

THOMAS T. VEBLEN

CURRICULUM VITA

PERSONAL INFORMATION

Office Address: Department of Geography
Campus Box 260
University of Colorado
Boulder, CO 80309-0260

Email: Veblen@Colorado.Edu

Webpage: <http://www.colorado.edu/geography/biogeography/>

Telephone and FAX: (303) 492-8528 and FAX (303) 492-7501

EDUCATIONAL BACKGROUND

B.A. (1969), M.A. (1970), and Ph.D. (1975) - Geography, University of California, Berkeley, CA

EXPERIENCE IN HIGHER EDUCATION

- 1981- Assistant Professor (1981), Associate Professor (1983), Full Professor (1988), Arts & Sciences Professor of Distinction (2006), and Distinguished Professor (2017), Department of Geography, University of Colorado, Boulder, CO
- 1990-93 Chairman, Department of Geography, University of Colorado, Boulder
- 1975-79 Visiting Professor of Plant Ecology, School of Forestry, Universidad Austral de Chile, Valdivia, Chile (Smithsonian-Peace Corps Environmental Program)
- 1974-75 Part-time Instructor, Department of Geography, California State University, Hayward, CA

OTHER PROFESSIONAL EXPERIENCE

- 1979-81 Research Fellow, Forest Research Institute, Christchurch, New Zealand

RESEARCH INTERESTS

My research interests are in the areas of biogeography, forest ecology, landscape ecology and the ecological aspects of global environmental change. I have conducted research on how stand-scale and landscape-scale forest patterns result from interactions among natural disturbances, human activities, and recent climatic variation in Guatemala, Chile, New Zealand, Argentina and Colorado. A principal regional focus of my research has been on the temperate forests of the southern Andes, where I have conducted research since 1975 with collaborators

and students from CU, Chile and Argentina. The goal of this continuing research program is a comprehensive understanding of the dynamics of *Nothofagus*- and conifer-dominated forests in relation to natural disturbances, human impacts (e.g. modification of fire regimes and introduction of large herbivores), and climatic variation. This research has been developed through a multi-scale and non-equilibrium approach to forest dynamics. Our research results have informed decisions in silvicultural management and forest conservation in the southern Andes. Another regional focus of my research is Colorado where I am currently conducting research on the effects of human activities and climatic variation on disturbance by fire and insect outbreaks, and their significance to ecological restoration and fire mitigation. Much of this recent work in Colorado, conducted jointly with graduate students and postdocs in my lab, is directed at improving our understanding of historic range of variability in disturbance processes and forest conditions in support of land management by federal, state and local management agencies. From 1999 to 2007 I led a USDA Forest Service project to assess the historic range of variability of seven National Forests in northern Colorado. In 2010, I began a major collaborative international project on Feedbacks and consequences of altered fire regimes in the face of climate and land-use change in Tasmania, New Zealand and the western U.S. sponsored by NSF's program on Partnerships for International Research and Education. My lab's research in Colorado and Patagonia has been continuously supported by NSF from 1987 through 2021 with 14 regular awards from the Geography and Spatial Sciences, Ecology, and International Programs and 15 Doctoral Dissertation Research Improvement awards from the Geography and Spatial Sciences Program.

COURSES TAUGHT

1977-79 Universidad Austral de Chile, Valdivia:
Forest Ecology
Conservation

1981- University of Colorado, Boulder:

Lower Division Lecture Courses

Landforms and Soils
Climate and Vegetation

Upper Division Lecture Courses

Biogeography
Forest Geography
Conservation of Natural Resources
Methods of Vegetation Analysis
Forest Ecology (at CU Mt. Research Station)

Undergraduate Critical Thinking Seminars

Biogeographical Aspects of Global Change
Historic Range of Variability and Future Environments of the Rockies

Ecological Impacts of Global Warming

Graduate Seminars

Biogeography

History and Nature of Physical Geography

Research Design in Physical Geography

Global Fire and Ecological Feedbacks

HONORS, AWARDS AND FELLOWSHIPS

- 1979 New Zealand National Research Advisory Council Post-Doctoral Fellowship
- 1985 Faculty Fellowship, University of Colorado, Boulder
- 1985 John Simon Guggenheim Memorial Fellowship
- 1990 Wallace W. Atwood Lecturer, Clark University
- 1991 Distinguished Visiting Scholar, Western Michigan University
- 1991 Honorary Fellow of the Royal Society of New Zealand (the national academy of science of New Zealand)
- 1992 Honors in Research Awarded by the Association of American Geographers
- 1993 Faculty Fellowship, University of Colorado, Boulder
- 1997 Award for Excellence in Research, Boulder Faculty Assembly, U. of Colorado
- 1998 Visiting Distinguished Ecologist, Colorado State University
- 2000 Henry C. Cowles Award for the best publication in biogeography, Biogeography Specialty Group, Association of American Geographers (for Veblen et al. 1999b)
- 2000 Edward J. Taafe Distinguished Lectureship, Ohio State University
- 2000 Carl O. Sauer Distinguished Scholarship Award, Conference of Latin Americanist Geographers
- 2005 Henry C. Cowles Award for the best publication in biogeography, Biogeography Specialty Group, Association of American Geographers (for Daniels and Veblen 2004)
- 2005 James J. Parsons Distinguished Career Award, Biogeography Specialty Group, Association of American Geographers
- 2006 Appointed Professor of Distinction by the College of Arts and Sciences, University of Colorado at Boulder
- 2007 Faculty Fellowship, University of Colorado, Boulder
- 2007 Journal of Vegetation Science Editors Award (second place, for Sherriff and Veblen 2006)
- 2008 Elected Fellow of the American Association for the Advancement of Science
- 2016 110th Distinguished Research Lectureship, University of Colorado Boulder
- 2017 Distinguished Professor (University of Colorado, system-wide honor)

KEYNOTE ADDRESSES

- 1987 Annual Meeting of the Ecological Society of New Zealand
- 1992 Annual Meeting of the Mile High Chapter of the Society of American Foresters

- 1995 Annual Meeting of the Colorado-Wyoming Society of American Foresters
- 1996 Conference on the Dynamics and Management of Native Forests in Argentina, Tucumán, Argentina
- 1997 Congressional Educational Tour on Forest Health, Organized by the Colorado Timber Industry Association, Golden, Colorado
- 2002 Mountain Forests Conference, International Union of Forestry Research Organizations, Vernon, British Columbia
- 2003 Annual Meeting of the Colorado Native Plant Society, Denver, Colorado
- 2004 Colorado Forest Restoration Network, Glenwood Springs, Colorado
- 2006 Future Range of Variability of Forests in Colorado, Glenwood Springs, Colorado
- 2007 Sixth North American Forest Ecology Workshop, Vancouver, British Columbia
- 2008 Boulder County Ecosystem Symposium, Boulder, Colorado

VISITING LECTURESHIPS

- 1984 Department of Geography, University of California, Los Angeles, one week.
- 1987 Special Program for the Improvement and Development of Ecological Research, Argentinian National Scientific and Technological Research Council, Buenos Aires, one week.
- 1998 Institute of Forest Ecology, University of Agricultural Sciences, Vienna, Austria, two weeks.

INVITED RESEARCH PRESENTATIONS TO COLLOQUIA:

- 1974a Geography, California State University, Hayward
- 1974b Geography, University of Kansas, Lawrence
- 1975a Geography, University of Delaware, Newark
- 1975b Geography, University of Texas, Austin
- 1979 Forestry, Universidad de Chile, Santiago
- 1980a Botany, University of Otago, Dunedin, NZ
- 1980b Forestry, University of Canterbury, Christchurch
- 1981a Geography, University of Colorado, Boulder
- 1981b Geography, University of California, Berkeley
- 1981c EPO Biology, University of Colorado, Boulder
- 1982a INSTAAR, University of Colorado, Boulder
- 1982b Mountain Research Station, University of Colorado
- 1984 Geography, University of California, Los Angeles
- 1985a INSTAAR, University of Colorado, Boulder
- 1985b Botany, University of Wyoming, Laramie
- 1986a Biology, Universidad Nacional del Comahue, Bariloche, Argentina
- 1987a Botany, Iowa State University, Ames, Iowa
- 1987b Geography, University of California, Berkeley
- 1987c Biology, Universidad de Buenos Aires, Buenos Aires, Argentina

- 1987d Botany, Victoria University, Wellington, NZ
- 1987e Botany, University of Auckland, Auckland, NZ
- 1987f Forest Research Center, Christchurch, NZ
- 1987g Geography, University of Colorado, Boulder
- 1988a Geography, Pennsylvania State University, University Park
- 1988b Geography, University of Denver, Denver
- 1990 Geography, Clark University, Worcester, MA
- 1991a Institute of Ecosystem Studies, Millbrook, NY
- 1991b Geography, University of Western Michigan, Kalamazoo, MI
- 1991c Environmental Sciences, University of Colorado, Denver
- 1993 Biology, Universidad Nacional del Comahue, Bariloche, Argentina
- 1997 Forest Sciences, Oregon State University, Corvallis
- 1998 Graduate Program in Ecology, Colorado State University, Fort Collins
- 1998 Geography, University of Colorado, Boulder
- 2002 Forest Research Institute, Warsaw, Poland
- 2002 Regional Office, USDA Forest Service, Denver, Colorado
- 2003 The Nature Conservancy, Boulder, Colorado
- 2006 Regional Office, Chilean Forest Service, Coyhaique, Chile
- 2006 Society of American Foresters, Front Range Chapter
- 2006 College of Arts & Sciences, CU, Boulder
- 2007 Rocky Mountain National Park, Resources Staff, Estes Park
- 2007 Parque Nacional Los Glaciares, Resources Staff, El Chaltén, Argentina
- 2007 Entomology Group, Colorado State University, Fort Collins
- 2007 Forest, Range and Watershed Stewardship Dept., CSU, Fort Collins
- 2007 Forestry School, Universidad Austral de Chile, Valdivia, Chile
- 2008 Ecology and Earth Sci. Departments, Montana State University, Bozeman
- 2015 School of Forestry, Northern Arizona University, Flagstaff
- 2019 Boulder County Nature Association
- 2019 Boulder Chapter of the Rights of Nature Association

PROFESSIONAL SERVICE

Service to Professional, Research, and Conservation Organizations:

- 1981-83 Board of Directors, Biogeography Specialty Group, Assoc. of Am. Geographers
- 1982-85 Board of Directors, Conference of Latin Americanist Geographers
- 1987-89 Chair, Biogeography Specialty Group, Association of American Geographers
- 1991-13 Vice-President of the Southern Connection (Acting President 2001-2004)
- 1991-99 Scientific Advisory Board of the Diane Fossey Gorilla Fund
- 1996-97 Organizer of an Inter-American Institute Workshop on Fire and Global Change in the Western Americas, Silver Falls, Oregon (co-sponsored by America's Inter-hemispheric Geosphere-Biosphere Organization--AMIGO)
- 1996 Member of the Scientific Advisory Group of the Colorado Program of the Nature Conservancy

- 1997 Organizer of an Inter-American Institute Field Conference on Fire and Global Change in the Western Americas, Bariloche, Argentina
- 1998-01 Scientific Advisory Board of the International Foundation for Science, Stockholm, Sweden
- 1998- Scientific Advisory Board of the Temperate Rain Forest Biological Station at Puerto Blest, Argentina
- 2000-01 Panel Member, Geography and Regional Science Program, NSF
- 2001- Science Board, The Four Corners Institute, Santa Fe, New Mexico
- 2005 Co-organizer, Workshop on Fire and Climate, Mountain Research Initiative, USGS, Flagstaff, Arizona
- 2005-07 Member of the Working Group on Historic Fire Regimes of Colorado, The Nature Conservancy
- 2006 Consultant on a fire and climate change report, Pew Center on Global Climate Change
- 2007-08 External Advisory Committee, Facultad de Ciencias Forestales, Universidad Austral de Chile
- 2009-14 Science Advisory Panel, Western Aspen Alliance
- 2010-19 International Science Advisory Board, Centro de Investigaciones en Ecosistemas en la Patagonia, Coyhaique, Chile
- 2013-16 Member of the Governing Council of the Southern Connection

Recent Community Service and Outreach:

- 1993 Preparation of a traveling exhibit of matched photographs of landscape change in Colorado related to fire history and forest health; shown at museums in Boulder, Estes Park and Fort Collins.
- 1993 Advisory Committee on Ecosystem Management, Arapaho-Roosevelt National Forest, Boulder District
- 1994 Evaluation Team for the Range of Natural Variability Reports for the Rio Grande and Routt National Forests
- 1995-97 Member of the Boulder County Task Force for Ecosystem Management
- 1998 Evaluation Team for the Range of Natural Variability Reports for White River National Forest
- 2000 Member of the Task Force to produce a report to the U.S. Congress on Assessment of Climate-Change Effects on Rocky Mountain Terrestrial Ecosystems
- 2000 Organized workshop on fire history and its management implications in Rocky Mountain National Park (presented to the Scientific and Management Staff of RMNP by myself and graduate students)
- 2001 Workshop on historic range of variability and its implications for resource management for the Rocky Mountain Regional Office of the USDA Forest Service (one of three speakers)
- 2002 Briefing on fire history given to the Rocky Mountain Regional Office of the USDA Forest Service
- 2003 Member of the Assessment Team requested by Congressman M. Udall for the 2002

- Hayman fire in Colorado
- 1999-07 Leader of the Historic Range of Variability project encompassing all National Forests of northern Colorado (for the USDA Forest Service)
- 2007 Briefing on fire and bark beetle issues to the Resource Management Staff of Rocky Mountain National Park, Estes Park.
- 2007 External advisor for the Fire Management Plan, Rocky Mountain National Park.
- 2010 Regional Office of the USDA Forest Service: quarterly meetings with the lodgepole pine science team
- 2011 CU Natural History Museum Outreach Exhibit: Burning issues: The Four Mile Canyon Fire, Sept. 6, 2011 - Jan. 26, 2011.
- 2020 Interviewed for and advised in the production of the Rocky Mountain Public Broadcasting System's TV production: The Colorado Experience—Changing Forests. <https://video.rmpbs.org/video/forests-of-change-ufmhof/>

Grant Proposal Reviewer:

Argentine National Agency for Scientific and Technological Promotion (FONCYT)
Argentine Council for Scientific Research and Technology (CONICET)
Australian Research Council
Austrian Research Council
Chilean National Fund for Scientific and Technological Development (CONICYT)
City of Boulder, Department of Open Space
Diane Fossey Gorilla Fund
Earthwatch
Environmental Science Program, Smithsonian Institution
Global Change Program, National Park Service
International Foundation for Science, Stockholm, Sweden
Marsden Fund, Royal Society of New Zealand
Millennium Science Initiative
Montanans on a New Trac (NSF-sponsored)
National Aeronautics and Space Administration
National Oceanic and Atmospheric Administration
National Geographic Society
National Science Foundation
Research Division, Universidad Austral de Chile, Valdivia, Chile
Research Council of Canada
South African National Research Foundation
USDA Forest Service, Forest Biology Program
Wildlife Conservation International, New York Zoological Society, New York

Occasional Manuscript Reviewer for:

Annals of the Association of American Geographers

Annals of Botany
Arctic and Alpine Research
Austral Ecology
Australian Journal of Botany
Biological Reviews
Bioscience
Bosque (Chile)
Butterworths Publishers
Cambridge University Press
Canadian Geographer
Canadian Journal of Forest Research
Canadian Journal of Botany
Columbia University Press
Ecología Austral
Ecological Applications
Ecology and Ecological Monographs
Ecoscience
Environmental Reviews
Folia Geobotanica
Forest Ecology and Management
Frontiers in Ecology and the Environment
Geomorphology
Global Biogeochemical Cycles
Global Ecology and Biogeography
Island Press
John Wiley & Sons Publishers
Journal of Vegetation Science
Journal of Forest History
Journal of Historical Geography
Journal of Biogeography
Journal of the Royal Society of New Zealand
Journal of Ecology
Mountain Research and Development
National Geographic Research
Natural Areas Journal
Nature Climate Change
Nature Geoscience
Nature Australia
New Zealand Journal of Botany
New Zealand Journal of Ecology
Oecologia
Oxford University Press
Palaeogeography, Palaeoclimatology, Palaeoecology
Photogrammetric Engineering and Remote Sensing

Physical Geography
 Phytocoenologia
 Plant Ecology
 Plant Ecology, Evolution and Systematics
 Prentice-Hall Publishers
 Proceedings of the National Academy of Sciences of the U.S.
 Professional Geographer
 Revista Chilena de Historia Natural
 Science
 Trends in Ecology and Evolution (TREE)
 University of Arizona Press
 University of California Press
 University of Chicago Press
 Vegetatio
 Yale University Press
 Yearbook of the Association of Pacific Geographers

Service on Editorial Boards and Advisory Committees:

1982-99	Mountain Research and Development
1985-10	Physical Geography (Biogeography Editor, 1989-92)
1989-90	Vegetatio
1989-92	Journal of Vegetation Science
1990-04	Journal of Biogeography
1990-04	Global Ecology and Biogeography Letters
1991-93	Annals of the Association of American Geographers
1996-00	Annals of the Association of American Geographer (Associate Editor)
1998-04	Phytocoenologia: International Journal of Vegetation Ecology
2000-05	Dendrochronologia: International Interdisciplinary Journal
1995-	Bosque (Chile)
2013-	Forest Research Papers (Poland)
2015-19	Current Forestry Reports (Springer)

Service to the University of Colorado

1987-93	Board of Directors, Ibero-Latin American Studies Center
1989-93	Advisory Board, CU Museum
1990-91	The President's Committee on Global Change
1992-93	<i>Ad hoc</i> Committee on Department/Institute relations
1990-93	Chairman, Department of Geography
1990-93	Governing Council, Institute of Arctic and Alpine Research
1990-93	Advisory Board, Center for Geochronological Dating
1990-93	College of Arts and Sciences Council of Chairs

1994-95	Dean's Personnel Committee, College of Arts and Sciences
1994-97	The University's Program Review Panel
1997	Council of the College of Arts and Sciences
2008	Organizer, Ecological Impacts Panel, CU Climate Change Symposium
2008	Search Committee, Director, National Snow and Ice Data Center, CU
2008-12	Selection Committee, College of Arts & Sciences Fellows Awards
2010-16	Faculty Advisory Board, Undergraduate Research Opportunity Program
2012-13	Chair, Selection Committee, A&S College of Arts & Fellows Awards

Service to the Geography Department of the University of Colorado

I served as Director of Graduate Studies in 1986-1989 and as the Chair of the Department in 1990-93. I have served several terms on the Graduate Studies Committee and many terms on the Personnel Committee. I have frequently served on and chaired ad hoc committees for faculty tenure and promotion reviews. I have mentored numerous junior faculty members. I served as Chair of the Self-Study Teams for the highly successful Program Reviews of the Geography Department in 1992 and again in 2000, and as co-Chair in 2011-12.

GRANTS

- 1972-73 Center for Latin American Studies, University of California, Berkeley, for dissertation research: "The ecological, cultural, and historical bases of forest preservation in Totoncapán, Guatemala"; \$1000. PI: T.T. Veblen.
- 1976-79 Forest Experiment Center, Universidad Austral de Chile, Valdivia: "The ecology of *Chusquea* bamboos"; \$6000. PI: T.T. Veblen.
- 1978-79 Research Division, Universidad Austral de Chile, Valdivia: "Vegetation dynamics under the influences of natural catastrophes in south-central Chile"; \$2000. PI: T.T. Veblen.
- 1982-83 Colorado Commission on Higher Education: "Disturbance and the dynamics of subalpine forests in the Colorado Front Range"; \$20,000. PI: T.T. Veblen.
- 1983-84 Graduate School, University of Colorado, Boulder: "Disturbance and the dynamics of subalpine forests in the Colorado Front Range"; \$3000. PI: T.T. Veblen.
- 1983-84 National Geographic Society: "Gap dynamics in the Valdivian Rain Forest, Chile"; \$15,500. PI: T.T. Veblen.
- 1984-85 Graduate School, University of Colorado, Boulder: "A Photo-historical analysis of forest changes in the Colorado Rocky Mountains"; \$3000. PI: T.T. Veblen.

- 1985-86 Graduate School, University of Colorado, Boulder: "Stability of the forest/steppe ecotone of Patagonia" (travel grant supplemental to a Faculty Fellowship); \$2000.
- 1986-87 American Association for State and Local History: "A comparative historical analysis of forest changes in the Colorado Rocky Mountains using repeat photography and tree population age structure"; \$3000. PI: T.T. Veblen.
- 1986-88 National Science Foundation, Geography Program: "Dissertation Research Award: The forest paludification hypothesis for *Sphagnum* bog formation: a continuation of primary succession in southeast Alaska" (Project Director for Lee F. Klinger); \$25,000.
- 1987-90 National Science Foundation, Geography Program: "Natural disturbance and the dynamics of subalpine forests in the central Rockies"; \$150,000. PI: T.T. Veblen.
- 1987-88 Secretaria de Ciencia y Tecnología, Argentina: "Impacts of large introduced herbivores on the forests of Lanin and Nahuel Huapi National Parks, Argentina"; \$7000. PI: T.T. Veblen. Co-PI: Carlos Martin.
- 1987-88 University of Colorado Undergraduate Teaching Enrichment Program: "Field and laboratory equipment for biogeography"; \$4000.
- 1987-89 National Science Foundation, Geography Program: "Doctoral Dissertation Award: Forest fragmentation at timberline in a Peruvian montane wet forest" (Project Director for Kenneth Young); \$25,000.
- 1988-90 National Geographic Society: "Ecological impacts of introduced red deer on Andean forests, southwestern Argentina;" \$21,750. PI: T.T. Veblen.
- 1989-90 Michaux Committee for Silviculture, American Philosophical Society: "Fire history and forest changes in northern Patagonia;" \$4850. PI: T.T. Veblen.
- 1989-92 MacArthur Foundation: "Biogeography of upper montane forests in eastern Peru and Ecuador;" Project Director for postdocs K. Young and B. Leon; \$358,000.
- 1990-93 National Geographic Society: "Ecological impacts of fire and introduced animals on Andean forests, southwestern Argentina;" \$24,540. PI: T.T. Veblen.
- 1990-93 National Science Foundation, Ecology and Human Dimensions of Global Change Programs: "Natural and anthropogenic disturbance along environmental gradients in the southern Andes;" \$80,000. PI: T.T. Veblen.
- 1991-92 Graduate School, University of Colorado: "Climate variation, disturbances, and the dynamics of forests in western Colorado;" \$4000. PI: T.T. Veblen.

- 1991-92 Global Change Program, University of Colorado: "Does climate change cause genetic change in limber pine?" with D. Tomback; \$12,000.
- 1992-95 National Geographic Society: "The effects of climate variation on forest dynamics in northern Patagonia, Argentina;" \$32,648. PI: T.T. Veblen.
- 1993-95 City of Boulder Open Space Department: "Fire Ecology in the Wildland/Urban Interface of Boulder County;" \$42,927. PI: T.T. Veblen.
- 1995-97 Universidad de Comahue, Bariloche, Argentina: "Ecología de regeneración de plantas en el Parque Nacional Nahuel Huapi, Argentina;" Project Director for Early Career Scientists M. Aisen, T. Kitzberger, A. Premoli, and E. Raffaele. \$2500.
- 1995-98 National Science Foundation, Geography, Ecology, and International Programs; "A multi-scale analysis of the effects of humans and climatic variation on fire regimes in northern Patagonia, Argentina;" \$249,467. PI: T.T. Veblen.
- 1996-97 National Science Foundation, Inter-American Institute Start-Up Grant; "Fire and global change in temperate ecosystems of western North and South America: An IAI Workshop;" \$49,930. PI: T.T. Veblen.
- 1996-97 National Science Foundation; "Doctoral Dissertation Award: Disturbance and tree diversity along the elevational gradient of a subtropical montane forest;" (Project Director for Ricardo Grau), \$10,000.
- 1996-97 National Science Foundation, International Programs; International Meeting: The Southern Connection; \$49,428. PI: T.T. Veblen.
- 1996-97 National Science Foundation, Geography Program; Research Experience for Undergraduate supplement; \$5,000. PI: T.T. Veblen.
- 1992-98 National Park Service Global Change Program: "The effects of climate variation on disturbance regimes and the dynamics of montane forests in the Colorado Front Range;" \$131,000. PI: T.T. Veblen.
- 1996-98 National Geographic Society; "Regeneration dynamics and genetic variation of *Fitzroya cupressoides* in southwestern Argentina;" \$25,000. PI: T.T. Veblen. Co-PIs: T. Kitzberger and A. Premoli.
- 1997-98 World Wildlife Fund; Dynamics of *Nothofagus* treelines in southern Chile and Argentina; Project Director for Ph.D. student L. Daniels. \$6000.
- 1996-98 U.S.D.A. Forest Service; Fire history in Pike National Forest; with J. Donnegan. \$25,000. PI: T.T. Veblen.

- 1998-01 National Science Foundation, Geography Program: Disturbance interactions and catastrophic blowdown in a Rocky Mountain subalpine forest landscape; Collaborative award with W.L. Baker. \$270,000. Subaward to CU: PI: T.T. Veblen.
- 1998-01 Universidad de Comahue, Bariloche, Argentina: "Patrones y procesos ecológicos del bosque templado Andino-Patagónico.;" Project Director for Early Career Scientists M. Aisen, T. Kitzberger, A. Premoli, and E. Raffaele. \$4000.
- 1999 Colorado State Forest Service; A pilot project on stand reconstruction in the montane zone of Boulder County; \$9000. PI: T.T. Veblen.
- 1999-00 U.S.D.A. Forest Service; Range of natural variability assessment for Pike-San Isabel National Forest; \$52,000. PI: T.T. Veblen.
- 1999-02 National Science Foundation, Division of Environmental Biology; Fire history in the subalpine zone of the Colorado Front Range; subaward from the CU LTER Program. Approx. \$24,000 per year.
- 1999-00 National Science Foundation, Geography Program; Research Experience for Undergraduate supplement; \$5,000. PI: T.T. Veblen.
- 2000-01 Graduate School, University of Colorado; Fire and landscape change in northern Patagonia. \$4780. PI: T.T. Veblen.
- 2000-01 U.S.D.A. Forest Service; Range of natural variability assessment for Arapaho-Roosevelt National Forest; \$56,000. PI: T.T. Veblen.
- 2000-01 U.S.D.A. Forest Service; Interactions of fire and spruce beetle outbreaks in White River National Forest: A GIS-modeling approach; \$40,000. PI: T.T. Veblen.
- 2000-01 National Science Foundation, Geography Program; Research Experience for Undergraduate supplement; \$5,000. PI: T.T. Veblen.
- 2000-01 National Science Foundation; Geography Program; "Doctoral Research Award: Disturbance interactions in a Rocky Mountain subalpine forest;" (Project Director for Dominik Kulakowski), \$10,000.
- 2000-01 National Science Foundation; Geography Program; "Doctoral Research Award: Impacts of exotic pine plantations on Paramo grasslands in the Ecuadorian Andes;" (Project Director for Kathleen Farley), \$10,000.
- 2001-03 U.S.D.A. Forest Service; Range of natural variability assessment for Grand Mesa, Routt, and White River National Forests. \$134,000. PI: T.T. Veblen.

- 2001-04 National Science Foundation; Geography Program; Fire and landscape change in northern Patagonia, Argentina: Integrating landscape heterogeneity, land use and climatic variability. \$286,000. PI: T.T. Veblen.
- 2001-02 Graduate School, University of Colorado; Ecological impacts of a massive bamboo flowering event in the southern Andes. \$7000. PI: T.T. Veblen.
- 2002-03 National Geographic Society: Forest dynamics and a massive bamboo flowering in the southern Andes. \$26,910. PI: T.T. Veblen.
- 2002-04 National Science Foundation; Geography, Ecosystems, Ecology, and International Programs: Biota and Ecosystems of the Southern Temperate Zone: An International Conference, Capetown, South Africa, January 2004.\$43,546. PI: T.T. Veblen.
- 2002-03 National Science Foundation; Geography Program; Doctoral Dissertation Award: The effects of climate and disturbance variation on Post-Fire Regeneration of Madrean Pine-Oak Forests in Mexico's Sierra Madre Occidental; (Project Director for Stacy Drury), \$10,000.
- 2002-03 National Science Foundation, Geography Program; Research Experience for Undergraduate supplement; \$6,000. PI: T.T. Veblen.
- 2002-03 National Science Foundation, Geography Program; Doctoral Dissertation Award: The historic range of variability of ponderosa pine in the northern Colorado Front Range: Past fire types and fire effects; (Project Director for Rosemary Sherriff), \$12,000.
- 1999-04 U.S.G.S. Division of Biological Resources, Global Change Program: Disturbance history of Rocky Mountain National Park; \$135,000. PI: T.T. Veblen.
- 2003-04 National Science Foundation, Geography Program: Doctoral Dissertation Award: A Multiscale Analysis of Natural and Human Influences on the Variability of Subalpine Forest Fire History in Rocky Mountain National Park; (Project Director for Jason Sibold), \$12,000.
- 2003-05 U.S.D.A. Forest Service; Assessment of current conditions and long-term trends in Colorado's aspen forests; \$97,513. PI: T.T. Veblen.
- 2003-2005 Joint Fire Science Program; Effects of blowdown, beetle outbreak, and fire history on the behavior and effects of the 2002 fires in western Colorado; \$212,008. PI: T.T. Veblen.

- 2003-2007 National Science Foundation, Ecological Studies Program; Climatic variation and disturbance interactions in subalpine Rocky Mountain forests; \$300,000. PI: T.T. Veblen.
- 2006-2007 National Geographic Society; Forest decline in Chilean temperate rainforests: a multiscale approach; \$25,520. PI: T.T. Veblen.
- 2006-2007 National Science Foundation, Geography Program; Doctoral Dissertation Award: Causes and consequences of forest dieback in temperate rainforests across western Patagonia: A multiscale approach; (Project Director for Andres Holz), \$12,000.
- 2006-2007 National Science Foundation, Geography Program; Environmental heterogeneity and insect outbreaks in Patagonian forests; (Project Director for Juan Paritsis), \$12,000.
- 2006-2009 National Science Foundation, Geography Program; Fire risk and ecological integrity in the wildland urban interface of the Colorado Front Range; \$235,000. PI: T.T. Veblen.
- 2007-2008 Graduate School, University of Colorado, Boulder: " Ecological impacts of fire in Patagonian Chile;" \$7000. PI: T.T. Veblen.
- 2007-2008 U.S. Geological Survey; Climatic drivers of forest dynamics; \$24,950. PI: T.T. Veblen.
- 2007-09 National Science Foundation, Geography Program; Research Experience for Undergraduate supplement; \$6,000. PI: T.T. Veblen.
- 2008-2009 Marsden Fund, New Zealand Royal Society: Modelling New Zealand's *Nothofagus* forests: pattern, process and coexistence; (P.I. George Perry; Assoc. Investigators J. Ogden and T. Veblen), \$124,097.
- 2008-2011 National Science Foundation, Ecological Studies Cluster: Collaborative Research: Wildfire and mountain pine beetle outbreaks in subalpine forests: cross-scale interactions under varying climate. \$500,000. PI: T.T. Veblen. Co-PIs: T. Schoennagel and D. Kulakowski.
- 2008-2010 National Science Foundation, Geography Program; Doctoral Dissertation Award: Effects of climate variation on tree mortality across spatially heterogeneous subalpine forest landscapes in the Front Range of Colorado; (Project Director for Jeremy M. Smith), \$12,000.
- 2010-2012 National Science Foundation, Geography and Spatial Sciences Program; Doctoral Dissertation Award: Spatio-temporal variability of ponderosa pine susceptibility to mountain pine beetle in the Colorado Front Range; (Project Director for Meredith Gartner), \$12,000.

2010-2012 National Science Foundation, Geography and Spatial Sciences Program; Doctoral Dissertation Award: Mountain pine beetle and fire influences on the regeneration of lodgepole pine in northern Colorado: (Project Director for Teresa Chapman), \$12,000.

2010-2013 National Science Foundation, Geography and Spatial Sciences Program; Wildfire regime shifts in southern South America from tree-ring reconstructed fire history networks: climatic controls, land use, and ecological feedbacks; \$300,000. PI: T.T. Veblen. Senior Personnel: Andres Holz and Juan Paritsis.

2010-2017 National Science Foundation, Partnerships for International Research and Education, Office of International Science and Engineering; WildFIRE PIRE: Feedbacks and consequences of altered fire regimes in the face of climate and land-use change in Tasmania, New Zealand and the western U.S. Total award of \$3,800,000 to Montana State University (PI: Cathy Whitlock), University of Idaho (PI: Phil Higuera), and CU (PI: T.T. Veblen; CU budget \$661,000).

2010-2011 University of Colorado Continuing Education Outreach Program; Historical perspectives and effects of the Fourmile Canyon Fire 2010," \$5000. PI: T.T. Veblen.

2011-2015 Australian Research Council; "How has bushfire activity varied around the Southern Hemisphere over the last 10,000 years?" \$560,000. PI: D. Bowman; Foreign Collaborators T.T. Veblen and C. Whitlock.

2011-2013 National Science Foundation, Geography Program; Research Experience for Undergraduate supplement; \$7,500. PI: T.T. Veblen.

2012-2014 National Science Foundation, Geography and Spatial Sciences Program; Doctoral Dissertation Award: Climate variability and the susceptibility of Engelmann spruce to spruce beetle (*Dendroctonus rufipennis*) outbreaks in northwestern Colorado; (Project Director for Sarah Hart), \$11,727.

2012-2014 National Science Foundation, Geography and Spatial Sciences Program; Doctoral Dissertation Award: Spatial and temporal variability of post-fire conifer regeneration in lower treeline forests of the U.S. Rocky Mountains; (Project Director for Monica Rother), \$15,993.

2013-2016 National Science Foundation, Geography and Spatial Sciences Program; Doctoral Dissertation Award: Cross-scale assessment of spatiotemporal patterns and drivers of fire effects in mixed-severity fire regime forests of the Northern Rockies; (Project Director for Cameron Naficy), \$15,983.

2013-2017 National Science Foundation, Geography and Spatial Sciences Program; Collaborative Research: Spruce beetle and wildfire interactions under varying climate in

- the Rockies; \$340,000. CU PI: T.T. Veblen; Clark Univ PI: D. Kulakowski. CU budget \$170,000.
- 2013-2016 National Science Foundation, Geography Program; Research Experience for Undergraduate supplement; \$7,300. PI: T.T. Veblen.
- 2014-2016 Glacier National Park on “Extent and contributing factors of delayed post-fire mortality in Glacier National Park.” \$43,228. P.I.: T.T. Veblen. Co-P.I.: Cameron Naficy.
- 2015-2017 National Science Foundation, Geography and Spatial Sciences Program; “Doctoral Dissertation Research: Avian Community Response to Broad-scale Ecological Disturbances Across Spruce-fir Forests of Southwestern Colorado;” (Project Director for Julia Hicks), \$15247.
- 2015-2018 National Center for Environmental Analysis and Synthesis, SNAP-TNC, and the Wilburforce Foundation; “Identifying common ground among fire researchers studying mixed conifer forests”. P.I.: M. Moritz. Co-P.I.s: T.T. Veblen, C. Allen, P. Hessburg, D. Odion, C. Topik. The funding (c. \$120,000) is administered through UCSB for workshop, travel, and administrative costs.
- 2016-2018 National Science Foundation, Geography and Spatial Sciences Program; “Doctoral Dissertation Research: Assessing Regeneration Niche Limitations to Upslope Migration of Subalpine Forests: Implications of a Changing Climate and Shifting Disturbance Regimes;” (Project Director for Robert Andrus), \$16000.
- 2017-2018 National Science Foundation, CU LTER Subcontract: “Subalpine tree regeneration and aboveground carbon dynamics under a shifting climate toward extended summer;” \$25,200; TT Veblen, R Andrus, BJ Harvey, R Chai.
- 2017-2019 Australian Research Council, “Fire regimes and demographic responses interact to threaten woody species as climate changes: Testing the Interval Squeeze model. Total budget AU \$536,000; CU budget AU\$239,928 (U.S. \$177,081). Collaborative proposal with Neal Enright and Joseph Fontaine of Murdoch University and Florian Jeltsch of University of Potsdam. Role: Partner Investigator.
- 2017-2019 Joint Fire Science Program, “Modeling the influence of climate and local site factors on post-fire regeneration in the Southern Rocky Mountains Ecoregion.” \$25,000. Graduate Research Innovation Award. Role: Project Director for Ph.D. student Kyle Rodman.
- 2018-2019 National Science Foundation, CU LTER Subcontract: “Upslope subalpine tree migration and aboveground carbon dynamics under a shifting climate toward extended summer.” \$34,494; TT Veblen, R Andrus, Rachel Chai.

2018-2021 National Science Foundation, Geography and Spatial Sciences Program; Fire-Driven Forest Transitions in Response to Land-Use Impacts and Moisture Availability “;” \$350,000. Portland State Univeristy PI: A. Holz; CU PI: TT Veblen. Subaward to CU: \$114,700.

RECENT UNDERGRADUATE STUDENT HONORS THESES SUPERVISED

- 2010 Slack, Andrew. Lodgepole pine regeneration following a fire: the influence of lodgepole density, serotiny, and moisture availability, on post-fire establishment in the Routt and White River National Forests. Graduated *cum laude*, May 2010. Current position: Department of Forestry and Wildland Resources, Humboldt State University, Arcata.
- 2011 Bloch, Jared. Lodgepole Pine Regeneration following Mountain Pine beetle Outbreak in Subalpine Forests of Northern Colorado. Graduated *summa cum laude*, May 2011.
- 2012 Albright, Adam. The Spread of Western Balsam Bark Beetle Infestation in Subalpine Fir near Brainard Lake and the CU Mountain Research Station. Graduated *cum laude*, May 2012.
- 2014 Bryan Hankinson. American red squirrel (*Tamiasciurus hudsonicus*) abundance in spruce beetle-infested forests of Colorado. Graduated *magna cum laude*, December 2014.
- 2014 Anderson, Kelly. The Use of Dendroecological Techniques to Build a Master Chronology and Determine Fire Effects in a Mixed-Severity Fire Regime Forest of Northern Montana. Graduated *summa cum laude*, May 2014.
- 2014 Furman, Luke. Influences of experimental microclimate manipulation on conifer regeneration in a recently disturbed, low-elevation site in the Colorado Front Range: Implications for post-fire regeneration under a changing climate. Graduated *summa cum laude*, May 2014. Current position: Resource specialist, County of Boulder Open Space Department.
- 2014 Todorovic-Jones, Alexandra. The Relationship between Engelmann Spruce Radial Growth and Spruce Beetle Infestation in Northwestern Colorado. Graduated *magna cum laude*, May 2014. Current position: graduate student, School of Forestry, Yale University.
- 2015 Jeremy Arkin. An Analysis of Tree Regeneration following the Hayman Fire in the Upper-Montane Zone of the Colorado Front Range. Graduated *cum laude*, May 2015. Current position: graduate student, Faculty of Forestry, University of British Columbia.
- 2016 Kelsea Jo Pellouchoud. Social-Environmental Vulnerability: The Social and Environmental Intersection of Land Fire Risk within the Roosevelt National Forest Wildland-Urban Interface. Graduated *cum laude*, May 2016.

GRADUATE STUDENT AND POST-DOC SUPERVISION

Ph.D. Dissertation and Master Thesis Supervision at University of Colorado:

- 1984 Influences of snow persistence on the regeneration of Engelmann spruce and subalpine fir, Colorado Front Range; Christopher Daly (M.A.), currently Research Scientist, Corvallis, OR.
- 1985 Vegetation changes associated with land use practices in Mbeya region, Tanzania; Salome Kigongo Mashalla (Ph.D.), Professor and Principal, School of Education, University of Dar es Salaam, Tanzania
- 1986 Early forest succession on abandoned agricultural fields on the loess bluffs of western Tennessee; David Shankman (Ph.D.), currently Professor, University of Alabama, Tuskegee, AL.
- 1987 Social dominance and the winter distribution of the Dark-eyed Junco (*Junco hyemalis*); Peter Yaukey (M.A.), currently Professor, University of New Orleans.
- 1987 Ecology of bamboos and their role in forest dynamics in the Wolong Natural Reserve, Sichuan, China; Alan Taylor (Ph.D.), currently Professor, Pennsylvania State University, University Park, PA.
- 1988 Successional change in vegetation and soils of southeast Alaska; Lee Klinger (Ph.D.), currently Applied Ecologist, Sudden Oak Life, Big Sur, CA.
- 1989 The response of understory vegetation to major canopy disturbance in the subalpine forests of Colorado; Marion Reid (M.A.), currently the Regional Ecologist (Western U.S.), The Nature Conservancy, Boulder, CO.
- 1989 Structural dynamics of a pine forest in the American southwest under chronic human disturbance; Melissa Savage (Ph.D.), currently Associate Professor emeritus, University of California, Los Angeles, CA.
- 1990 Biogeography and ecology of timberline forest in north-central Peru; Ken Young (Ph.D.); currently Professor, University of Texas, Austin.
- 1990 Fire history of a Ponderosa pine/Douglas fir forest in the Colorado Front Range; David Goldblum (M.A.), currently Associate Professor, Northern Illinois University, DeKalb, Illinois.
- 1990 Stand response and landscape response to Western Spruce Budworm and Douglas-fir Bark Beetle Outbreaks, Colorado Front Range; Keith Hadley (Ph.D.), currently Professor, Portland State University, Portland, OR.
- 1991 A dendrochronological method of studying tree mortality patterns; Joy Nystrom Mast (M.A.), currently Associate Professor, Carthage College, Wisconsin.

- 1991 The dynamics and disturbance regimes of *Fitzroya cupressoides* forests in the Andes of south-central Chile; Antonio Lara (Ph.D.), currently Professor and Dean, Forestry School, Universidad de Chile, Valdivia, Chile.
- 1991 The regeneration dynamics of *Araucaria araucana* in the southern Andes; Bruce R. Burns (Ph.D.), currently Lecturer, School of Biological Sciences, University of Auckland, New Zealand.
- 1992 The use of remote sensing techniques in the old-growth spruce-fir forests in the Rocky Mountains; Elizabeth M. Nel (M.A.), currently science teacher, St. Vrain School District, Colorado. (Co-supervised with C. Wessman, EPOB.)
- 1993 Climatic and disturbance factors influencing *Pinus ponderosa* stand structure near the forest/grassland ecotone in the Colorado Front Range; Joy N. Mast (Ph.D.), currently Associate Professor, Carthage College, Wisconsin.
- 1994 Fire regime variation along a northern Patagonian forest-steppe gradient: Stand and landscape response; Thomas Kitzberger (Ph.D.), currently Research Scientist, Argentinean National Council for Research and Technology, Bariloche, Argentina.
- 1995 Disturbance regimes and regeneration dynamics of upper montane forests and páramos in the southern Ecuadorian Andes; Philip L. Keating (Ph.D.).
- 1995 Climatic influences on forest dynamics along the forest-steppe ecotone in northern Patagonia; Ricardo Villalba (Ph.D.), currently Research Scientist and Director of the Argentine Snow and Glacier Institute, Mendoza, Argentina.
- 1996 A dendrochronological history of western spruce budworm (*Choristoneura occidentalis* Freeman) infestations and outbreaks in the northern Colorado Front Range; Steven W. Shimek (M.A.).
- 1997 The impact of flood frequency, permafrost distribution, and climate variation on a northern treeline floodplain in Alaska; Alison E. Ariens (Ph.D.), currently Resource Specialist, Department of Natural Resources, AK.
- 1999 Influences of dieback of the bamboo *Chusquea quila* on tree regeneration in canopy gaps in south-central Chile; Mauro Gonzales (M.A.), currently Associate Professor and Director, Forestry School, Universidad Austral de Chile, Valdivia Chile
- 1999 Disturbances and tree species diversity along the elevational gradient of a subtropical montane forest of NW Argentina; Ricardo Grau (Ph.D.), currently Research Scientist, Argentinean National Council for Research and Technology, Tucumán, Argentina.

- 1999 Dendrochronological identification of spruce bark beetle outbreaks in northwestern Colorado; Karen S. Eisenhart (M.A.), currently Assistant Professor, Edinboro University of Pennsylvania, Edinboro.
- 2000 Climatic and human influences on fire regimes in Pike National Forest; Joseph Donnegan (Ph.D.), currently Research Forester, U.S.D.A. Forest Service, Portland, OR.
- 2000 Fire history at high elevation in the Colorado Front Range; Rosemary Sherriff (M.A.), currently Professor, Department of Geography, Humboldt State University.
- 2000 The dynamics of alpine treelines in the southern Andes; Lori D. Daniels (Ph.D.), currently Professor, University of British Columbia, Vancouver, BC.
- 2001 The forest fire regime of an upper montane and subalpine forest, Wild Basin, Rocky Mountain National Park; Jason S. Sibold (M.A.), currently Associate Professor, Department of Anthropology, Colorado State University .
- 2002 Impacts of pine plantations on Paramo ecosystems in Ecuador; Kathleen Farley (Ph.D.), formerly Associate Professor, San Diego State University CA, currently Forest Conservation Coordinator for Department of Natural Resources and Parks, King County, WA.
- 2002 Interactions among natural disturbances in subalpine forests in northwestern Colorado; Dominik Kulakowski (Ph.D.), currently Associate Professor, Clark University.
- 2002 Fire history of Araucaria-Nothofagus forests in the Andean cordillera of south-central Chile; Mauro Gonzalez (Ph.D.), currently Associate Professor and Director, Forestry School, Universidad Austral de Chile, Valdivia Chile.
- 2004 Regeneration dynamics of persistent quaking aspen (*Populus tremuloides*) in western Colorado; Brian P. Kurzel (M.A.), currently Resource Specialist, Colorado State Parks.
- 2004 Tree regeneration responses to *Chusquea montana* bamboo dieback in subalpine forests in the southern Andes; Andres Holz (M.A.), currently Assistant Professor, Portland State University.
- 2004 The role of recent climatic variability on episodic *Pinus ponderosa* recruitment patterns along the forest-grassland ecotone of northern Colorado; Kevin League (M.A.), currently Research Technician, USDA Forest Service, Rocky Mountain Range and Forest Experiment Station, Fort Collins, CO.
- 2004 Historic range of variability and stand development on pinyon-juniper woodlands of western Colorado. Karen S. Eisenhart (Ph.D), currently assistant professor, Edinboro University of Pennsylvania, Edinboro.

- 2004 The historic range of variability of ponderosa pine in the northern Colorado Front Range: Past fire types and fire effects. Rosemary Sherriff (Ph.D.), currently Professor, Department of Geography, Humboldt State University.
- 2004 Modeling wildfire mitigation and ecological restoration in the wildland-urban interface: A study of the montane zone of the Colorado Front Range. Rutherford V. Platt (Ph.D.), currently Associate Professor, Gettysburg College.
- 2005 A multi-scale analysis of natural and human influences on the variability of subalpine forest fire history in Rocky Mountain National Park. Jason Sibold (Ph.D.), currently Associate Professor, Department of Anthropology, Colorado State University.
- 2006 Effects of climate and disturbance on Madrean pine-oak forests in Mexico's Sierra Madre Occidental. Stacy Drury (Ph.D.), currently Research Scientist, USDA Forest Service, Davis, CA.
- 2007 Characterizing historic fire regimes from understory vegetation composition in ponderosa pine-dominated forests of the northern Colorado Front Range. Robin Keith (M.A.).
- 2007 Forest fuel mapping and strategic wildfire mitigation in the montane zone of Boulder County, Colorado. Kevin Krasnow (M.A.), currently Research Faculty, Conservation Research Center and Graduate Program of the Teton Science Schools.
- 2008 Fire history of ponderosa pine-dominated forests in the Colorado Front Range: Elevation, topography and land-use. Meredith H. Albright (M.A.).
- 2009 Spatio-temporal patterns of mountain pine beetle activity in lodgepole and ponderosa pines of the southern Rocky Mountains: influences of climate and habitat heterogeneity. Teresa B. Chapman (M.A.), currently Ph.D. student, Univ. of Colorado, Boulder.
- 2009 Temperature influences on phenology and population growth of mountain pine beetle populations in northern Colorado. Kerry E.W. Malm (M.A.), currently Environmental Analyst, Anchor Point Fire Mitigation, Boulder, CO.
- 2009 Climatic and human influences on fire regimes and forest dynamics in temperate rainforests in southern Chile. Andres Holz (Ph.D.), currently Associate Professor, Portland State University.
- 2009 Insect defoliator outbreaks and environmental heterogeneity in *Nothofagus* forests in the Patagonian Andes. Juan Paritsis (Ph.D.), currently Research Scientist, Argentinean National Council for Research and Technology, Bariloche, Argentina.

- 2012 An examination of background tree mortality and mountain pine beetle disturbance in subalpine forests of the Front Range of Colorado, USA. Jeremy Smith (Ph.D.), currently Instructor, Geography Department, University of Nevada, Reno.
- 2013 Influence of climate variability on radial growth of *Nothofagus pumilio* near altitudinal treeline in the Andes of northern Patagonia, Chile. Claudio Alvarez (M.A.), currently Research Technician and PhD student, Universidad Austral de Chile, Valdivia Chile.
- 2014 Climate variability and the susceptibility of Engelmann spruce to spruce beetle in northwestern Colorado. Sarah J. Hart (Ph.D.), currently Assistant Professor, Forest and Wildlife Ecology, University of Wisconsin, Madison.
- 2015 Influences of an active spruce beetle outbreak on fire severity in spruce-fir forests in southern Colorado. Robert A. Andrus (M.A.), currently Postdoc Research Associate, Environmental and Ecosystem Sciences, Washington State University, Pullman.
- 2015 Conifer regeneration after wildfire in low-elevation forests of the Colorado Front Range: Implications of a warmer, drier, climate. Monica T. Rother (Ph.D.), currently Assistant Professor, Department of Environmental Sciences, University of North Carolina, Wilmington, NC.
- 2015 The occurrence, severity, and interaction of mountain pine beetle and wildfire in the Colorado Front Range. Meredith H. Gartner (Ph.D.).
- 2016 Influences of anthropogenic and bark beetle disturbances on breeding bird populations in the U.S. Rocky Mountains: lessons from the American three-toed woodpecker. Julia J. Kelly (Ph.D.), currently, Researcher, Audobon Society, Tuburon, CA.
- 2016 A cross-scale assessment of historical fire severity patterns, landscape dynamics, and methodological challenges in mixed-severity fire regimes of the northern U.S. Rockies. Cameron E. Naficy (Ph.D.), currently Postdoc Research Associate, Forest Sciences, University of British Columbia, Vancouver.
- 2017 Influences of stand development and climate on above-ground biomass in subalpine forest permanent plots in the Colorado Front Range. Rachel K. Chai (M.A.), currently Ph.D. student, Univ. of Colorado, Boulder.
- 2019 Forest cover change and post-fire response in the southern Rocky Mountains. Kyle C. Rodman (Ph.D.), currently Postdoc Researcher, Forest and Wildlife Ecology, University of Wisconsin, Madison.
- 2019 The impacts of climate change and biotic disturbances on regeneration dynamics in subalpine forests. Robert A. Andrus (Ph.D.), currently Postdoc Research Associate, Environmental and Ecosystem Sciences, Washington State University, Pullman.

Co-Supervision of Graduate Students at Other Universities

- 1999 Efectos del ramoneo sobre la regeneración del bosque de ciprés de la cordillera (*Austrocedrus chilensis*); Maria A. Relva. Ph.D. Co-supervised with L. Sancholuz at the Universidad Nacional del Comahue, Bariloche, Argentina. Currently post-doc research fellow of the Argentinean National Council for Research and Technology, Bariloche, Argentina.
- 2000 Razón de sexos y crecimiento diferencial del ciprés de la cordillera *Austrocedrus chilensis* (Cupressaceae), a lo largo de un gradiente de precipitación; Adriana Edit Rovere. Ph.D. Co-supervised with E. Rapoport and M. Aizen at the Universidad Nacional del Comahue, Bariloche, Argentina. Currently post-doc research fellow of the Argentinean National Council for Research and Technology, Bariloche, Argentina.
- 2006 Interacciones paisaje-disturbio en ecosistemas boscosos de Norpatagonia: Influencias del paisaje en la propagación del fuego y en la recuperación de la vegetación luego de incendios. Monica Mermoz. Masters. Co-supervised with T. Kitzberger at Universidad Nacional del Comahue, Bariloche, Argentina. Currently Staff Scientist, Argentine National Parks.
- 2008 Cambio climático, uso de la tierra y trayectorias de regeneración posfuego. Norlan Tercero-Bucardo. Ph.D. Co-supervised with T. Kitzberger at Universidad Nacional del Comahue, Bariloche, Argentina.
- 2012 Respuestas de especies leñosas a herbívoros e incendios en bosques y matorrales del noroeste de la Patagonia: Estudio de la inflamabilidad vegetal. Melisa Blackhall. Ph.D. Co-supervised with Estela Raffaele. Universidad Nacional del Comahue, Bariloche, Argentina.

Current Graduate Student Supervision:

At University of Colorado:

Rachel Chai, Teresa Chapman

At Universidad Nacional del Comahue, Bariloche, Argentina:

Joaquin Brunet (co-supervisor with T. Kitzberger)

Marcelo Castro (co-supervisor with J. Paritsis)

At Universidad de La Plata, Argentina:

Maria Guadalupe Franco (co-supervisor with Ignacio Mundo)

Post-doc Mentor and/or Sponsor

- 1988-91 Alan J. Rebertus, supported by CU; currently Professor, Northern Michigan University, MI.
- 1989-92 Kenneth R. Young, supported by MacArthur Foundation Research Award; currently Professor, University of Texas, Austin, TX.
- 1995-97 Thomas Kitzberger, supported by National Science Foundation; currently Research Scientist, Argentinean National Council for Research and Technology, Bariloche, Argentina.
- 1995-97 Estela Raffaele, supported by Argentinean National Council for Research and Technology; currently Research Scientist, Argentinean National Council for Research and Technology, Bariloche, Argentina.
- 2000-01 Peter Bebi, supported by the Swiss National Science Foundation and the USDA Forest Service; currently Research Scientist, Swiss Federal Institute for Snow, Ice and Landscape Research, Davos, Switzerland.
- 2002-03 William Pollman, supported by the German science agency (DAAD)
- 2004 Rosemary Sherriff, supported by the Joint Fire Science Program; currently Professor, California State University at Humboldt
- 2004-05 Christof Bigler, supported by the Swiss Foundation for Science and the Joint Fire Science Program, currently Associate Professor ETH University, Switzerland.
- 2002-07 Dominik Kulakowski, supported by the USDA Forest Service, NSF, and the Joint Fire Science Program; currently Associate Professor, Clark University.
- 2003-10 Tania Schoennagel, supported by the National Science Foundation and a Smith Conservation Fellowship; currently Research Associate, INSTAAR, University of Colorado.
- 2010-12 Andres Holz, supported by the National Science Foundation and a CU Chancellor=s Postdoctoral Fellowship; currently Assistant Professor, Portland State University.
- 2010-12 Juan Paritsis, supported by the National Science Foundation and a CU Chancellor=s Postdoctoral Fellowship; currently Research Scientist, Argentinean National Council

for Research and Technology, Bariloche, Argentina.

- 2010-15 Alan Tepley, supported by the National Science Foundation (Wildfire PIRE); currently Research Associate, Smithsonian Institution.
- 2013-14 Christian Temperli, supported by the Swiss National Science Foundation; currently Postdoctoral Researcher at the Swiss Federal Research Institute for Forest, Snow and Landscape Research (WSL).
- 2014-16 Sarah J. Hart, supported by the National Science Foundation and a NASA New Investigator Program award; currently Assistant Professor, Forest and Wildlife Ecology, University of Wisconsin, Madison.
- 2015-17 Brian J. Harvey, supported by a Smith Conservation Research Fellowship; currently Assistant Professor, University of Washington.
- 2016- Jennifer Landesmann (at Universidad del Comahue, co-supervised with T. Kitzberger), supported by a CONICET Postdoctoral Fellowship.

PUBLICATIONS

BOOKS AND MONOGRAPHS

- 1991 T.T. Veblen and D.C. Lorenz. *The Colorado Front Range: A Century of Ecological Change*. University of Utah Press, Salt Lake City. 186 pp.
- 1992 D.C. Glenn-Lewin, R.K. Peet, and T.T. Veblen. Eds. *Plant Succession: Theory and Prediction. Population and Community Biology Series*. Chapman and Hall, London. 352 pp.
- 1996 T.T. Veblen, R.S. Hill, and J. Read. Eds. *Ecology and Biogeography of Nothofagus Forests*. Yale University Press, New Haven. 403 pp.
- 2003 T.T. Veblen, W.L. Baker, G. Montenegro and T.W. Swetnam. Eds. *Fire Regimes and Climatic Change in Temperate Ecosystems of the Western Americas*. Springer-Verlag. 439 pp.
- 2006 T. T. Veblen and J.A. Donnegan. *Historical Range of Variability of Forest Vegetation of the National Forests of the Colorado Front Range*. USDA Forest Service, Rocky Mountain Region and the Colorado Forest Restoration Institute, Fort Collins. 151 pages.

- 2006 D. Kulakowski and T.T. Veblen. *Historical range of variability of forest vegetation of Grand Mesa National Forest, Colorado*. USDA Forest Service, Rocky Mountain Region and the Colorado Forest Restoration Institute, Fort Collins. 84 pages. (refereed).
- 2007 T.T. Veblen, A. Orme, and K. Young. Eds. *Physical Geography of South America*. Oxford University Press. 360 pp.
- 2009 Bentz B, Allen CD, Ayres M, Berg E, Carroll A, Hansen M, Hicke J, Joyce L, Logan J, McMahon J, Macfarlane J, Munson S, Negrón J, Paine T, Powell J, Raffa K, Régnière J, Reid M, Romme W, Seybold S, Six D, Tomback D, Vandygriff J, Veblen T, White M, Witcosky J, Wood D. *Bark Beetle Outbreaks in Western North America: Causes and Consequences*. University of Utah Press, ISBN 978-0-87480965-7. 42 p.

ARTICLES, BOOK CHAPTERS, AND REFEREED REPORTS

- 1975a T. T. Veblen. Alien weeds in the tropical highlands of western Guatemala. *Journal of Biogeography*, Vol. 2, No. 1, pp. 19-25. Spanish translation published in *Anales de la Academia de Geografía e Historia de Guatemala*, Vol. 58, pp. 189-196.
- 1975b T. T. Veblen. Bunchgrass exploitation: An example of intensive land-use among the highland Maya of Guatemala. *Environmental Conservation*, Vol. 2, pp. 269-270.
- 1976a T. T. Veblen. The urgent need for forest conservation in highland Guatemala. *Biological Conservation*, Vol. 9, No. 2, pp. 141-154.
- 1976b T. T. Veblen and R. J. Delmastro. The *Araucaria araucana* gene resource in Chile. *Forest Genetic Resources Information*, No. 5, pp. 2-6.
- 1976c T. T. Veblen, R. J. Delmastro and J. E. Schlatter. The conservation of *Fitzroya cupressoides* and its environment in southern Chile. *Environmental Conservation*, Vol. 3, No. 4, pp. 291-301.
- 1977a T. T. Veblen, D. H. Ashton, F. M. Schlegel, and A. T. Veblen. Distribution and dominance of species in the understory of a mixed evergreen-deciduous *Nothofagus* forest in south-central Chile. *Journal of Ecology*, Vol. 65, No. 3, pp. 815-830.
- 1977b T. T. Veblen. Native population decline in Totonicapán Guatemala. *Annals of the Association of American Geographers*, Vol. 67, No. 4, pp. 484-499. Spanish translation published in *Mesoamérica*, Vol. 3 (1982), pp. 26-66.
- 1977c T. T. Veblen, D. H. Ashton, F. M. Schlegel, and A. T. Veblen. Plant succession in a timberline depressed by vulcanism in south-central Chile. *Journal of Biogeography*, Vol. 4, No. 3, pp. 275-294.

- 1978a T. T. Veblen and D. H. Ashton. Catastrophic influences on the vegetation of the Valdivian Andes, Chile. *Vegetatio*, Vol. 36, No. 3, pp. 149-167.
- 1978b T. T. Veblen. Guatemalan conifers. *Unasylva* (United Nations Food and Agriculture Association), Vol. 29, No. 118, pp. 25-30. French translation published in *Repris d'Unasylva* in 2015 as "Les résineux des montagnes du Guatemala", <http://www.fao.org/3/a-l2015f/l2015f06.htm>
- 1978c T. T. Veblen. Forest preservation in the western highlands of Guatemala. *Geographical Review*, Vol. 68, No. 4, pp. 417-434. Spanish translations published in *Mesoamérica*, Vol. 3, pp. 332-355 and in *Anales de la Sociedad de Geografía e Historia de Guatemala*, Vol. 52 (1979), pp. 75-93.
- 1978d T. T. Veblen, D. H. Ashton, F. M. Schlegel, and A. T. Veblen. Influencia del estrato arboreo sobre los estratos inferiores en un bosque andino, mixto, perenni-caducifolio de Antillanca, Osorno, Chile. *Bosque*, Vol. 2, No. 2, pp. 88-104.
- 1979a T. T. Veblen. Structure and dynamics of *Nothofagus* forests near timberline in south-central Chile. *Ecology*, Vol. 60, No. 5, pp. 937-945.
- 1979b T. T. Veblen and D. H. Ashton. Successional pattern above timberline in south-central Chile. *Vegetatio*, Vol. 40, No. 1, pp. 39-47.
- 1979c T. T. Veblen, A. T. Veblen, and F. M. Schlegel. Understory patterns in mixed evergreen-deciduous *Nothofagus* forests in Chile. *Journal of Ecology*, Vol. 67, No. 3, pp. 809-823.
- 1979d T. T. Veblen, D. H. Ashton, and F. M. Schlegel. Tree regeneration strategies in a lowland *Nothofagus* dominated forest in south-central Chile. *Journal of Biogeography*, Vol. 6, No. 4, pp. 329-340.
- 1979e T. T. Veblen, F. M. Schlegel, and B. Escobar R. Biomasa y producción primaria de *Chusquea culeou* Desv. y *Chusquea tenuiflora* Phil. en el Sur de Chile. *Bosque*, Vol. 3, No. 1, pp. 47-56.
- 1980a T. T. Veblen, F. M. Schlegel, and B. Escobar R. Structure and dynamics of old-growth *Nothofagus* forests in the Valdivian Andes, Chile. *Journal of Ecology*, Vol. 68, No. 1, pp. 1-31.
- 1980b T. T. Veblen, F. M. Schlegel, and B. Escobar R. Dry matter production of two species of bamboos (*Chusquea culeou* and *C. tenuiflora*) in south-central Chile. *Journal of Ecology*, Vol. 68, No. 2, pp. 397-404.

- 1980c T. T. Veblen and G. Stewart. Comparison of forest structure and regeneration on Bench and Stewart Islands, New Zealand. *New Zealand Journal of Ecology*, Vol. 3, pp. 50-68.
- 1980d T. T. Veblen. Regeneration patterns in subalpine *Nothofagus* forests in south-central Chile. Pp. 179-193 in U. Benecke and M. R. Davis, eds., *Mountain Climates and Subalpine Tree Growth*, Proc. IUFRO Workshop, November 1979, Christchurch, New Zealand; F. R. I. Technical Paper, 70.
- 1980e R. Borgel O. and T. T. Veblen. Chile. Pp. 186-199 in A. W. Kuchler, ed., *International Bibliography of Vegetation Maps*, 2nd Edition. Section 1. South America. University of Kansas Libraries.
- 1981 T. T. Veblen, C. Donoso Z., F. M. Schlegel, and B. Escobar R. Forest dynamics in south-central Chile. *Journal of Biogeography*, Vol. 8, No. 3, pp. 211-247.
- 1982a T. T. Veblen. Regeneration patterns in *Araucaria araucana* forests in Chile. *Journal of Biogeography*, Vol. 9, No. 1, pp. 11-28.
- 1982b T. T. Veblen. Natural hazards and forest resources in the Andes of south-central Chile. Special issue of *Geojournal* on Natural Hazard Management in Latin America. *Geojournal*, Vol. 6, No. 2, pp. 141-150.
- 1982c T. T. Veblen. Native population decline in Totonicapán, Guatemala. Pp. 81-102 in R. M. Carmack, J. Early, and C. Lutz, eds. *The Historical Demography of Highland Guatemala*. Institute for Mesoamerican Studies, State University of New York, Albany.
- 1982d G. H. Stewart and T. T. Veblen. Regeneration patterns in rata (*Metrosideros umbellata*)/kamahi (*Weinmannia racemosa*) forest in central Westland, New Zealand. *New Zealand Journal of Botany*, Vol. 20, No. 1, pp. 55-72.
- 1982e T. T. Veblen and D. H. Ashton. The regeneration status of *Fitzroya cupressoides* in the Cordillera Pelada, Chile. *Biological Conservation*, Vol. 23, pp. 141-161.
- 1982f T. T. Veblen and G. H. Stewart. On the conifer regeneration gap in New Zealand: the dynamics of *Libocedrus bidwillii* stands on South Island. *Journal of Ecology*, Vol. 70, No. 2, pp. 413-436.
- 1982g T. T. Veblen and G. H. Stewart. The effects of introduced wild animals on New Zealand forests. *Annals of the Association of American Geographers*, Vol. 72, No. 3, pp. 372-397.
- 1982h T. T. Veblen. Growth patterns of *Chusquea* bamboos in the understory of Chilean *Nothofagus* forests and their influences in forest dynamics. *Bulletin of the Torrey Botanical Club*, Vol. 109, No. 4, pp. 474-487.

- 1982i G. H. Stewart and T. T. Veblen. A commentary on canopy tree mortality in Westland rata-kamahi protection forests. *New Zealand Journal of Forestry*, Vol. 27, No. 2, pp. 168-188.
- 1982j T.T.Veblen and F. M. Schlegel. Reseña ecológica de los bosques del sur de Chile. *Bosque*, Vol. 4, pp. 73-115.
- 1983a T. T. Veblen, F. M. Schlegel, and J. V. Oltremari. Temperate broad-leaved evergreen forests of South America. pp. 5-31 in J. D. Ovington, ed., *Temperate Broad-leaved Evergreen Forests*. Elsevier, Amsterdam.
- 1983b T. T. Veblen and L. Gutierrez-Witt. Relación de los caciques y número de Yndios que hay en Guatemala, 21 de abril de 1572. *Mesoamerica*, Vol. 4, pp. 212-235.
- 1983c G. H. Stewart and T. T. Veblen. Forest instability and canopy tree mortality in Westland, New Zealand. *Pacific Science*, Vol. 37, No. 4, pp. 427-431.
- 1984 T. T. Veblen. Degradation of native forest resources in southern Chile. Pp. 344-352 in H. K. Steen, ed., *History of Sustained-Yield Forestry: A Symposium*. International Union of Forestry Research Organizations and the Forest History Society. Portland, Oregon.
- 1985a T. T. Veblen. Forest development in treefall gaps in the temperate rain forests of Chile. *National Geographic Research*, Vol. 1, No. 2, pp. 162-183.
- 1985b T. T. Veblen. Stand dynamics in Chilean *Nothofagus* forests. Pp. 35-51 in S. T. A. Pickett and P. S. White, eds., *The Ecology of Natural Disturbance and Patch Dynamics*. Academic Press, New York.
- 1986a T.T. Veblen. Treefalls and the coexistence of conifers in subalpine forests of the central Rockies. *Ecology*, Vol. 67, No. 3, pp. 644-649.
- 1986b T.T. Veblen and D.C. Lorenz. Anthropogenic disturbance and recovery patterns in montane forests, Colorado Front Range. *Physical Geography*, Vol. 7, pp. 1-24.
- 1986c T. T. Veblen. Age and size structure of subalpine forests in the Colorado Front Range. *Bulletin of the Torrey Botanical Club*, Vol. 113, No. 3, pp. 225-240.
- 1987a T.T. Veblen. Trees of the trembling earth. *Natural History*, Vol. 96, No. 9, pp. 42-47.
- 1987b T.T. Veblen and D.C. Lorenz. Post-fire stand development of *Austrocedrus-Nothofagus* forests in Patagonia. *Vegetatio*, Vol. 71, pp. 113-126.

- 1988a T.T. Veblen. Natural disturbance and the regeneration dynamics of *Nothofagus* species in the Chilean Lake District. *Canadian Geographer*, Vol. 32, pp. 82-83.
- 1988b T.T. Veblen and D.C. Lorenz. Recent vegetation changes along the forest/steppe ecotone in northern Patagonia. *Annals of the Association of American Geographers*. Vol. 78, No. 1, pp. 93-111.
- 1988c T.T. Veblen and C. Donoso. Alteración natural y dinámica regenerativa de las especies chilenas de *Nothofagus* de la Region de Los Lagos. *Bosque*, Vol. 8, pp. 133-142.
- 1988d T.T. Veblen and V. Markgraf. Steppe expansion in Patagonia? *Quaternary Research*, Vol. 30, pp. 331-338.
- 1989a T.T. Veblen. *Nothofagus* regeneration in treefall gaps in northern Patagonia. *Canadian Journal of Forest Research*, Vol. 19, pp. 365-71.
- 1989b T.T. Veblen, D.H. Ashton, S. Rubulis, D.C. Lorenz, and M. Cortes. *Nothofagus* stand development on in-transit moraines, Casa Pangué Glacier, Chile. *Arctic and Alpine Research*, Vol. 21, pp. 144-155.
- 1989c T. Veblen, M. Mermoz, C. Martín, and E. Ramilo. Effects of exotic deer on forest regeneration and composition in northern Patagonia. *Journal of Applied Ecology*, Vol. 26, pp. 711-724.
- 1989d T.T. Veblen. Tree regeneration responses to gaps along a transandean gradient. *Ecology*, Vol. 70, pp. 543-545.
- 1989e T.T. Veblen. Anthropogenic influences on the forest/steppe ecotone of northern Patagonia: a re-evaluation of the Kalela hypothesis. *Monografías de la Academia Nacional de Ciencias Exactas y Naturales*, Vol. 4:63-72.
- 1989f T.T. Veblen. Biogeography in American geography. Pp. 28-46 in G. Gaile and C. Willmott, eds. *Geography in America*. Merrill Publishing Company.
- 1989g T.T. Veblen, K.S. Hadley, M.S. Reid, A.J. Rebertus. Blowdown and stand development in a Colorado subalpine forest. *Canadian Journal of Forest Research*, Vol. 19, pp. 1218-25.
- 1990 W.L. Baker and T.T. Veblen. Spruce beetles and fires in the nineteenth century subalpine forests of western Colorado. *Arctic and Alpine Research*, Vol. 22, pp. 65-80.
- 1991a T.T. Veblen, K.S. Hadley, M.S. Reid, and A.J. Rebertus. The response of subalpine forests to spruce beetle outbreak in Colorado. *Ecology*, Vol. 72, pp. 213-231.

- 1991b T.T. Veblen, K.S. Hadley, M.S. Reid, and A.J. Rebertus. Methods of detecting past spruce beetle outbreaks in Rocky Mountain subalpine forests. *Canadian Journal of Forest Research*, Vol. 21, pp. 242-254.
- 1991c A.J. Rebertus, B.R. Burns, and T.T. Veblen. Stand dynamics of *Pinus flexilis*-dominated subalpine forests in the Colorado Front Range. *Journal of Vegetation Science*, Vol. 2, pp. 445-458.
- 1991d T.T. Veblen, K.S. Hadley, and M.S. Reid. Disturbance and stand development of a Colorado subalpine forest. *Journal of Biogeography*, Vol. 18, pp. 202-716.
- 1991e G.H. Stewart, A.B. Rose, and T.T. Veblen. Forest development in canopy gaps in old-growth beech (*Nothofagus*) forests, New Zealand. *Journal of Vegetation Science*, Vol. 2, pp. 679-690.
- 1992a T.T. Veblen, M. Mermoz, C. Martín, and T. Kitzberger. Ecological impacts of introduced animals in Nahuel Huapi National Park. *Conservation Biology*, Vol. 6, No. 1, pp. 71-83.
- 1992b D. Goldblum and T.T. Veblen. Fire history of a Ponderosa pine/Douglas-fir forest in the Colorado Front Range. *Physical Geography*, Vol. 13, pp. 133-148.
- 1992c E.M. Nel, C.A. Wessman, and T.T. Veblen. The use of digital image processing techniques in old-growth inventories. Pages 135-138 in *Proceedings of the Conference on Old-Growth Forests in the Rocky Mountains and Southwest*, Portal, AZ, March 9-13, 1992. USDA Forest Service U.S. Forest Service General Technical Report RM-213.
- 1992d A.J. Rebertus, T.T. Veblen, L.M. Roovers, and J.N. Mast. Structure and dynamics of old-growth Engelmann spruce-subalpine fir in Colorado. Pages 139-153 in *Proceedings of the Conference on Old-Growth Forests in the Rocky Mountains and Southwest*, Portal, AZ, March 9-13, 1992. USDA Forest Service U.S. Forest Service General Technical Report RM-213.
- 1992e T.T. Veblen, T. Kitzberger, and A. Lara. Disturbance and forest dynamics along a transect from Andean rain forest to Patagonian shrublands. *Journal of Vegetation Science*, Vol. 3:507-520.
- 1992f M. Savage, M. Reid, and T.T. Veblen. Diversity and disturbance in a Colorado subalpine forest. *Physical Geography* Vol. 13, No. 3, pp. 240-249.
- 1992g J.O. Murphy and T.T. Veblen. Proxy data from tree-ring time series for the eleven year solar cycle. *Proceedings of the Astronomical Society of Australia*, Vol. 10, No. 1, pp. 64-67.

- 1992h A. Lara and T.T. Veblen. Forest plantations in Chile: a successful model? Pp. 118-139 in A. Mather, ed. *Afforestation: Policies, Planning and Progress*. Belhaven Press, London.
- 1992i T.T. Veblen. Regeneration dynamics. Pp. 152-187 in D.C. Glenn-Lewin, R.K. Peet, and T.T. Veblen. *Plant Succession: Theory and Prediction*. Chapman & Hall, London.
- 1993a K.S. Hadley and T.T. Veblen. Stand response to western spruce budworm and Douglas-fir bark beetle outbreaks, Colorado Front Range. *Canadian Journal of Forest Research*, Vol 23, No. 3, pp. 479-491.
- 1993b J.O. Murphy, T.T. Veblen, and H. Sampson. A regression model derived from proxy data for the 11-year solar cycle. *Proceedings of the Astronomical Society of Australia*, Vol. 10, No. 3, pp. 196-199.
- 1993c A.J. Rebertus and T.T. Veblen. Partial wave formation in old-growth *Nothofagus* forests on Tierra del Fuego, Argentina. *Bulletin of the Torrey Botanical Club*, Vol. 120, No. 4, pp. 461-470.
- 1993d A.J. Rebertus and T.T. Veblen. Structure and treefall gap dynamics of old-growth *Nothofagus* forests on Tierra del Fuego, Argentina. *Journal of Vegetation Science*, Vol. 4, pp. 641-693.
- 1993e T.T. Veblen. A geographical perspective on forest dynamics in the southern Andes of Chile and Argentina. *Wallace W. Atwood Lecture Series*, No. 7, pp. 1-35.
- 1993f A.J. Rebertus, T.T. Veblen, and T. Kitzberger. Gap formation and dieback in Fuego-Patagonian *Nothofagus* forests. *Phytocoenologia* 23:581-599.
- 1994a T.T. Veblen, K.S. Hadley, E.M. Nel, T. Kitzberger, M. Reid, and R. Villalba. Disturbance regime and disturbance interactions in a Rocky Mountain subalpine forest. *Journal of Ecology*, Vol. 82, pp. 125-135.
- 1994b E.M. Nel, C.A. Wessman, and T.T. Veblen. Digital and visual analysis of Thematic Mapper imagery for differentiating old growth from younger spruce-fir stands. *Remote Sensing of Environment* 48:291-301.
- 1994c R. Villalba, T.T. Veblen, J. Ogden. Climatic influences on the growth of subalpine trees in the Colorado Front Range. *Ecology* 75:1450-1462.
- 1994d J.O. Murphy, H. Sampson, T.T. Veblen, and R. Villalba. Regression model for the 22-year Hale solar cycle derived from high altitude tree-ring data. *Proceedings of the Australian Society of Astronomy* 11: 157-163.

- 1994e J.O. Murphy, H. Sampson, T.T. Veblen, and R. Villalba. Reconstruction of the annual variation in solar radio flux ($F_{10.7}$) and the Catania sunspot area (A_c) from tree-ring index time series. *Proceedings of the Australian Society of Astronomy* 11: 164-169.
- 1994f J.N. Mast and T.T. Veblen. A dendrochronological method of studying tree mortality patterns. *Physical Geography* 15:529-542.
- 1995a J.R. Runkle, G.H. Stewart, and T.T. Veblen. Sapling diameter growth in gaps for two *Nothofagus* species in New Zealand. *Ecology* 76:2107-2117.
- 1995b T.J. Stohlgren, D. Binkley, T.T. Veblen and W.L. Baker. Attributes of reliable long-term landscape-scale studies: Malpractice insurance for landscape ecologists. *Environmental Monitoring and Assessment* 36:1-25.
- 1995c T.T. Veblen, B.R. Burns, T. Kitzberger, A. Lara and R. Villalba. The ecology of the conifers of southern South America. Pages 120-155 in: N. Enright and R. Hill (eds.), *Ecology of the Southern Conifers*. Melbourne University Press.
- 1995d N.J. Enright, R.S. Hill, and T. T. Veblen. The southern conifers - an introduction. In: N. Enright and R. Hill (eds.), *Ecology of the Southern Conifers*. Melbourne University Press.
- 1995e T. Kitzberger, T.T. Veblen, and R. Villalba. Tectonic influences on tree growth in northern Patagonia, Argentina: the roles of substrate stability and climatic variation. *Canadian Journal of Forest Research* 25:1684-1696.
- 1996a T.T. Veblen and P.B. Alaback. A comparative review of forest dynamics and disturbance in the temperate rain forests of North and South America. Pages 173-213 in: R.G. Lawford, P. Alaback and E.R. Fuentes (eds.), *High Latitude Rain Forests and Associated Ecosystems of the West Coast of the Americas: Climate, Hydrology, Ecology and Conservation*. Springer-Verlag, New York.
- 1996b R. Villalba, J.A. Boninsegna, A. Lara, T.T. Veblen, F.A. Roig, J.C. Aravena, and A. Ripalta. Interdecadal climatic variations in millennial temperature reconstructions from southern South America. Pages 161-189 in: P.D. Jones and R. Bradley (eds.), *Climatic Forcings of the Last 2000 Years*. NATO Advanced Sciences Institutes Series.
- 1996c T.T. Veblen, R.S. Hill and J. Read. Introduction: themes and concepts in the study of *Nothofagus* forests. Pages 1-10 in: T.T. Veblen, R.S. Hill, and J. Read (eds.), *Ecology and Biogeography of Nothofagus Forests*. Yale University Press.
- 1996d T.T. Veblen, C. Donoso, T. Kitzberger, and A.J. Rebertus. Ecology of southern Chilean and Argentinean *Nothofagus* forests. Pages 293-353 in: T.T. Veblen, R.S. Hill, and J. Read (eds.), *Ecology and Biogeography of Nothofagus Forests*. Yale University Press.

- 1996e T.T. Veblen, R.S. Hill, and J. Read. Epilogue: Commonalities and needs for future research. Pp. 387-397 in: T.T. Veblen, R.S. Hill, and J. Read (eds.), *Ecology and Biogeography of *Nothofagus* Forests*. Yale University Press.
- 1996f T.T. Veblen, T. Kitzberger, B.R. Burns and A.J. Rebertus. Perturbaciones y regeneración en bosques andinos del sur de Chile y Argentina. Pages 169-198 in: J.J. Armesto, M.K. Arroyo, and C. Villagrán (eds.), *Ecología del Bosque Nativo de Chile*. Universidad de Chile Press.
- 1996h J.O. Murphy, H. Sampson, T.T. Veblen, and R. Villalba. Reconstruction of the annual variation in Zurich sunspot number from tree ring-index time series. In J.S. Dean, D.M. Meko and T.W. Swetnam (eds), *Tree Rings, Environment and Humanity*. University of Arizona Press.
- 1996i R. Villalba and T.T. Veblen. The tree-ring record of dry spring-wet summer events in the forest-steppe border, northern Patagonia, Argentina. Pages 107-116 in J.S. Dean, D.M. Meko and T.W. Swetnam (eds), *Tree Rings, Environment and Humanity*. University of Arizona Press.
- 1997a A.J. Rebertus, T. Kitzberger, T.T. Veblen, and L.M. Roovers. Blowdown history and landscape patterns in the Andes of Tierra del Fuego, Argentina. *Ecology*, Vol. 78, pp. 678-692.
- 1997b T. Kitzberger, T.T. Veblen and R. Villalba. Climatic influences on fire regimes along a rainforest-to-xeric woodland gradient in northern Patagonia, Argentina. *Journal of Biogeography*, Vol. 24, no. 1, pp. 35-47.
- 1997c R. Villalba and T.T. Veblen. Regional patterns of tree population age structures in northern Patagonia: climatic and disturbance influences. *Journal of Ecology*, Vol. 85, no. 2, pp. 113-124.
- 1997d R. Villalba and T.T. Veblen. Spatial and temporal variation in tree growth along the forest-steppe ecotone in northern Patagonia. *Canadian Journal of Forest Research*, vol. 27, pp. 580-597.
- 1997e J.N. Mast, T.T. Veblen, and M.E. Hodgson. Tree invasion within a pine/grassland ecotone: An approach with historic aerial photography and GIS modeling. *Forest Ecology and Management*, Vol. 93, pp. 187-194.
- 1997f R. Villalba, J.A. Boninsengna, T.T. Veblen, A. Schmelter, and S. Rubulis. Recent trends in tree-ring records from high elevation sites in the Andes of northern Patagonia. *Climatic Change* 36: 225-254.

- 1997g T. Kitzberger and T.T. Veblen. Influences of humans and ENSO on fire history of *Austrocedrus chilensis* woodlands. *Ecoscience* 4: 508-520.
- 1997h R. Villalba and T.T. Veblen. Improving estimates of total tree ages based on increment core samples. *Ecoscience* 4: 534-542.
- 1998a R. Villalba and T.T. Veblen. Annual- versus decadal-scale climatic influences on tree establishment and mortality in northern Patagonia. Pages 145-170 in M. Beniston and J.L. Innes (eds.), *The Impacts of Climate Variability on Forests*. Springer, Berlin, Germany
- 1998b M.A. Relva, and T.T. Veblen. Impacts of introduced large herbivores on *Austrocedrus chilensis* forests in northern Patagonia, Argentina. *Forest Ecology and Management* 108: 27-40.
- 1998c M.J. Brown, Alaback, P. B. and Veblen, T. T. Floristic monitoring in the cool temperate rainforest biome. Pages 481-491 in F. Dallmeier and J. A. Comiskey (eds), *Forest Biodiversity Research, Monitoring and Modeling*. Man and Biosphere Series Vol 20, UNESCO and Parthenon, Paris.
- 1998d E. Raffaele and T.T. Veblen. Facilitation by nurse shrubs on resprouting behavior in a post-fire shrubland in northern Patagonia, Argentina. *Journal of Vegetation Science* 9:693-698.
- 1998e R. Villalba and T.T. Veblen. Influences of large-scale climatic variability on episodic tree mortality at the forest-steppe ecotone in northern Patagonia. *Ecology* 79:2624-2640.
- 1998f J.N. Mast, T.T. Veblen, Y.B. Linhart. Disturbance and climatic influences on age structure of ponderosa pine at the pine/grassland ecotone, Colorado Front Range. *Journal of Biogeography* 25:743-755.
- 1998g R. Villalba, E.R. Cook, G.C. Jacoby, R.D. D'Arrigo, T.T. Veblen and P.D. Jones. Tree-ring based reconstructions of precipitation in Patagonia since A.D. 1600. *Holocene* 8:659-674.
- 1999a T.T. Kitzberger and T.T. Veblen. Fire-induced changes in northern Patagonian landscapes. *Landscape Ecology* 14:1-15.
- 1999b T.T. Veblen, T. Kitzberger, R. Villalba, and J. Donnegan. Fire history in northern Patagonia: The roles of humans and climatic variation. *Ecological Monographs* 69:47-67.
- 1999c J.N. Mast and T.T. Veblen. Tree spatial patterns and stand development along the pine-grassland ecotone in the Colorado Front Range. *Canadian Journal of Forest Research* 29:575-584.

- 1999d B.O. Bauer, T.T. Veblen and J.A. Winkler. Old methodological sneakers: fashion and function in a cross-training era. *Annals of the Association of American Geographers* 89:679-687.
- 1999e B.O. Bauer, J.A. Winkler, and T.T. Veblen. Afterword: A shoe for all occasions or shoes for every occasion: Methodological diversity, normative fashions, and metaphysical unity in physical geography. *Annals of the Association of American Geographers* 89:771-778.
- 2000a K. Heinemann, T. Kitzberger, and T.T. Veblen. Influences of gap microheterogeneity on the regeneration of *Nothofagus pumilio* in a xeric old-growth forest of northwestern Patagonia, Argentina. *Canadian Journal of Forest Research* 30:25-31.
- 2000b T. Kitzberger, and T.T. Veblen y R. Villalba. Métodos dendroecológicos y sus aplicaciones en estudios de dinámica de bosques templados de Sudamérica. Pages 17-78 in: F. Roig (ed.). *Dendrocronología en América Latina*. Editorial de la Universidad del Cuyo, Mendoza, Argentina.
- 2000c T.T. Veblen. Disturbance patterns in southern Rocky Mountain forests. Pages 31-54 in: R.L. Knight, F. Smith, S.W. Buskirk, W.H. Romme and W.L. Baker (eds.). *Forest Fragmentation in the Southern Rocky Mountains*. Colorado University Press.
- 2000d T. Kitzberger, D.F. Steinaker, and T.T. Veblen. Effects of climatic variability on facilitation of tree establishment in northern Patagonia. *Ecology* 81:1914-1924.
- 2000e T. T. Veblen, T. Kitzberger and J. Donnegan. Climatic and human influences on fire regimes in ponderosa pine forests in the Colorado Front Range. *Ecological Applications* 10:1178-1195.
- 2000f A. C. Premoli, T. Kitzberger and T. Veblen. Isozyme variation and recent biogeographical history of the long-lived conifer *Fitzroya cupressoides*. *Journal of Biogeography* 27:251-260.
- 2000g T. Kitzberger, A. Perez, A.C. Premoli, T.T. Veblen and G. Iglesias. Distribución y estado de conservación del alerce (*Fitzroya cupressoides* (Mol.) Johnst.) en Argentina. *Bosque (Chile)* 21: 79-89.
- 2000h A. C. Premoli, T. Kitzberger and T. Veblen. Conservation genetics of the endangered conifer *Fitzroya cupressoides*. *Conservation Genetics* 1:57-66.
- 2000i H.R. Grau and T.T. Veblen. Rainfall variability, fire, and vegetation dynamics in subtropical montane ecosystems in northwestern Argentina. *Journal of Biogeography* 27:1107-1121

- 2000j L.D. Daniels and T.T. Veblen. ENSO effects on temperature and precipitation of the Patagonian-Andean region: Implications for biogeography. *Physical Geography* 21: 223-243.
- 2000k K. Eisenhart and T. T. Veblen. Dendrochronological detection of spruce bark beetle outbreaks in northwestern Colorado. *Canadian Journal of Forest Research* 30: 1788-98.
- 2001a T. Kitzberger, T.W. Swetnam, & T.T. Veblen. 2001. Inter-hemispheric synchrony of forest fires and the El Niño-Southern Oscillation. *Global Ecology and Biogeography* 10: 315-326.
- 2001b R.L. Sherriff, T.T. Veblen, and J.S. Sibold. Fire history in high elevation subalpine forests in the Colorado Front Range. *Ecoscience* 8:369-380.
- 2001c J.A. Donnegan, T.T. Veblen, and J.S. Sibold. Climatic and human influences on fire history in Pike National Forest, central Colorado. *Canadian Journal of Forest Research* 31: 1526-1539.
- 2001d W.L. Baker, P.H. Flaherty, J.D. Lindemann, T.T. Veblen, K.S. Eisenhart, and D. Kulakowski. Effect of vegetation on the impact of a severe blowdown in the Southern Rocky Mountains, USA. *Forest Ecology and Management* 154: 1-13.
- 2001e E. Raffaele and T. T. Veblen. Effects of cattle grazing on early postfire regeneration of matorral in northwest Patagonia, Argentina. *Natural Areas Journal* 21: 243-249.
- 2001f T.T. Veblen, D. Kulakowski, K.S. Eisenhart, and W.L. Baker. Subalpine forest damage from a severe windstorm in northern Colorado. *Canadian Journal of Forest Research* 31:2089-2097.
- 2002a R.E. Keane, R.E., K.C. Ryan, T.T. Veblen, C.D. Allen, J. Logan, B. Hawkes. Cascading effects of fire exclusion in Rocky Mountain ecosystems: A literature review. USDA Forest Service Gen. Tech. Report RMRS-GTR-91, 24 pp.
- 2002b T.T. Veblen, Carl O. Sauer and geographical biogeography. Pp. 163-182 in: K. Mathewson (ed.), *Culture, Land, and Legacy: Carl O. Sauer and the Berkeley School of Geography*. *Geoscience and Man* 37. Louisiana State University, Baton Rouge.
- 2002c D. Kulakowski and T.T. Veblen. Influences of fire history and topography on the pattern of a severe wind blowdown in a Colorado subalpine forest. *Journal of Ecology* 90:806-819.
- 2002d R.E. Keane, K.C. Ryan, T.T. Veblen, C. Allen, J. Logan, and B. Hawkes. The cascading effects of fire exclusion in Rocky Mountain ecosystems. Pages 133-152 in: J. Baron, D.

- Fagre, and R. Hauer (eds.). Rocky Mountain Futures: An Ecological Perspective. Island Press.
- 2002e T.J. Stohlgren, T.T. Veblen, K. Kendall, W.L. Baker, A. Logan and M. Ryan. Montane and subalpine ecosystems. Pages 203-218 in: J. Baron, D. Fagre, and R. Hauer (eds.). Rocky Mountain Futures: An Ecological Perspective. Island Press.
- 2002f M.E. González, T.T. Veblen, C. Donoso, and L. Valeria. Tree regeneration responses in a lowland *Nothofagus*-dominated forest after bamboo dieback in South-Central Chile. *Plant Ecology* 161:59-73.
- 2002g T.T. Veblen, and T. Kitzberger. Inter-hemispheric comparison of fire history: The Colorado Front Range, U.S.A. and the Northern Patagonian Andes, Argentina. *Plant Ecology* 163: 187-207.
- 2003a P. Bebi, D. Kulakowski, and T.T. Veblen. Interactions between fire and spruce beetle in a subalpine Rocky Mountain forest landscape. *Ecology* 84:362-371.
- 2003b T.T. Veblen. Historic range of variability of mountain forest ecosystems: concepts and applications. *The Forestry Chronicle* 79:223-226.
- 2003c L.D. Daniels and T.T. Veblen. Altitudinal treelines of the southern Andes near 40° S. *The Forestry Chronicle* 79:237-241.
- 2003d T. Kitzberger, E. Raffaele, and T. Veblen. 2003. Variable community responses to herbivory in fire-altered landscapes of northern Patagonia, Argentina. Pages 300-307 in N. Allsopp, A.R. Palmer, S.J. Milton, K.P. Kirkman, G.H. Kerley, C.R. Hurt, and C.J. Brown (editors), *Proceedings of the VIIIth International Rangelands Congress*. 26 July - 1 August 2003, Durban, South Africa.
- 2003e T. T. Veblen. Key issues in fire regime research for fuels management and ecological restoration. Pages 259-276 in: P. Omi and L. Joyce (technical eds). *Fire, Fuel Treatments and Ecological Restoration: Conference proceedings; 2002 16-18 April; Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station*. 475 p.
- 2003f P. Alaback, T.T. Veblen, C. Whitlock, A. Lara, T. Kitzberger, R. Villalba. Climatic and human influences on fire regimes in temperate forest ecosystems in North and South America. Pages 49-87 in G.A. Bradshaw and P.A. Marquet (eds), *How Landscapes Change*. Springer-Verlag.
- 2003g T. T. Veblen, T. Kitzberger, E. Raffaele, and D.C. Lorenz. Fire history and vegetation change in northern Patagonia, Argentina. Pages 259-289 in: T.T. Veblen, W.L. Baker,

- G. Montenegro and T.W. Swetnam (eds). *Fire Regimes and Climatic Change in Temperate Ecosystems of the Western Americas*. Springer-Verlag.
- 2003h T. Kitzberger and T.T. Veblen. Influences of climate on fire in northern Patagonia, Argentina. Pages 290-315 in: T.T. Veblen, W.L. Baker, G. Montenegro and T.W. Swetnam (eds). *Fire Regimes and Climatic Change in Temperate Ecosystems of the Western Americas*. Springer-Verlag.
- 2003i D. Kulakowski, T.T. Veblen, and P. Bebi. Effects of fire and spruce beetle outbreak legacies on the disturbance regime of a subalpine forest in Colorado. *Journal of Biogeography* 30: 1445-1456.
- 2003j D. Kulakowski and T.T. Veblen. Subalpine forest development following a blowdown in the Mount Zirkel Wilderness, Colorado, USA. *Journal of Vegetation Science* 14: 653-660.
- 2003k K. R. Young, Mark A. Blumler, Lori D. Daniels, Thomas T. Veblen, and Susy S. Ziegler. *Biogeography*. Pages 17-31 in: C. Willmott and G. Gaile, eds. *Geography in America*. Second Edition.
- 2003l W.H. Romme, T.T. Veblen, M.R. Kaufmann, R. Sherriff and C.M. Regan. Ecological effects of the Hayman Fire Part1: Historical (Pre-1860) and current (1860-2002) fire regimes. Pages 151-163 in: *Hayman Fire Case Study Analysis*. USDA Forest Service Tech. Rep. RMRS-GTR-114.
- 2003m W.H. Romme, M.R. Kaufmann, T.T. Veblen, R. Sherriff and C.M. Regan. Ecological effects of the Hayman Fire Part1: Historical (Pre-1860) and current (1860-2002) forest and landscape structure. Pages 164-171 in: *Hayman Fire Case Study Analysis*. USDA Forest Service Tech. Rep. RMRS-GTR-114.
- 2003n W.H. Romme, C.M. Regan, M.R. Kaufmann, L. Huckaby, and T.T. Veblen. Part 4: Forest succession. Pages 179-187 in: *Hayman Fire Case Study Analysis*. USDA Forest Service Tech. Rep. RMRS-GTR-114.
- 2003o L.D. Daniels and T.T. Veblen. Regional and local effects of disturbance and climate on altitudinal treelines in northern Patagonia. *Journal of Vegetation Science* 14: 733-742.
- 2004a L. D. Daniels and T.T. Veblen. Spatio-temporal influences of climate on altitudinal treeline in Northern Patagonia. *Ecology* 85:1284-1296.
- 2004b J. A. Hicke, R.L. Sherriff, T.T. Veblen, and G.P. Asner. Carbon accumulation in Colorado ponderosa pine stands. *Canadian J. Forest Research* 34: 1283-1295.

- 2004c T.L. Schoennagel, T.T. Veblen and W.H. Romme. The interaction of fire, fuels and climate across Rocky Mountain forests. *BioScience* 54: 661-676.
- 2004d T. T. Veblen, T. Kitzberger, and R. Villalba. Nuevos paradigmas en ecología y su influencia sobre el conocimiento de la dinámica de los bosques del sur de Argentina Chile. Pages 1-48 in: M.F. Arturi, J.L. Frangi and J.F. Goya (eds.). *Ecología y Manejo de Bosques de Argentina*. Editorial de la Universidad Nacional de La Plata, La Plata, Argentina.
- 2004e D. Kulakowski, T.T. Veblen and S. Drinkwater. The persistence of quaking aspen (*Populus tremuloides*) in the Grand Mesa area, Colorado. *Ecological Applications* 14: 1603-14.
- 2004f W. Pollman and T.T. Veblen. *Nothofagus* regeneration dynamics in south-central Chile: A test of a general model. *Ecological Monographs* 74:615-634.
- 2005a C. Bigler, D. Kulakowski, and T. T. Veblen. 2005. Multiple disturbance interactions and drought influence fire severity in Rocky Mountain subalpine forests. *Ecology* 86: 3018-3029.
- 2005b M. E. González, T. T. Veblen, and J.S. Sibold. Fire history in *Araucaria-Nothofagus* forests in Villarrica National Park, Chile. *Journal of Biogeography* 32:1187-1202.
- 2005c T. Kitzberger, E. Raffaele, and T.T. Veblen. Variable community responses to herbivory in fire-altered landscapes of northern Patagonia, Argentina. *African Journal of Range & Forage Science* 22:85-91.
- 2005d M. Mermoz, T. Kitzberger, and T. Veblen. Landscape influences on occurrence and spread of wildfires in Patagonian forests and shrublands. *Ecology* 86: 2705-2715.
- 2005e T. L. Schoennagel, T.T. Veblen, W.H. Romme, J.S. Sibold, E.R. Cook. ENSO and PDO variability affect drought-induced fire occurrence in Rocky Mountain subalpine forests. *Ecological Applications* 15:2000-2014
- 2005f T. T. Veblen, J.J. Armesto, B.R. Burns, T. Kitzberger, A. Lara, B. León, and K.R. Young. The coniferous forests of South America. Pages 701-725 in: F. Andersson and S. Gessel (eds.), *Ecosystems of the World: Coniferous Forests*. Elsevier, Amsterdam.
- 2006a C.A. Holz and T.T. Veblen. Tree regeneration responses to *Chusquea montana* bamboo dieback in a subalpine *Nothofagus* forest in the southern Andes. *Journal of Vegetation Science* 17:19-28.

- 2006b J. S. Sibold, T.T. Veblen and M.E. Gonzalez. Spatial and temporal variation in historic fire regimes in subalpine forests across the Colorado Front Range in Rocky Mountain National Park. *Journal of Biogeography* 32: 631-647.
- 2006c K. League and T.T. Veblen. Climatic variability and episodic *Pinus ponderosa* establishment along the forest-grassland ecotones of Colorado. *Forest Ecology and Management* 228:98-107.
- 2006d J.S. Sibold and T.T. Veblen. Relationships of subalpine forest fires in the Colorado Front Range to interannual and multi-decadal scale climatic variation. *Journal of Biogeography* 33:833-842.
- 2006e D. Kulakowski, T.T. Veblen, and B. League. Influences of infrequent fire, elevation and pre-fire vegetation on the persistence of quaking aspen (*Populus tremuloides* Michx.) in the Flat Tops area, Colorado. *Journal of Biogeography* 33:1397-1413.
- 2006f R.V. Platt, T.T. Veblen, R.S. Sherriff. Are wildfire mitigation and restoration of historic forest structure compatible? A spatial modeling assessment. *Annals of the Assoc. of Am. Geographers* 96:455-470.
- 2006g M.E. González and T. T. Veblen. Climatic influences on fire in *Araucaria araucana* - *Nothofagus* forests in the Andean cordillera of south-central Chile. *Ecoscience* 13:342-350.
- 2006h Paritsis, J., E. Raffaele, and T.T. Veblen. Vegetation disturbance by fire affects plant reproductive phenology in a shrubland community in northwestern Patagonia, Argentina. *New Zealand Journal of Ecology* 30:387-395.
- 2006i Romme, W.H., J. Clement, J. Hicke, D. Kulakowski, L.H. MacDonald, T.L. Schoennagel, and T.T. Veblen. Recent forest insect outbreaks and fire risk in Colorado forests: A brief synthesis of relevant research. Colorado Forest Restoration Institute, Report, 24 pp. Fort Collins, CO.
- 2006j Sherriff, R.L. and T.T. Veblen. Ecological effects of changes in fire regimes in *Pinus ponderosa* ecosystems in the Colorado Front Range. *Journal of Vegetation Science* 17:705-718.
- 2006k Kaufmann, M.R., T. T. Veblen, and W. H. Romme. 2006. Historical fire regimes in ponderosa pine forests of the Colorado Front Range, and recommendations for ecological restoration and fuels management. Colorado Forest Research Institute Report (refereed), 14 pages.

- 2006l Kulakowski, D. and T.T. Veblen. The effect of fires on susceptibility of subalpine forests to a nineteenth century spruce beetle outbreak in western Colorado. *Canadian Journal of Forest Research* 36:2974-2982.
- 2007a Baker, W.L., T.T. Veblen and R.L. Sherriff. Fire, fuels, and restoration of ponderosa pine-Douglas-fir forests in the Rocky Mountains, USA. *Journal of Biogeography*. 34:251-269.
- 2007b Kitzberger, T., P. M. Brown, E. K. Heyerdahl, T. W. Swetnam, and T. T. Veblen. Contingent Pacific-Atlantic Ocean influence on multi-century wildfire synchrony over western North America. *Proceedings of the National Academy of Sciences* 104:543-548.
- 2007c Veblen, T.T. Temperate Forests of the Southern Andean Region. Pages 217-231 in T.T. Veblen, A. Orme, and K. Young. Eds. *Physical Geography of South America*. Oxford University Press.
- 2007d Veblen, T.T., K.R. Young, and A.R. Orme. Future Environments of South America. Pages 340-352 in T.T. Veblen, A. Orme, and K. Young. Eds. *Physical Geography of South America*. Oxford University Press.
- 2007e Young, K.R., P.E. Berry and T.T. Veblen. Flora and vegetation. Pages 91-100 in: T.T. Veblen, A. Orme, and K. Young. Eds. *Physical Geography of South America*. Oxford University Press.
- 2007f Raffaele, E., T. Kitzberger and T.T. Veblen. Interactive effects of introduced herbivores and post-flowering die-off of bamboos on tree regeneration and the understory in a *Nothofagus* forest, Argentina. *Journal of Vegetation Science* 18: 371-378.
- 2007g Sherriff, R.L. and T.T. Veblen. A spatially-explicit reconstruction of historical fire occurrence in the ponderosa pine zone of the Colorado Front Range. *Ecosystems* 9:1342-1347.
- 2007h Daniels, L.D., T.T. Veblen and R. Villalba. Use of thin sections to improve age estimates of *Nothofagus pumilio* seedlings. *EcoScience* 14:17-22.
- 2007i Kulakowski, D. and T.T. Veblen. Effect of prior disturbances on the extent and severity of a 2002 wildfire in Colorado subalpine forests. *Ecology* 88:759-69.
- 2007j Tercero-Bucardo, N., T. Kitzberger, T.T. Veblen, and E. Raffaele. A field experiment on climatic and herbivore impacts on post-fire tree regeneration in northwestern Patagonia. *Journal of Ecology* 95:771-779.

- 2007k Sibold, J.S., T. T. Veblen, K. Chipko, L. Lawson, E. Mathis, and J. Scott. Influences of surface fire, mountain pine beetle, and blowdown on lodgepole pine stand development in the northern Colorado Front Range. *Ecological Applications* 17:1638-1655.
- 2007l González, M.E. and T.T. Veblen. Incendios en bosques de *Araucaria araucana* y consideraciones ecológicas al madereo de aprovechamiento en áreas recientemente quemadas. *Revista Chilena de Historia Natural* 80:243-253.
- 2007m Schoennagel, T., T.T. Veblen, D. Kulakowski, and A. Holz. Multidecadal climate variability and interactions among Pacific and Atlantic sea surface temperature anomalies affect subalpine fire occurrence, western Colorado (USA). *Ecology* 88:2891-2902.
- 2007n Kurznel, B.P., T.T. Veblen and D. Kulakowski. A typology of stand structure and dynamics of Quaking aspen in northwestern Colorado. *Forest Ecology and Management* 252:176-190.
- 2007o Bigler, C., D. G. Gavin, C. Gunning and T. T. Veblen. Drought induces lagged tree mortality in a subalpine forest in the Rocky Mountains. *Oikos* 116:1983-1994.
- 2008a Sherriff, R.L. and T.T. Veblen. Variability in fire-climate relationships in ponderosa pine forests in the Colorado Front Range. *International Journal of Wildland Fire* 17:50-59.
- 2008b Dobrowolksa, D. and T.T. Veblen. Treefall-gap structure and regeneration in mixed *Abies alba* stands in central Poland. *Forest Ecology and Management* 255:3469-76.
- 2008c Drury, S.A. and T.T. Veblen. Spatial and temporal variability in fire occurrence within the Las Bayas Forestry Reserve, Durango, Mexico. *Plant Ecology* 197:299-316.
- 2008d Blackhall, M., E. Raffaele, and T.T. Veblen. Cattle affect early post-fire regeneration in a *Nothofagus dombeyi* - *Austrocedrus chilensis* mixed forest in northern Patagonia, Argentina. *Biological Conservation* 141:2251-61.
- 2008e Platt, R.V., T.T. Veblen and R.L. Sherriff. A Spatial Model of Forest Management Strategies and Outcomes in the Wildland-Urban Interface. *Natural Hazards Review* 4:199-208.
- 2008f Veblen, T.T., T. Kitzberger, E. Raffaele, M. Mermoz, M. E. González, J. S. Sibold, and A. Holz. 2008. The historical range of variability of fires in the Andean-Patagonian *Nothofagus* forest region. *International Journal of Wildland Fire* 17:724-741.
- 2008g Kaufmann, M. R., G. H. Aplet, M. Babler, W. L. Baker, B. Bentz, M. Harrington, B. C. Hawkes, L. S. Huckaby, M. J. Jenkins, D. M. Kashian, R. E. Keane, D. Kulakowski, W.

- McCaughey, J. Negron, J. Popp, W. H. Romme, T. Schoennagel, W. Shepperd, F. W. Smith, E. M. Sutherland, D. Tinker, and T. T. Veblen. 2008. The Status of Our Scientific Understanding of Lodgepole Pine and Mountain Pine Beetles - A Focus on Forest Ecology and Potential Fire Behavior. The Nature Conservancy, Arlington, VA. GFI report 2008-2. 13 pp.
- 2009a Mantgem, P.J. van, N. L. Stephenson, J.C. Byrne, L. D. Daniels, J. F. Franklin, P.Z. Fulé, M.E. Harmon, A.J. Larson, J.M. Smith, A.H. Taylor, T.T. Veblen. 2008. Widespread increase in tree mortality rates in the western United States. *Science* 323: 521-524.
- 2009b Bigler, C. and T.T. Veblen. Increased early growth rates decrease longevities of conifers in two subalpine forests. *Oikos* 118:1130-1138.
- 2009c Krasnow, K., T. Schoennagel, and T.T. Veblen. Forest fuel mapping and validation of LANDFIRE fuel maps in Boulder County, Colorado. *Forest Ecology and Management* 257: 1603-1612.
- 2009d Paritsis, J., T.T. Veblen and T. Kitzberger. Assessing dendroecological methods to reconstruct defoliator outbreaks on *Nothofagus pumilio* in northwestern Patagonia, Argentina. *Canadian Journal of Forest Research* 39:1617-1629.
- 2009e Holz, A., and T.T. Veblen. *Pilgerodendron uviferum*: the southernmost tree-ring fire recorder species. *Ecoscience* 16:322-329.
- 2010a Keith, R.P., T.T. Veblen, T.L. Schoennagel, and R.L. Sherriff. Understory vegetation indicates historic fire regimes in ponderosa pine-dominated ecosystems in the Colorado Front Range. *Journal of Vegetation Science* 21: 488-499.
- 2010b Veblen, T.T. Wildfire risk and hazard in northern Patagonia, Argentina. Pages 383-387 in: M. Stoffel, M. Bollschweiler, D. R. Butler, B. H. Luckman (eds). *Tree-Ring Reconstruction in Natural Hazards Research*. Springer-Verlag.
- 2010c Veblen, T.T. Disturbance and vegetation dynamics in the southern Andean region of Chile and Argentina. Pages 167-185 in: R.H. Webb, R. Turner, and D. Boyer (eds). *Repeat Photography: Methods and Applications in the Natural Sciences*. Island Press.
- 2010d Paritsis, J., and T.T. Veblen. Temperature and foliage quality affect performance of the outbreak defoliator *Ormiscodes amphimone* (F.) (Lepidoptera: Saturniidae) in northwestern Patagonia, Argentina. *Revista Chilena de Historia Natural* 83:593-603.
- 2010e González, M.E., T.T. Veblen, and J.S. Sibold. Influence of fire severity on stand development of *Araucaria araucana*-*Nothofagus pumilio* stands in the Andean cordillera of south-central Chile. *Austral Ecology* 35:597-615.

- 2010f Paritsis, J., M. Elgueta, C. Quintero, and T.T. Veblen. *Nothofagus pumilio* (Poepp. et Endl.) Krasser. (Fagales: Nothofagaceae), a New Host for the Defoliator *Ormiscodes amphinome* (Fabricius) (Lepidoptera: Saturniidae). *Neotropical Entomology* 39:1048-50
- 2011a Raffaele, E., T.T. Veblen, M. Blackhall, and N. Tercero-Bucardo. Synergistic influences of introduced herbivores and fire on vegetation change in northern Patagonia, Argentina. *Journal of Vegetation Science* 22:59-71.
- 2011b Bigler, C. and T.T. Veblen. Changes in litter and dead wood loads following tree death beneath subalpine conifer species in northern Colorado. *Canadian Journal of Forest Research* 41:331-340.
- 2011c Paritsis, J., T.T. Veblen, Smith, J.M., and A. Holz. 2011. Spatial prediction of caterpillar (*Ormiscodes*) defoliation in Patagonian *Nothofagus* forests. *Landscape Ecology* 26:791-803.
- 2011d Paritsis, J. and T.T. Veblen. Dendroecological analysis of defoliator outbreaks on *Nothofagus pumilio* and their relation to climate variability in the Patagonian Andes. *Global Change Biology* 17: 239-253.
- 2011e Holz, A., and T. T. Veblen. Variability in the Southern Annular Mode determines wildfire activity in Patagonia, *Geophys. Res. Lett.*, 38, L14710, doi:10.1029/2011GL047674.
- 2011f Platt, R.V., T. Schoennagel, T.T. Veblen, R.L. Sherriff. Modeling wildfire potential in residential parcels: A case study of the north-central Colorado Front Range. *Landscape and Urban Planning* 102:117B 126.
- 2011g Schoennagel, T., R.L. Sherriff, and T.T. Veblen. Fire history and tree recruitment in the upper montane zone of the Colorado Front Range: implications for forest restoration. *Ecological Applications* 21:2210-2222.
- 2011h Veblen, T.T., A.H. Holz, J. Paritsis, E. Raffaele, T. Kitzberger, and M. Blackhall. Adapting to global environmental change in Patagonia: What role for disturbance ecology? *Austral Ecology* 36:891-903.
- 2011i Holz, A., T.T. Veblen. The amplifying effects of humans on fire regimes in temperate rainforests in western Patagonia. *Palaeogeography, Palaeoclimatology, Palaeoecology* 311:82-92.
- 2012a Schoennagel, T., T.T. Veblen, J.F. Negron, J. M. Smith. Effects of mountain pine beetle on fuels and expected fire behavior in lodgepole pine forests, Colorado, USA. *PLoS ONE* 7:1-14.

- 2012b Paritsis, J., C. Quintero, T. Kitzberger and T.T. Veblen. Mortality of the outbreak defoliator *Ormiscodes amphimone* (F.) (Lepidoptera: Saturniidae) caused by natural enemies in northwestern Patagonia, Argentina. *Revista Chilena de Historia Natural* 85: 113-122.
- 2012c Holz, A., S. Haberle, T.T. Veblen, R. De Pol-Holz, and J. Southon. Fire history in western Patagonia from paired tree-ring fire-scar and charcoal records. *Climate of the Past Discussions* 8:451-466.
- 2012d Holz, A., and T.T. Veblen. Wildfire activity in rainforests in western Patagonia linked to the Southern Annular Mode. *International Journal of Wildfire* 21:114-126.
- 2012e Paritsis, J., T.T. Veblen. Outbreak species. In: *The Encyclopedia of Sustainability*, Vol. 5: Ecosystem Management and Sustainability, pages 286-290. Berkshire Publishing.
- 2012f Tepley, A., J. Paritsis and T.T. Veblen. Disturbance. In: *The Encyclopedia of Sustainability*, Vol. 5: Ecosystem Management and Sustainability, pages 98-102. Berkshire Publishing.
- 2012g Veblen, T.T., W.H. Romme, C. Regan. Regional Application of Historical Ecology at Ecologically Defined Scales: Forest Ecosystems in the Colorado Front Range. Chapter 10 in: J. A. Wiens, G.D. Hayward, H. D. Safford and Catherine Giffen (eds). *Historical Environmental Variation in Conservation and Natural Resource Management*. Pages 149-165. Wiley-Blackwell. DOI: 10.1002/9781118329726.ch10
- 2012h Blackhall, M., E. Raffaele, and T.T. Veblen. Is foliar flammability of woody species related to time since fire and herbivory in northwestern Patagonia, Argentina? *Journal of Vegetation Science*. 23: 931-941.
- 2012i Gartner, M.H., T.T. Veblen, R.L. Sherriff, T.L. Schoennagel. Proximity to grasslands influences fire frequency and sensitivity to climate variability in ponderosa pine forests of the Colorado Front Range. *International Journal of Wildfire* 21: 562-571.
- 2012j Hayward, G.D., T.T. Veblen, L. Suring, B. Davis. Challenges in the application of historical range of variation to conservation and land management. Chapter 3 in: J. A. Wiens, G.D. Hayward, H. D. Safford and Catherine Giffen (eds). *Historical Environmental Variation in Conservation and Natural Resource Management*. Pages 32-45. Wiley-Blackwell. DOI: 10.1002/9781118329726.ch3
- 2012k Muñoz, A.A., M.E. Gonzalez, C. Celedón, T.T. Veblen. Respuesta inicial de la regeneración arbórea luego de la floración y muerte de *Chusquea culeou* (Poaceae) en bosques andinos del centro-sur de Chile. *Bosque (Valdivia, Chile)* 33:153-162.

- 2012l Kulakowski, D., D. Jarvis, T.T. Veblen, J.M. Smith. Stand-replacing fires reduce susceptibility of lodgepole pine to mountain pine beetle outbreaks in Colorado. *Journal of Biogeography* 39: 2061-2071.
- 2012m Smith, J.M., S.J. Hart, T.B. Chapman, T.T. Veblen, and T. Schoennagel. Dendroecological reconstruction of 1980s mountain pine beetle outbreak in lodgepole pine forests in northwestern Colorado. *Ecoscience* 19:113-126.
- 2012n Chapman, T.B., T.T. Veblen, T. Schoennagel. Spatio-temporal patterns of mountain pine beetle activity in the southern Rocky Mountains. *Ecology* 93: 2175-2185.
- 2012o Holz, A., T. Kitzberger, J. Paritsis, T.T. Veblen. Ecological and climatic controls of modern wildfire activity patterns across southwestern South America. *Ecosphere* 3(11): article 103, pages 1-25. <http://dx.doi.org/10.1890/ES12-00234.1>
- 2013a Kulakowski, D., C. Matthews, D. Jarvis, and T.T. Veblen. Compounded disturbances in subalpine forests in western Colorado favor future dominance by quaking aspen (*Populus tremuloides*). *Journal of Vegetation Science* 24: 168-176.
- 2013b Rhoades, C.C., J.H. McCutchan, Jr., L.A. Cooper, D.W. Clow, T.M. Detmer, J.S. Briggs, J.D. Stednick, T.T. Veblen, R.M. Ertz, G.E. Likens, and W.M. Lewis, Jr. Biogeochemistry of beetle killed forests: Explaining a weak nitrate response. *Proceedings of the National Academy of Sciences* 110 (5): 1756-60.
- 2013c McWethy, D.B., P.E. Higuera, C. Whitlock, T.T. Veblen, D.M.J.S. Bowman, G.J. Cary, S.G. Haberle, R.E. Keane, B.D. Maxwell, M.S. McGlone, G.L.W. Perry, J.M. Wilmshurst, A. Holz, and A.J. Tepley. A conceptual framework for predicting temperate ecosystem sensitivity to human impacts on fire regimes. *Global Ecology and Biogeography* 22: 900-12. DOI: 10.1111/geb.12038.
- 2013d Paritsis, J., A. Holz, T.T. Veblen, T. Kitzberger. Habitat distribution modeling reveals vegetation flammability and land use as drivers of wildfire in SW Patagonia. *Ecosphere*. 4(5):53. <http://dx.doi.org/10.1890/ES12-00378.1>
- 2014a Odion, D.C., C.T. Hanson, A. Arsenault, W.L. Baker, D.A. DellaSala, R. Hutto, W. Klenner, M.A. Moritz, R. Sherriff, T.T. Veblen. Examining historical and current mixed-severity fire regimes in ponderosa pine and mixed-conifer forests of western North America. *PLoS ONE* 9(2) pages 1-14: e87852. doi:10.1371/journal.pone.0087852.
- 2014b Hart, S.J., T.T. Veblen, K.S. Eisenhart, D. Jarvis, D. Kulakowski. Drought induces spruce beetle (*Dendroctonus rufipennis*) outbreaks across northwestern Colorado. *Ecology* 95:930–939. <http://dx.doi.org/10.1890/13-0230.1>

- 2014c Hart, S.J., T.T. Veblen, D. Kulakowski. Do tree and stand-level attributes determine susceptibility of spruce-fir forests to spruce beetle outbreaks? *Forest Ecology and Management* 318: 44-53. <http://dx.doi.org/10.1016/j.foreco.2013.12.035>
- 2014d Westerling, A.L., T. Brown, T. Schoennagel, T. Swetnam, M. Turner, T. Veblen. Briefing: Climate and Wildfire in Western U.S. Forests. Pages 81-102 in Sample, V. Alaric and Bixler, R. Patrick, and Char Miller (eds.). *Forest Conservation and Management in the Anthropocene: Conference Proceedings*. Proceedings. RMRS-P-71. Fort Collins, CO: US Department of Agriculture, Forest Service. Rocky Mountain Research Station. 494 p.
- 2014e González, M.E., M. Amoroso, A. Lara, T.T. Veblen, C. Donoso, T. Kitzberger, I. Mundo, A. Holz, A. Casteller, J. Paritsis, A. Muñoz, M. L. Suárez. Ecología de disturbios y su influencia en los bosques templados de Chile y Argentina. Pages 411-502 in C. Donoso, M. E. González, A. Lara (eds). *Ecología Forestal. Bases para el Manejo Sustentable y Conservación de los Bosques Nativos de Chile*. Ediciones de La Universidad Austral de Chile, Valdivia. Includes the following two boxes by T.T. Veblen: Fuego y cambios del paisaje cerca del ecotono de la estepa y bosques en el norte de la Patagonia, Argentina: recuadro, pages 441-443 and Deslizamientos den los Andes causados por terremotos: recaudro, pages 462-464.
- 2014f Temperli, C., S.J Hart, T.T Veblen, D. Kulakowski, J.J Hicks, R. Andrus. Are density reduction treatments effective at managing for resistance or resilience to spruce beetle disturbance in the southern Rocky Mountains? *Forest Ecology and Management* 334: 53-63. Online <http://dx.doi.org/10.1016/j.foreco.2014.08.028>.
- 2014g Sherriff, R.L., Platt R.V., Veblen T.T., Schoennagel T.L., Gartner M.H. Historical, observed, and modeled wildfire severity in montane forests of the Colorado Front Range. *PLoS ONE*. 9(9) pages 1-17: e106971. doi:10.1371/journal.pone.0106971.
- 2014h Veblen, T.T. Cambio ecológico en el ecotono estepa-bosque: recuadro. Page 55 in E. Raffaele, M de Torres Curth, C.L. Morales, y Thomas Kitzberger.(eds). *Ecología e Historia Natural de la Patagonia Andina, un cuarto de siglo de investigación en Biogeografía, Ecología y Conservación*. Fundacion Azara, Buenos Aires. 255 pp.
- 2015a Holz, A., S.W. Wood, T.T. Veblen, D.M.J.S. Bowman. Effects of high severity fire drove the population collapse of the subalpine Tasmanian endemic conifer *Athrotaxis cupressoides*. *Global Change Biology* 21: 445-448. Online. doi: 10.1111/gcb.12674
- 2015b Blackhall, M., T.T. Veblen, E. Raffaele. Recent fire and cattle herbivory enhance plant-level fuel flammability in shrublands. *Journal of Vegetation Science* 26: 123-133. Online. doi: 10.1111/jvs.12216
- 2015c Paritsis, J., T.T. Veblen, and A. Holz. Positive fire feedbacks contribute to shifts from *Nothofagus pumilio* forests to fire-prone shrublands in Patagonia. *Journal of Vegetation Science* 26: 89-101. Online doi: 10.1111/jvs.12225.

- 2015d Smith, Jeremy M., Juan Paritsis, Thomas T. Veblen, Teresa B. Chapman. Permanent forest plots show accelerating tree mortality in subalpine forests of the Colorado Front Range from 1982 to 2013. *Forest Ecology and Management* 341:8-17.
- 2015e Whitlock, C., D.B. McWethy, A.J. Tepley, T.T. Veblen, A. Holz, M.S. McGlone, G.L.W. Perry, J.M. Wilmshurst, S.W. Wood. Past and present vulnerability of closed-canopy temperate forests to altered fire regimes. *BioScience* 65: 151-163. doi: 10.1093/biosci/biu194.
- 2015f Álvarez, Claudio, Thomas T. Veblen, Duncan Christie and Álvaro González-Reyes. Influence of climate variability on radial growth of *Nothofagus pumilio* near altitudinal treeline in the Andes of northern Patagonia, Chile. *Forest Ecology and Management* 342: 112–121.
- 2015g Hart, S.J., T. Schoennagel, T.T. Veblen, and T.B. Chapman. Area burned in the western United States is unaffected by recent mountain pine beetle outbreaks. *Proceedings of the National Academy of Sciences*. www.pnas.org/cgi/doi/10.1073/pnas.1424037112
- 2015h Blackhall, M., E. Raffaele, T.T. Veblen. Efectos combinados del fuego y el ganado en matorrales y bosques del noroeste patagónico. *Ecología Austral* 25: 1-10.
- 2015i Hart, S.J., Veblen, T.T., N. Mietkiewicz, and D. Kulakowski. Negative feedbacks on bark beetle outbreaks: Widespread and severe spruce beetle infestation restricts subsequent infestation. *PloS ONE* 10(5): e0127975. Doi:10.1371/journal.pone.0127975.
- 2015j Hanson, C.T., R.L. Sherriff, R.L. Hutto, D.A. DellaSalla, T.T. Veblen, and W.L. Baker. Setting the stage for mixed- and high-severity fires. Pages 3-22 in: D. DellaSalla and C.T. Hanson (eds). *The Ecological Importance of Mixed-Severity Fires: Nature's Phoenix*. Elsevier, New York.
- 2015k Kulakowski, D. and T. T. Veblen. Bark beetles and high-severity fires in Rocky Mountain subalpine forests. Pages 149-168 in: D. DellaSalla and C.T. Hanson (eds). *The Ecological Importance of Mixed-Severity Fires: Nature's Phoenix*. Elsevier, New York.
- 2015l Hart, S.J. and T.T. Veblen. Detection of spruce beetle-induced tree mortality using high- and medium-resolution remotely sensed imagery. *Remote Sensing of the Environment* 168: 134-145. Doi:10.1016/j.rse.2015.06.015
- 2015m Tepley, A.J. and T.T. Veblen. Spatiotemporal fire dynamics in mixed-conifer and aspen forests in the San Juan Mountains of southwestern Colorado, USA. *Ecological Monographs*: 85(4), 2015, pp. 583–603. Doi/pdf/10.1890/14-1496.1

- 2015n Naficy, C. E., Veblen, T.T., and Hessburg, P.F. Spatially explicit quantification of heterogeneous fire effects over long time series: patterns from two forest types in the northern U.S. Rockies. In: Keane, R.E., M. Jolly, R.Parsons, and K. Riley. 2015. Proceedings of the Large Wildland Fires: Social, Political, and Ecological Effects Conference. Held May 2014 Missoula MT. USFS Rocky Mountain Research Station Proceedings RMRS-P-73. Pages 167-171 www.fs.fed.us/rmrs/publications. Peer reviewed.
- 2015o Rother, M.T., Veblen, T.T., and Furman L.G. A field experiment informs expected patterns of conifer regeneration after disturbance under changing climate conditions. *Canadian Journal of Forest Research* 45: 1607-1616. dx.doi.org/10.1139/cjfr-2015-0033.
- 2015p Gartner, M.H., T.T. Veblen, S. Leyk, C.A. Wessman. Detection of mountain pine beetle - killed ponderosa pine in a heterogeneous landscape using high-resolution aerial imagery. *International Journal of Remote Sensing* 36: 5353-5372. DOI: 10.1080/01431161.2015.1095369.
- 2015q Temperli, C., T.T. Veblen, S.J. Hart, D. Kulakowski, A.J. Tepley. Interactions among spruce beetle disturbance, climate change and forest dynamics captured by a forest landscape model. *Ecosphere* 6: article 231: 1-20. <http://dx.doi.org/10.1890/ES15-00394.1>
- 2016a Andrus, R.A., T.T. Veblen, B.J. Harvey, S.J. Hart. Fire severity unaffected by spruce beetle outbreak in spruce-fir forests in southwestern Colorado. *Ecological Applications* 26: 700-711. <http://dx.doi.org/10.1890/15-1121.1>
- 2016b Naficy, C.E., E.G. Keeling, P. Landres, P.F. Hessburg, A. Sala, T.T. Veblen. A framework for testing assumptions about ecological intervention in wilderness using a case study of fire ecology in the Rocky Mountains. *Journal of Forestry* 114:384–395 <http://dx.doi.org/10.5849/jof.15-010>.
- 2016c Veblen T.T., M.E. Gonzalez, G.H. Stewart, T. Kitzberger, J. Brunet. Tectonic ecology of the temperate forests of South America and New Zealand. *New Zealand Journal of Botany* 54: 223-246. <http://dx.doi.org/10.1080/0028825X.2015.1130726>.
- 2016d Kitzberger, T., Perry, GLW, Paritis, J, Gowda J. Tepley A.J., Holz, A. Veblen, TT. Fire-vegetation feedbacks and alternative states: common mechanisms of temperate forest vulnerability to fire in southern South America and New Zealand. *New Zealand Journal of Botany* 54: 223-246. <http://dx.doi.org/10.1080/0028825X.2016.1151903>.
- 2016e Tepley, AJ, TT Veblen, GLW Perry, GH Stewart, CE Naficy. 2016. Positive feedbacks to fire-driven deforestation following human colonization of the South Island of New Zealand. *Ecosystems*. *Ecosystems* 19: 1325–1344. DOI: 10.1007/s10021-016-0008-9.

- 2016f Kulakowski, D, TT Veblen, P Bebi. Fire severity controlled susceptibility to a 1940s spruce beetle outbreak in Colorado, USA. *PLoS One* 11(7): e0158138. doi:10.1371/journal.pone.0158138
- 2016g Westerling, A.L., T. Brown, T. Schoennagel, T. Swetnam, M. Turner, T. Veblen. 2016. Briefing: Climate and Wildfire in Western U.S. Forests. Pages 43-55 in Sample, V. Alaric and Bixler, R. Patrick (eds.). *Forest Conservation in the Anthropocene*. University Press of Colorado.
- 2016h Bakaj, F., N. Mietkiewicz, T. T. Veblen, and D. Kulakowski. 2016. The relative importance of tree and stand properties in susceptibility to spruce beetle outbreak in the mid-20th century. *Ecosphere* 7(10):e01485. 10.1002/ecs2.1485. pp 1-17.
- 2016i Rother, MT, TT Veblen. Limited conifer regeneration following wildfires in dry ponderosa pine forests of the Colorado Front Range. *Ecosphere* 7(12), e01594, 0.1002/ecs2.1594. pp 1-17.
- 2017a Conlisk, E, C Castanha, MJ Germino, TT Veblen, JM Smith, LM Kueppers. Declines in low-elevation subalpine tree populations outpace growth in high-elevation populations with warming. *Journal of Ecology* 105: 1347-1357. doi: 10.1111/1365-2745.12750.
- 2017b Veblen, TT. Disturbance in biogeography. Richardson, Douglas; Castree, Noel; Goodchild, Michael F.; Kobayashi, Audrey; Liu, Weidong; Marston, Richard A.; and Al-Hindi, Karen Falconer, "*International Encyclopedia of Geography: People, the Earth, Environment, and Technology*." ISBN 978-0470659632, Wiley-Blackwell. DOI: 10.1002/9781118786352.wbieg0884.
- 2017c Treml, V, TT Veblen. Does tree growth sensitivity to warming trends vary according to treeline form? *Journal of Biogeography* 44: 1469-1480, doi:10.1111/jbi.12996.
- 2017d Rother, MT, TT Veblen. Climate drives episodic conifer establishment after fire in dry ponderosa pine forests of the Colorado Front Range, USA. *Forests* 8(5):159. doi: 10.3390/f8050159.
- 2017e Blackhall, M, E Raffaele, J Paritsis, F Tiribelli, JM Morales, T Kitzberger, J Gowda, TT Veblen. Effects of biological legacies and herbivory on fuels and flammability traits: A long-term experimental study of alternative stable states. *Journal of Ecology* 105: 1309-1322. doi: 10.1111/1365-2745.12796.
- 2017f Harvey, JE, DJ Smith, TT Veblen. Mixed-severity fire history at a forest-grassland ecotone in west central British Columbia, Canada. *Ecological Applications* 1746-1760. doi: 10.1002/eap.1563.
- 2017g Holz, A, J Paritsis, I Mundo, TT Veblen, T Kitzberger, G Williamson, E Aráoz, C Bustos-Schindler, M González, H Grau, J Quezada. Southern Annular Mode drives multi-century wildfire activity in southern South America. *Proceedings of National Academy of Sciences* 114: 9552-9557. www.pnas.org/cgi/doi/10.1073/pnas.1705168114.
- 2017h Hart, SJ, TT Veblen, D Schneider, NP Molotch. 2017. Summer and winter drought drive the initiation and spread of spruce beetle infestation in the Southern Rocky Mountains. *Ecology* 98:2698-2707. doi: 10.1002/ecy.1963.

- 2017i Mundo, I. A., R. Villalba, T. T. Veblen, T. Kitzberger, A. Holz, J. Paritsis, and A. Ripalta. Fire history in southern Patagonia: human and climate influences on fire activity in *Nothofagus pumilio* forests. *Ecosphere* 8(9):e01932.10.1002/ecs2.1932.
- 2017j Gill, NS, D Jarvis, STA Pickett, D Kulakowski. Is initial post-disturbance regeneration indicative of longer-term trajectories? *Ecosphere* 8(8): e01924. 10.1002/ecs2.1924.
- 2017k Conlisk, E, C Castanha, MJ Germino, TT Veblen, JM Smith, A Moyes, LM Kueppers. Seed origin influences lodgepole pine recruitment under altered warming and watering, with implications to populations and the pace of range shifts. *Global Change Biology* 24: 197-211. doi: 10.1111/gcb.13840.
- 2018a Stevens-Rumann, CS, KB Kemp, PE Higuera, BJ Harvey, MR Rother, DC Donato, P Morgan, TT Veblen. Evidence for declining forest resilience to wildfires under climate change. *Ecology Letters* 21: 243-252. doi: 10.1111/ele.12889.
- 2018b Andrus, RA, BJ Harvey, KC Rodman, SJ Hart, TT Veblen. Moisture availability limits subalpine tree establishment. *Ecology* 99: 567–575. DOI:10.1002/ecy.2134.
- 2018c Mietkiewicz, N, D Kulakowski, TT Veblen. Do pre-outbreak forest conditions mediate the effects of spruce beetle (*Dendroctonus rufipennis* (Kirby)) outbreaks on fuels in subalpine forests of Colorado? *Ecological Applications* 28: 457–472.
- 2018d Andrus, RA, BJ Harvey, RK Chai, TT Veblen. Different vital rates of Engelmann spruce and subalpine fir explain discordance in understory/overstory dominance. *Canadian Journal of Forest Research* 48:1554-1562. dx.doi.org/10.1139/cjfr-2018-0182
- 2018e Holz, A, S Hart, G Williamson, TT Veblen, JA Aravena. Radial growth response to climate change along the latitudinal range of the world's southernmost conifer in southern South America. *Journal of Biogeography* 45: 1140-1152. DOI:10.1111/jbi.13199.
- 2018f Tepley, AJ, E. Thomann, TT Veblen, GLW Perry, A Holz, J Paritsis, T Kitzberger, KJ Anderson-Teixeira. Influences of fire–vegetation feedbacks and post-fire recovery rates on the extent and stability of forest cover across landscapes subject to changing fire regimes. *Journal of Ecology* 106: 1925-40. DOI:10.1111/1365-2745.12950.
- 2018g Mariani, M, A Holz, TT Veblen, G Williamson, M Fletcher, DMJS Bowman. Climate change amplifications of fire-climate teleconnections in the Southern Hemisphere. *Geophysical Research Letters* DOI: 10.1029/2018GL078294
- 2018h McWethy, DB, A Pauchard, RA García, A Holz, ME González, TT Veblen, J Stahl, B Currey. Landscape drivers of recent fire activity (2001-2017) in south-central Chile. *PloSOne* 13(8). e0201195. <https://doi.org/10.1371/journal.pone.0201195>
- 2018i Moritz, MA, C Topik, CD Allen, PF Hessburg, P Morgan, D. Odion, TT Veblen, IM McCullough. 2018. A Statement of Common Ground Regarding the Role of Wildfire in Forested Landscapes of the Western United States. Fire Research Consensus Working Group Final Report. Published by Science for Nature and People and the Wilburforce Foundation. Peer reviewed. <https://www.nceas.ucsb.edu/featured/fire-research-consensus>.
- 2018j Sommerfeld, A, S Cornelius, B Buma, AW D'Amato, T Després, I Díaz-Hormazábal, S Fraver, LE Frelich, AG Gutiérrez, SJ Hart, BJ Harvey, HS He, T Hlásny, A Holz, T Kitzberger, D Kulakowski, D Lindenmayer, AS Mori, J Müller, J Paritsis, GLW Perry, SL Stephens, M Svoboda, MG Turner, TT Veblen, R Seidl. Patterns and drivers of recent

- disturbances across the temperate forest biome. *Nature Communications* 9:4355. DOI: 10.1038/s41467-018-06788-9
- 2019a Kelly, JJ, QS Latif, VA Saab, TT Veblen. Spruce Beetle outbreaks guide American Three-toed Woodpecker *Picoides dorsalis* occupancy patterns in subalpine forests. *Ibis—International Journal of Avian Science* 161: 172–183. Published online March 17, 2018. DOI:10.1111/ibi.12596.
- 2019b Rodman, KC, TT Veblen, S Saraceni, TB Chapman. Wildfire Activity and Land Use Drove 20th Century Changes in Forest Cover in the Colorado Front Range. *Ecosphere*
- 2019c Davis, KT, SZ Dobrowski, PE Higuera, AZ Holden, TT Veblen, MT Rother, SA Parks, A Sala, MP Maneta. Wildfires and climate change push low-elevation forests across a critical climate threshold for tree regeneration. *Proceedings of the National Academy of Sciences*, published March 11, 2019. www.pnas.org/cgi/doi/10.1073/pnas.1815107116.
- 2019d Hessburg PF, Miller CL, Parks SA, Povak NA, Taylor AH, Higuera PE, Prichard SJ, North MP, Collins BM, Hurteau MD, Larson AJ, Allen CD, Stephens SL, Rivera-Huerta H, Stevens-Rumann CS, Daniels LD, Gedalof Z, Gray RW, Kane VR, Churchill DJ, Hagemann RK, Spies TA, Cansler CA, Belote RT, Veblen TT, Battaglia MA, Hoffman C, Skinner CN, Safford HD and Salter RB (2019). Climate, Environment, and Disturbance History Govern Resilience of Western North American Forests. *Frontiers in Ecology and Evolution* 7:239. doi: 10.3389/fevo.2019.00239.
- 2019e Chai, RK, RA Andrus, KC Rodman, BJ Harvey, TT Veblen. Stand dynamics and topographic setting influence changes in live tree biomass over a 34-year permanent plot record in a subalpine forest in the Colorado Front Range. *Canadian Journal of Forest Research* 49: 1256-1264 (2019) dx.doi.org/10.1139/cjfr-2019-0023
- 2019f Rodman, KC, TT Veblen, TB Chapman, MT Rother, A Wion, MD Redmond. Limitations to recovery following wildfire in dry forests of southern Colorado and northern New Mexico, USA. *Ecological Applications*, 0(0), 2019, e02001, pages 1-20. In press.
- 2020a Franco, MG, IA Mundo, TT Veblen. Field-validated burn-severity mapping in North Patagonian forests. *Remote Sens.* 2020, 12, 214; doi:10.3390/rs12020214.

Manuscripts accepted for publication

- Andrus, RA, SJ Hart, TT Veblen. Ungulate herbivory slows forest recovery following synchronous outbreaks of spruce and western balsam bark beetle. *Ecology*.
- Chapman, TB, T Schoennagel, TT Veblen, KC Rodman. Still standing: recent patterns of post-fire conifer refugia in ponderosa pine forests of the Colorado Front Range. *PloSOne*.
- Fadrique, B, JW Veldman, JW Dalling, LG Clark, L Montti, E Ruiz-Sanchez, DC Rother, F Ely, W Farfan-Ríos, P Gagnon, CM Prada, JC Camargo García, S Saha, TT Veblen, X

Londoño, KJ Feeley, CA Rockwell. Guidelines for including bamboos in tropical ecosystem monitoring. *Biotropica*.

Holz, A., SW Wood, C Ward, TT Veblen, DMJS Bowman. Population collapse and geographic retreat to fire refugia of the Tasmanian endemic conifer *Athrotaxis selaginoides* following the transition from Aboriginal to European fire management. *Global Change Biology*.