

JACOB P. VERSCHUYL, PHD

National Council for Air and Stream Improvement (NCASI)

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EDUCATION:

PhD in Ecology & Environmental Science

Ecology Department, Montana State University, Bozeman, MT 59717. May, 2007. GPA 4.0

B.S. in Wildlife Management; Minor in Biostatistics

Wildlife and Fisheries Department, Humboldt State University, Arcata, CA 95521. May 2000. GPA 3.56

RECENT PUBLICATIONS AND PRESENTATIONS:

- Schweinle, J., A. Rödl, P. Börjesson, D. G. Neary, J. W.A. Langeveld, G. Berndes, A. Cowie, S. Ahlgren, M. Margni, C. Gaudreault, **J. Verschuyll**, T. B. Wigley, K. Vice and B. Titus 2015. *Assessing the Environmental Performance of Biomass Supply Chains: Methods, Results, Challenges and Limitations*. IEA Bioenergy Task 43; Tech. Rep. 122 pp.
- Betts, M. G., **J. Verschuyll**, J. Giovanini, T. Stokely, and A. J. Kroll. 2013. *Initial experimental effects of intensive forest management on avian abundance*. Forest Ecology and Management 310:1036–1044.
- Riffell, S., **J. P. Verschuyll**, D. Miller, T. B. Wigley. 2012. *Potential biodiversity response to intercropping herbaceous biomass crops on forest land*. Journal of Forestry 110: 42-47.
- Rupp, S. P., L. Bies, A. Glaser, C. Kowaleski, T. McCoy, T. Rentz, S. Riffell, J. Sibbing, **J. Verschuyll**, and T. Wigley. 2012. *Effects of bioenergy production on wildlife and wildlife habitat*. Wildlife Society Technical Review 12-03. The Wildlife Society, Bethesda, Maryland, USA.
- Riffell, S., **J. P. Verschuyll**, D. Miller, T. B. Wigley. 2011a. *Biofuel harvests, coarse woody debris, and biodiversity – A meta-analysis*. Forest Ecology and Management 261(4): 878-887.
- Riffell, S., **J. P. Verschuyll**, D. Miller, T. B. Wigley. 2011b. *Biodiversity response to short-rotation woody crops*. GCB Bioenergy 3: 313–321.
- Stumpf, J.P., N. Denis, T. Hamer, G. Johnson, and **J. Verschuyll**. 2011. *Flight Height Distribution and Collision Risk of the Marbled Murrelet (Brachyramphus Marmoratus): Methodology and Preliminary Results*. Journal of Marine Ornithology 39:11-124.
- Holmstrom, L., T. Hamer, E. Colclazier, N. Denis, **J. Verschuyll**, and D. Ruché. 2011. *Assessing Avian-Wind Turbine Collision Risk: An Approach Angle Dependent Model*. Wind Engineering 35:289–312.
- **Verschuyll, J. P.**, S. Riffell, D. Miller, T. B. Wigley. 2011. *Biodiversity Response to intensive biomass production from forest thinning in North American forests – A meta-analysis*. Forest Ecology and Management 262: 221-232.
- McWethy, D. B., A. J. Hansen and **J. P. Verschuyll**. 2010. *Disturbance, available energy and bird richness: A test of the dynamic equilibrium hypothesis*. Landscape Ecology 25: 533-549.
- Jones, D. A., K. Bly-Honess, J. I. Paugh, A. J. Hansen, K. Doherty, **J. P. Verschuyll**, R. Carle, and S. J. Story. 2009. *Monitoring land use and cover around parks: A conceptual approach*. Remote Sensing of Env. 113(7): 1346-1356.
- McWethy, D. B., A. J. Hansen and **J. P. Verschuyll**. 2009. *Edge effects for songbirds vary with forest productivity*. Forest Ecology and Management 257: 665–678.
- **Verschuyll, J. P.**, A. J. Hansen and D. B. McWethy. 2009. *Letter to the Editor: Assessing species-energy relationships at multiple scales*. Ecological Applications 19(7): 1963-1965.
- **Verschuyll, J. P.**, A. J. Hansen and D. B. McWethy. 2008. *Is the effect of forest structure on bird diversity modified by forest productivity?* Ecological Applications 18(5): 1155–1170.
- **Verschuyll, J. P.** 2007. *Biodiversity potential in the Pacific and Inland Northwest: The relative importance of forest structure and available energy in driving species diversity*. Doctoral dissertation, Montana State University, 190 pp.
- Presentation: *Relationships between intensive biomass production and biodiversity in N. American forests*. NCASI Canada Annual Conference. Vancouver, BC. November 16, 2011
- Presentation: *Potential impacts of biofuel production in forests on biological diversity: results of meta-analyses II*. The Wildlife Society Annual Meeting Waikoloa, HI. November 6, 2011

PUBLICATIONS AND PRESENTATIONS (CONTINUED):

- **Presentation:** *A manipulative study of the effects of forest herbicide use on biodiversity and ecosystem processes.* NCASI West Coast Regional Meeting, Vancouver, WA. September 22, 2011
- **Presentation:** *Relationships between intensive biomass production and biodiversity in N. American forests.* NCASI West Coast Regional Meeting, Vancouver, WA. September 20, 2011
- **Presentation:** *Does bird response to harvest intensity and pattern vary with forest productivity?* NCASI West Coast Regional Meeting. Portland, OR. September 30, 2010
- **Presentation:** *The influence of landscape setting on bird diversity;* NCASI West Coast Regional Meeting. Portland, OR. September 25, 2009
- **Presentation:** *Is the effect of forest structure on bird diversity modified by forest productivity?* Presentation for the Oregon Chapter of the Wildlife Society Annual Conference. Gleneden Beach, OR. February 11, 2009
- **Presentation:** *Use of Radar to Investigate Avian Collision Potential near Proposed or Existing Overhead Lines.* Presentation for the International Conference on Overhead Lines. Fort Collins, CO. March 28, 2008
- **Presentation:** *Inland Flight Heights of Newell's Shearwater and Hawaiian Petrel on the Island of Kauai.* Presentation for the Pacific Seabird Group Annual Meeting and Conference, Blaine, WA. February 2, 2008
- **Presentation:** *Biodiversity potential in the Pacific and Inland Northwest: the relative importance of forest structural complexity seral stage and available energy in driving species diversity.* Dissertation Defense. Montana State University, OR. April 24, 2007
- **Presentation:** Results of three manuscripts presented at the 2006 NCASI West Coast Regional Meeting. Portland, OR. September 28, 2006
- **Presentation:** *Biodiversity potential in the Pacific and Inland Northwest: the relative importance of forest structural complexity seral stage and available energy in driving species diversity.* Ecological Society of America annual meeting and conference, Memphis TN. August 8, 2006
- **Presentation:** *Biodiversity potential in the Pacific and Inland Northwest Progress Report.* Presented at the NCASI West Coast Regional Meeting. Forest Management: Terrestrial Biodiversity. Portland, OR. September 15, 2004.

WORK EXPERIENCE

- ❖ **Western Wildlife Program Manager, NCASI**, P.O. Box 1259, Anacortes, WA. Jul. 2013 – present.
 - Manage research program with \$700K- \$1.1 mil. annual budget.
 - Threatened and endangered species habitat relationships
 - Effects of intensive forest management on biodiversity
 - Wildlife response to variation in post-harvest retention patterns
 - Effects of natural and anthropogenic disturbances on wildlife and biodiversity in temperate forests
- ❖ **Biodiversity Research Coordinator, NCASI**, P.O. Box 1259, Anacortes, WA. Oct. 2009 – Jun. 2013.
 - Effects of intensive forest management on ecosystem processes.
 - Effects of biomass harvest on biodiversity
 - Effects of forestry in the Pacific Northwest on avian diversity and abundance
 - Trends in avian diversity and abundance; responses to forest management
- ❖ **Ecologist, Hamer Environmental**, 1510 South 3rd St. Mount Vernon, WA. May 2007 – Sept 2009.
 - Factors leading to Spotted Owl persistence: A 20 year retrospective (Seattle City Light Wildlife Research Grant).
 - Assessing flight height and passage rates of Newell's Shearwater and Hawaiian Petrel on the island of Kauai (Kauai Island Utility Cooperative HCP).
 - Marbled Murrelet Habitat Conservation Plan Science Team Report, Washington Department of Natural Resources
 - Marbled Murrelet flight height and passage assessment using marine radar.
 - Northern goshawk survey effort; Entiat transmission line.

WORK EXPERIENCE (CONTINUED):

- ❖ **Wildlife Ecologist, EDAW Inc.**, 815 Western Ave Suite 300, Seattle, WA 98104. Feb. 2002 – Apr. 2003.
Supervisor: Colleen McShane
 - Lewis River hydroelectric relicensing; terrestrial component, Cowlitz, Skamania, and Clark Counties, Washington.
 - Klamath River hydroelectric relicensing; terrestrial component, Klamath County, OR, and Siskiyou County, CA.
 - Valley Rainbow 500 Kv Transmission Line Interconnection, Riverside and San Diego counties, CA.
- ❖ **Wildlife Technician, Oregon State University**, Department of Forest Science 321 Richardson Hall, Corvallis, OR 97331. Sept. 2001 - Feb. 2002. *Supervisor: Dave Waldien, PhD*
 - Measuring small mammal response to alternative timber harvest practices.
- ❖ **Seasonal Field Biologist, Kingfisher Environmental Consultants**, 2792 NW Angelica Dr. Corvallis, OR 97330. March - July 2001. *Supervisor: John Perkins*
 - NSO surveys on Oregon Department of Forestry lands in NW Oregon
- ❖ **Exp. Biology Aide, Oregon Dept. of Fish and Wildlife**, Newport, OR. Sept.-Dec. 2000. *Supervisor: Robin Brown*
 - Harbor seal radio telemetry and salmonid predation surveys Alsea River and Bay, Oregon.
- ❖ **Seasonal Field Biologist, Turnstone Environmental Consultants**, 24409 Decker Rd. Corvallis, OR. 97333. May-Aug. 2000. *Supervisor: Tom Williamson*
 - Marbled murrelet surveys BLM Coos Bay district, Oregon.
- ❖ **Seasonal Field Biologist, Green Diamond Resource Company**, P.O. Box 68, Korbelt, CA 95550-0068. May 1997 - Aug. 1999. *Supervisor: Lowell Diller, PhD*
 - Northern spotted owl demographic study. Surveyed for, captured, and banded spotted owls.
 - Northern flying squirrel nest density study.
- ❖ **Student Assistant, Humboldt State University, Volunteer shorebird surveying**, Department of Wildlife, Humboldt State University, #1 Harpst Street, Arcata, CA 95521. Fall 1998 - Spring 2000. *Supervisor: Mark Colwell, PhD*

DOCTORAL RESEARCH

- ❖ **Landscape Biodiversity Lab, Montana State University: NCASI and NFWF Funded Research.** Ecology Department, P.O. Box 173460 Bozeman, MT 59717. April, 2003-May 2007.

Coordinated with the National Council for Air and Stream Improvement (NCASI), Weyerhaeuser, Plum Creek, Boise Corp., Wenatchee National Forest, Boise National Forest, Payette National Forest, Willamette National Forest, Oregon BLM biologists and foresters to complete a large scale bird point count and forest inventory sampling effort across Oregon, Washington and Idaho with 13 crew members spread across three remote field sites. Compiled and formatted biodiversity, forest structure and biophysical factor data sets, including three collected during previous studies. Performed a variety of statistical analyses, including: simple linear and multiple regression; ANOVA; mixed effects models; and principle components analysis. Wrote successful proposals for additional research funding from the National Fish and Wildlife Foundation (NFWF) and the University of Montana, and presented results to timber company collaborators as well as at numerous scientific meetings. Resulted in three publications (authored or co-authored).

TEACHING AND WORKSHOPS

- ❖ Lecturer in Principles of Ecology (Biology 303); Montana State University, Spring 2007.
- ❖ Led workshop titled “Biodiversity in Managed Forests of the Northwest”. Presented dissertation study results and led group discussion with stakeholders on landscape scale management applications. Winter 2007.
- ❖ Led resume building workshop, Conservation Unlimited Sponsored Event, Humboldt State University, Spring 2000.
- ❖ Lecturer in Introduction to Wildlife Management (Wildlife 111), Humboldt State University, Fall 1998 and 1999.
- ❖ Prepared assignments, administered, graded and recorded examinations and quizzes for Cosmos (Physics 304), Humboldt State University, Spring 1997.

SPECIALIZED TRAINING & SOFTWARE EXPERIENCE

- ❖ Modelling Patterns and Dynamics of Species Occurrence, Proteus Wildlife Research Consultants, Completed March 2010
- ❖ Proficient use of the following programs: **R** statistical computing software, ArcGIS 9.x, ArcView 3.x, DISTANCE, MARK, FRAGSTATS, Excel, Access, Word, and PowerPoint.
- ❖ ESRI ArcGIS 9.x online training, ESRI Training and Education, <http://www.esri.com/training>. Completed October 2006.
- ❖ Microsoft Access training; Montana State University Great Falls, College of Technology. Completed March 2004.
- ❖ ORV safety certification; State of California. Completed in June 1997

PROFESSIONAL ORGANIZATIONS

- ❖ **The Ecological Society of America (ESA):** Active member (since 2003)
- ❖ **The Wildlife Society (TWS):** Active member. Biodiversity Working Group (Treasurer 2011-2013). Served as Wildlife Society student representative (California North Coast Chapter) 1998-1999.
- ❖ **Pacific Seabird Group (PSG):** member 2008-2009, 2013-present
- ❖ **Society for Conservation Biology (SCB):** member 2009-2010
- ❖ **Conservation Unlimited:** Active member from Sept. 1996 - May 2000. President (Sept 1999 – May 2000). Conservation Unlimited is the oldest club at Humboldt State University and serves as the student chapter to The Wildlife Society.
- ❖ **Wildlife Conclave:** Participant in wildlife conclave, a competition between wildlife students from universities with wildlife ecology or management programs, sponsored by The Wildlife Society 1999,2000.

SPECIALIZED COURSEWORK (* DENOTES GRADUATE LEVEL COURSEWORK)

Wildlife Habitat Modeling*	Analysis of Ecological Communities*	Landscape Ecology*
Frontiers in Landscape Ecology*	Analysis of Population and Habitat Data*	Avian Population Biology*
Biological Risk Assessment*	Experimental Design & ANOVA*	Mixed Effects Models*
Multiple Regression*	Upland Habitat Management	Wildlife Techniques
Non-game Wildlife Management	Wildlife Conservation & Administration	Multivariate Calculus
Ornithology	Shorebird Conservation and Management	Mammals Management

AWARDS RECEIVED

- ❖ **Distinguished Lecturer, Plum Creek Lecture Series, College of Forestry, University of Montana** March 2014.
- ❖ **Transboundary Research Award, University of Montana**, Received Apr. 2005. Award given for large scale research with conservation or management applications that extend across political boundaries.
- ❖ **The California North Coast Chapter of the Wildlife Society: Student of the Year**, Received Apr. 2000. Award given to the “Student of the Year” for the 1999-2000 academic year.
- ❖ **Rocky Mountain Elk Foundation: Wildlife Leadership Award**, Received Apr. 1999. A national award for a select number of wildlife undergraduates who demonstrated leadership potential and solid academic performance.
- ❖ **Humboldt State University: Mark P. Bush Memorial Scholarship**, Received Nov. 1999. Award given to one undergraduate wildlife student annually, who has demonstrated high academic achievement and professional promise
- ❖ **Humboldt State University: Stanley W. Harris Scholarship**, Received Nov. 1999. Award given to one undergraduate wildlife student annually, who has demonstrated high academic achievement, professional promise, a well written essay on their conservation ethic, and superior letters of recommendation.
- ❖ **Humboldt State University: Presidential Scholar**, spring 1999; GPA>3.85