXPERIENCE

Mainframe Computers - IBM 360 (TSO), Cyber 70/73 (NOS)

Mini Computers - SEL Gould 32/67 (MPX)

Micro Computers - IBM-XT (MS-DOS), Apple IIe, Tektronix 4052

COMPUTER SOFTWARE EXPERIENCE

--SIPS	Statistical Interactive Programming System
--MAP	Map Analysis Package
--TABORD	Tabular Analysis of Vegetation Data
--CAM	Cartographic Automatic Mapping
--SYMAP	Choropleth and Isopleth Mapping Programs
--SYMVU	3 Dimensional Mapping Software
--CALFORM	Calcomp Plotter Graphics
--SPSS	Statistical Package for the Social Sciences
--POLYGRID	Polygon to Grid Cell Digitization Routines
--LIMAP	Landsat Imagery Analysis Package
--DTAP	Digital Terrain Analysis Package
--IMGRID	Information Manipulation System for Grid Cell Data
--ADATABASE	Tabular Information Management System
--SAS	Statistical Analysis System
--MICROMP	Computer Assisted Cartography Using and Apple II Computer
--A/DIPS	Apple II Digital Image Processing System
--PixSys	Pictorial Information Extraction System
--SAGIS	System Applications Geographic Information System

ORGANIZATIONAL AFFILIATIONS

1. Association of American Geographers
2. American Society of Photogrammetry and Remote Sensing (member of an editorial review committee for Photogrammetric Engineering and Remote Sensing)
3. American Society of Photogrammetry and Remote Sensing, chairman - Publications Subcommittee of the Geographic Information Management Systems Committee
4. Member of the Oregon State Mapping Advisory Committee

RESEARCH GRANTS AND CONTRACTS

1985-1986

Principal Investigator, Remote Sensing of Elk Trail and Wallow Impacts in Mount Rainier National Park. Sponsor - National Park Service, Cooperative Agreement No. CA-9000-3-0003, Subagreement No. 16.

1985-1986

Principal Investigator, Classification of Digital Landsat Data for Wildlife Management Applications on the Warm Springs Indian Reservation, Oregon. Sponsor - Confederate Tribes of Warm Springs.

1985

Co-Principal Investigator, Spectral Reflectance Patterns in Some Key Cascade West Slope Vegetation Types. Sponsor - Weyerhaeuser Company.

1984-85

Co-Principal Investigator, Remote Sensing of Vegetation. Sponsor - National Aeronautics and Space Administration, NASA Contract NGL-39-002-053.

1984-85

Principal Investigator, Integration of Digital LANDSAT Data with the MOSS Geographic Information System. Sponsor - Oregon Land Conservation and Development Commission and Department of Energy.

1984

Principal Investigator, Diurnal Reflectance of Competing Shrub Species in the Siskiyou Mountains of Oregon. Sponsor - U.S.D.A. Forest Science Laboratory.

1980-1981

Principal Investigator, Development of Techniques to Monitor Nonpoint Sources of Water Pollution Using Remote Sensing and a Geographic Information System. Sponsor - South Dakota Department of Environmental Protection.

PUBLICATION LIST

Schlesinger, Jerry; Loveland, Tom; and Ripple, Bill. Spearfish Land Capability Study. South Dakota State Planning Bureau, Pierre, South Dakota, August 1978.

Schlesinger, Jerry; Loveland, Thomas; and Ripple, Bill. Assessing Nonpoint Sources of Pollution in South Dakota. Land Resource Information System, State Planning Bureau, Pierre, South Dakota, September 1978.

PUBLICATION LIST (con't)

Schlesinger, Jerry; Ripple, Bill; and Loveland, Thomas. "The Integration of Landsat with Other Natural Resource Data for 208 Water Quality Planning in South Dakota." Proceedings of the Fall Convention of the American Society of Photogrammetry. Albuquerque, New Mexico, October 16-20, 1978. pp. 440-456.

Loveland, Thomas; Schlesinger, Jerry; and Ripple, Bill. "Compositing Natural Resource and Land Use Information in Spearfish, South Dakota: A Land Capability Study." Proceedings of the Fall Convention of the American Society of Photogrammetry. Albuquerque, New Mexico, October 16-20, 1978. pp. 343-359.

Schlesinger, Jerry; Ripple, Bill; and Loveland, Thomas. "Land Capability Studies of the South Dakota Automated Geographic Information System." Computer Mapping in Natural Resources and the Environment: Including Applications of Satellite-Derived Data, Laboratory for Computer Graphics and Spatial Analysis, Harvard University, Cambridge, Mass. 1979. pp. 105-114.

Ripple, Bill. "Landsat: Satellite Technology in 208 Planning." Eco-Forum. Published by the South Dakota Resources Coalition, Volume VI, Number 9, October 1979.

Ripple, Bill. "South Dakota State Planning Bureau's Remote Sensing Program." Proceedings of the Western Regional Remote Sensing Conference, National Aeronautics and Space Administration, Monterey, California, NASA Conference Publication 2148, October 17-19, 1979. pp. 1-110, 1-115.

Ripple, Bill. Belle Fourche Land Capability Analysis: An Integration of Soils and Geology Data. South Dakota State Planning Bureau, Pierre, South Dakota, June 1980.

Miller, Steve and Ripple, Bill. "Learning by Layering: Benefits Multiply as Computer 'Composites' Discrete Studies." The Western Planner, Volume 1, Number 8, October 1980.

Ripple, Bill and Erickson, Terry. Soil Erosion Modeling with a Land Resource Information System: The Lake Hendricks Watershed. South Dakota State Planning Bureau, Pierre, South Dakota, March 1981.

Ripple, Bill J. and Miller, Steve B. "Remote Sensing and Computer Modeling for Water Quality Planning in South Dakota." Chapter in Remote Sensing for Resource Management. Edited by Chris J. Johannsen and James L. Sanders. Soil Conservation Society of America, Ankeny, Iowa. 1982. pp. 309-316.

Tessar, Paul A.; Palmer, E. Charles; Ripple, Bill J. "Remote Sensing as a Tool for Resource Management by State Governments." Chapter in Remote Sensing for Resource Management. Edited by Chris J. Johannsen and James L. Sanders. Soil Conservation Society of America, Ankeny, Iowa. 1982. pp. 519-531.

Ripple, William J. Monitoring Annual Ryegrass with the LANDSAT Thematic Mapper Bands. Environmental Remote Sensing Applications Laboratory, ERSAL Publication 84-1, Oregon State University, Corvallis, Oregon, 1984.

PUBLICATION LIST (con't)

Schrumpf, B.J., Isaacson, D.L., and Ripple, W.J. "Desert Shrub Community Variables and Spectral Reflectance Properties." In Research in Rangeland Management. Special Report No. 743, Oregon State University, Agricultural Experiment Station, Corvallis, Oregon, June, 1985. pp. 11-22.

Isaacson, D.L., Schrumpf, B.J., and Ripple, W.J. "Radiometric Responses to Step-wise Removal of Vegetation from a Stationary Plot." Proceedings of Pecora 10. Poster Paper, Fort Collins, Colorado, August 20-22, 1985.

Ripple, William J. "Landsat Thematic Mapper Bands for Characterizing Fescue Grass Vegetation." International Journal of Remote Sensing. 6(8): 1373-1384, August 1985.

Ripple, William J. 1985. "Asymptotic Reflectance Characteristics of Grass Vegetation." Photogrammetric Engineering and Remote Sensing. 51(12):1915-1921.

Ripple, William J., Schrumpf, B.J., and Isaacson, D.L. "The Influence of Observational Interdependence on Spectral Reflectance Relationships with Plant and Soil Variables." International Journal of Remote Sensing, (In press).

Ripple, William J. "Phenological Effects of Grass Canopy/Spectral Relationships." Forthcoming in Proceedings of the Annual Convention of the American Society of Photogrammetry and Remote Sensing. Washington D.C., March 16-21, 1986.

Ripple, William J. and Ray, John (editors). The Applications of Geographic Information Systems for Resource Management. American Society of Photogrammetry and Remote Sensing, Falls Church, Virginia, (In preparation).

Ripple, William J. "Spectral Reflectance Relationships to Leaf Water Stress." Photogrammetric Engineering and Remote Sensing, (In review).