

VEAL EXHIBIT 87

Brian D. Collins

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CURRENT POSITIONS

- 2014 - present Senior Lecturer, part-time, University of Washington, Seattle, WA.
1986 – present Consultant in geomorphology and geology, Seattle, WA

EDUCATION

- 2009 Ph.D., Geological Sciences, University of Washington, Seattle, WA.
Dissertation: “The historical ecogeomorphology of Puget Sound lowland rivers.”
Advisor: David Montgomery.
- 1984 M. S., Geological Sciences, University of Washington, Seattle, WA.
Thesis: “Erosion of tephra from the 1980 eruption of Mount St. Helens.”
Advisor: Thomas Dunne.
- 1980 B.S., Geological Sciences, University of Washington, Seattle, WA.
- 1979 Field Geology Course, Indiana University, Bloomington, IND.
- 1979 B.A., Biology, Oberlin College, Oberlin, OH.

PROFESSIONAL EMPLOYMENT HISTORY

- 2012 – present Lecturer (2012-2014) and Senior Lecturer (2014-present), Dept. of Earth and Space Sciences, University of Washington, Seattle, WA. Teach graduate courses in geomorphology, serve on core faculty of M.S. program in applied geosciences, conduct research in geomorphology, serve on M.S. and Ph.D. advisory committees.
- 2011 – 2012 Instructor, Stream restoration certificate program, University of Washington Professional and Continuing Education, Seattle, WA.
- 1998 – 2012 Research Scientist, Department of Earth and Space Sciences, University of Washington, Seattle, WA. Study of geomorphology, historical ecology, and environmental history of Puget Sound lowland rivers.
- 1986 – present Consultant in Geomorphology, Seattle, WA. Consulting on: Land use and river engineering effects on erosion and sediment transport, fluvial processes, and aquatic habitat; watershed and aquatic habitat restoration; historical change to rivers and riverine habitats.
- 1985 – 1986 Geologist, Hosey & Associates Engineering Company, Bellevue, WA. Planned and carried out geotechnical and geomorphological investigations for proposed hydropower projects.

- 1980 – 1983 Research Assistant, Department of Geological Sciences, University of Washington, Seattle, WA. Field research on hillslope erosion, sediment budgets and land management at Mount St. Helens volcano.
- 1979, 1980 Field Assistant, Indiana University-Purdue University, Indianapolis, IND. Assisted in mapping alpine glacial geology, SW Montana, and Quaternary geology, western Montana.

TEACHING EXPERIENCE

Courses currently taught at University of Washington

- 2012 – present Fluvial geomorphology, ESS426/526
- 2013 – present Applied fluvial geomorphology, ESS541
- 2014 – present Technical communication in applied geosciences, ESS518

Other teaching experience

- 2010 – 2011 Changing rivers of Puget Sound, ESS/ENVIR/AIS 320
- 2011 Watershed and riverine processes, Stream Restoration Certificate Program, Professional and Continuing Education
- 2011 Guest lecturer, Antioch University, Seattle, WA. Course in “Bio-regional studies: The dynamic Duwamish River.”
- 2001 – 2011 Guest lecturer, University of Washington, Seattle, WA. Lectures and seminars in Fluvial Geomorphology, Urban Ecology, Streamside Studies, Oceanography, and Quaternary Environments.
- 1996 – 2005 Professional Engineering Program, University of Washington, Seattle, WA. Taught portion of Geology and Geomorphology of Stream Channels.
- 1982 – 1984 Graduate Teaching Assistant, University of Washington, Seattle, WA. Laboratory and field programs in Introductory Field Geology, Hillslope Geomorphology, Photogeology, and Environmental Geology.
- 1980 Associate Instructor, Indiana University, Bloomington, IND. Teaching assistant for Field Geology in the Northern Rocky Mountains.

Education training and education research

- 2008 – 2011 Researcher, NSF-sponsored “Data-driven inquiry in geoscience environmental restoration studies.” Collaboration between UW and SRI International to develop and teach geoscience curricula for American Indian students at Tulalip Heritage High School and UW.
- 2009 Puget Sound Summer Field Institute, Curriculum for the Bioregion, The Evergreen State College, Aug. 3-6, 2009.
- Four-day Native Case Studies Workshop, Enduring Legacies Project, The Evergreen State College, June 22-25, 2009.

RESEARCH EXPERIENCE

Areas of Experience

- 1980 – 2019 Erosion and sedimentation in volcanic areas
- 1986 – present Land use and river engineering effects on erosion, sediment transport and deposition, channel dynamics, and aquatic habitats
- 1997 – present Interactions of riparian forests, fluvial wood, and river dynamics and processes of floodplain formation
- 1998 – present Combining archival data mining methods and field studies to reconstruct historical geomorphology, riverine ecology, and habitats
- 1999 – 2019 Processes of bedrock river incision and strath terrace formation

Current Research Projects

- (1) Sediment production, routing, and channel response in the western Washington Cascades and Puget Sound lowlands to improve flood modeling capabilities
- (2) Wood jam dynamics and geomorphic change for stream restoration design and monitoring
- (3) Late Holocene and recent effects of traditional and modern land uses and natural disturbances on soil erosion and fluvial sedimentation in SW Sichuan
- (4) Holocene loess deposition, hillslope processes, and human settlement in northern Sichuan
- (5) Using archival sources to reconstruct historical hydrology, channel geomorphology, and riverine habitats in the Puget Sound region.

Current Research Support

- 2017 – 2021 National Science Foundation #1663859: Integrated modeling of hydro-geomorphic hazards: floods, landslides and sediment. PI: Erkan Istanbuluoglu; Co-PI: Brian Collins, Christina Bandaragoda, Alexander Horner-Devine, Guillaume Mauger; \$1.7M; 09/01/2017—8/31/2021
- 2018 – 2021 USFS Pacific Northwest Research Station: Evaluating wood jam dynamics and geomorphic change for stream restoration. PI: Brian Collins; \$128,826; 09/01/2018—09/30/2021.

Student and Post-Doctoral Supervision (*indicates committee chair)

Masters in Applied Geosciences: Hannah Karlsson* (2019); Lizzie Wratten (2019); Eric Dunham (2019); Shawn Harrington* (2018); Cameron Reister* (2018); Jeff Keck* (2017); Ryan Ransavage (2017); Chelsey DeWitt* (2016); Chester Chiao* (2016); Matthew Teich (2016); Tom Haskins (2016); Taylor Kenyon* (2016); Niall Twomey (2016); Jesse Favia* (2015); Hannah Marshburn* (2015); Katie Gauglitz (2014); Audrey Britton (2013); Clay Johnson (2013).

Ph.D.: Sarah Schanz (Earth and Space Sciences, 2018)

Post-doctoral: Daniel Scott (2018—)

PROFESSIONAL REGISTRATION

Registered Geologist, Washington (#1669)

PROFESSIONAL MEMBERSHIPS

American Geophysical Union, Geological Society of America

PROFESSIONAL SERVICE

Manuscript Reviews: Earth Surface Processes and Landforms (2011-2020); Earth Science Reviews (2013); Environmental Management (2013); Geomorphology (2014-2019); Geophysical Research Letters (2017); Journal of Geophysical Research Earth Surface (2012); Journal of Hydrology (2015); Landscape Ecology (2015); Quaternary Research (2012); Regional Environmental Change (2018); Reviews of Geophysics (2016); River Research and Applications (2012-2013); Water Resources Research (2013-2020).

Grant Review Panels: California Sea Grant (2005); University of Minnesota Water Resources Center (2012); National Geographic (2013).

Awards Panels: Geological Society of America Quaternary Geology & Geomorphology Award Committee (2014-2018).

Science Advisory Panels: Landscape Interpretation Team for “Management tools for landscape-scale restoration of ecological functions to the Sacramento River Delta,” San Francisco Estuary Institute.

UW, Earth and Space Sciences Department Committees: MS in ESS-Applied Geosciences: steering committee (2012-2020); comprehensive exam committee (2012-2019); admissions committee (2012-2015, 2018-2019); equipment committee (2012-2019).

CONSULTING and CONTRACT RESEARCH EXPERIENCE

List of Clients (as independent consultant, or, if marked by asterisk, in contract research as employee of the University of Washington)

Government Agencies

California Dept. of Conservation, Division of Mines & Geology, Sacramento, CA

Clallam County Conservation District

*Dungeness-Quilcene Water Resources Pilot Project, Sequim, WA

Grays Harbor County Dept. of Planning and Building, Montesano, WA

Grays Harbor County Prosecutor, Montesano, WA

*NOAA Fisheries, Northwest Fisheries Science Center, Seattle, WA.

*King County Water and Land Resources Div., Seattle, WA

King County Dept. of Natural Resources and Parks, Seattle, WA.

Snohomish County Dept. of Public Works, Everett, WA

*US Army Corps of Engineers, Seattle District

*US Forest Service Rocky Mountain Research Station, Fort Collins, CO

*US Forest Service Pacific Northwest Research Station, Corvallis, OR

*Washington Dept. of Natural Resources Aquatic Resources Division, Olympia, WA.

Washington Dept. of Ecology, Olympia, WA

Washington Dept. of Natural Resources, Div. of Geology and Earth Resources, Olympia, WA
Washington Wildlife Heritage Foundation
*Whatcom County Public Works Dept., Bellingham, WA.

Engineering and Environmental Consultants

Beak Consultants, Portland, OR
Ebasco Environmental, Inc., Bellevue, WA
ENTRIX, Inc., Seattle, WA
Hong Consulting Engineers, Lynnwood, WA
Hosey & Associates Engineering Co., Bellevue, WA
Northwest Archaeological Associates, Seattle, WA
Pacific Watershed Institute., Seattle, WA
Pentec Environmental, Inc., Edmonds, WA
R. W. Beck & Associates Engineering Co., Seattle, WA
Shannon & Wilson, Inc., Seattle, WA
Shapiro & Associates, Inc., Seattle, WA.
Philip Williams & Assoc., San Francisco, CA
Water Resources Consulting, Bellingham, WA

Indian Tribes

*Jamestown S’Klallam Tribe, Sequim, WA
Lummi Indian Tribal Council, Bellingham, WA
*Nooksack Indian Tribe Natural Resources Department, Deming, WA.
*Northwest Indian Fisheries Commission, Olympia, WA
Skagit River System Coop, LaConner, WA
Squaxin Island Tribe, Shelton, WA
Stillaguamish Tribe of Indians, Arlington, WA
The Tulalip Tribes, Marysville, WA

Private Industry

Boise Cascade Company, Boise, ID
Crown Pacific, Ltd., Hamilton, WA
Lone Star Northwest, Seattle, WA
Pilchuck River Coalition, Snohomish, WA
Plum Creek Timber Company, Seattle, WA
Weyerhaeuser Canada, Okanagan Falls, B. C.

Attorneys

Furlong-Butler Attorneys, Mount Vernon, WA
Environmental Law Support Associates, Seattle, WA
Toby Thaler, Seattle, WA. (as attorney for Whatcom County, City of Bellingham, and Lake
Whatcom Water & Sewer District)
Washington Forest Law Center, Seattle, WA
Willie Water Law, Seattle, WA

Non-Governmental Organizations

McKenzie Watershed Council, Springfield, OR
San Francisco Estuary Institute, Oakland, CA

Skagit Watershed Council, Mount Vernon, WA
Wild Fish Conservancy, Duvall, WA
Washington Environmental Council, Seattle, WA
The Wilderness Society, Seattle, WA

PUBLICATIONS (*Indicates student co-author)

Refereed Journal Articles Submitted, in Review, or in Preparation

Schmidt, A.H., **Collins, B.D.**, Keen-Zebert, A., *McGuire, C., d'Alpoim Guedes, J., Hein, A., Feathers, J., Persico, L., Fiallo, D., Tang, Y. Simonson, B. 2020 in prep. Implications of the loess record for Holocene climate and human settlement in Jiuzhaigou, eastern Tibetan Plateau, Sichuan, China.

Collins, B.D., Schmidt, A.H., Harrell, S., Aalto, R., Feathers, J, Tang, Y. 2020 in prep. Late Holocene erosional history and the role of sediment storage in decoupling erosion from downstream sediment yield in a third-order Yangtze River basin, Sichuan, China.

Scott, D.N., **Collins, B.D.** 2020 in prep. Sediment production from Pleistocene glacial terraces and Holocene lahar terraces to rivers in the western Cascade Range, Washington.

*Ahrendt, S., Horner-Devine, A., Kumar, N., Morgan, J.A., **Collins, B.D.**, Istanbuluoglu, E., Bandaragoda C., Pfeiffer, A.M. 2020 in prep. Using the stream gaging record to relate flood risk to channel capacity change in high sediment supply mountain basins.

Harrell, S., Schmidt, A.H., **Collins, B.D.**, Hagmann, R.K., Hinckley, T.M. 2019 in review. Sunny slopes are for grain, shady slopes for trees: Nuosu Yi agroforestry and environmental change in the Cool Mountains of southwestern Sichuan.

*Keck J., **Collins B.D.**, Wright W., Istanbuluoglu, E. 2020 in prep. Fluvial connectivity of a deep-seated landslide to upstream tree harvest.

Refereed Journal Articles and Book Chapters

Collins, B.D., Dunne, T. 2019. Thirty years of tephra erosion following the 1980 eruption of Mount St. Helens. *Earth Surface Processes and Landforms*. <https://doi.org/10.1002/esp.4707>.

Pfeiffer, A., **Collins, B.D.**, Anderson, S.W., Montgomery, D., Istanbuluoglu, E. 2019. River bed elevation variability reflects sediment supply, rather than peak flows, in the uplands of Washington State. Submitted to: *Water Resources Research*. <https://doi.org/10.1029/2019WR025394>.

*Schanz, S.A., Montgomery, D.R., **Collins, B.D.** 2019. Anthropogenic strath terrace formation caused by reduced sediment retention. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)* <https://doi.org/10.1073/pnas.1814627116>.

Collins, B.D., *Dickerson-Lange, S.E., *Schanz, S., *Harrington, S. 2019. Differentiating the effects of logging, river engineering, and hydropower dams on flooding in the Skokomish River, Washington. *Geomorphology* 332: 138-156. <https://doi.org/10.1016/j.geomorph.2019.01.021>.

*Schanz S.A, Montgomery D.R., **Collins B.D.**, Duvall, A.R. 2018. Multiple paths to straths: a review and re-assessment of terrace genesis. Geomorphology 312:12-23. <https://doi.org/10.1016/j.geomorph.2018.03.028>.

Collins, B.D., Montgomery, D.R., *Schanz, S.A., *Larsen, I.J. 2016. Rates and mechanisms of bedrock incision and strath terrace formation in a forested catchment, Cascade Range, Washington. Geological Society of America Bulletin 128: 926-943. <https://doi.org/10.1130/B31340.1>.

Chin, A., Florsheim, J., **Collins, B.D.**, Wohl, E.E. 2014. Feedbacks in human-landscape systems. Environmental Management 53: 28-41. <https://doi.org/10.1007/s00267-013-0031-y>.

Collins, B.D., Montgomery, D.R., Fetherston, K.L., Abbe, T.B. 2012. The floodplain large-wood cycle hypothesis: a mechanism for the physical and biotic structuring of temperate forested alluvial valleys in the North Pacific coastal ecoregion. Geomorphology 139-140: 460-470. <https://doi.org/10.1016/j.geomorph.2011.11.011>.

Collins, B.D., Montgomery, D.R. 2011. The legacy of Pleistocene glaciation and the organization of lowland alluvial process domains in the Puget Sound region. Geomorphology 126: 174-185. <https://doi.org/10.1016/j.geomorph.2010.11.002>.

Stock, J.D., Montgomery, D.R., **Collins, B.D.**, Dietrich, W.E., Sklar, L. 2005. Field rates of incision following bedrock exposure: Implications for process controls on the long-profiles of valleys cut by rivers and debris flows. Geological Society of America Bulletin 117: 174-194. <https://doi.org/10.1130/B25560.1>.

Collins, B.D., Montgomery, D.R., Sheikh, A.J. 2003. Reconstructing the historical riverine landscape of the Puget Lowland. Pp. 79-128 in: Montgomery, D.R., Bolton, S.M., Booth, D.B., Wall, L., eds., Restoration of Puget Sound Rivers, University of Washington Press, Seattle, WA.

Montgomery, D.R., **Collins, B.D.**, Buffington, J.M., Abbe, T.B. 2003. Geomorphic effects of wood in rivers. Pp. 21-48 in: Gregory, S.V., Boyer, K.L., Gurnell, A.M., eds. The Ecology and Management of Wood in World Rivers. American Fisheries Society Symposium 37, American Fisheries Society, Bethesda, MD.

Collins, B.D., Montgomery, D.R. 2002. Forest development, wood jams and restoration of floodplain rivers in the Puget Lowland. Restoration Ecology 10: 237-247. <https://doi.org/10.1046/j.1526-100X.2002.01023.x>.

Collins, B.D., Montgomery, D.R., Haas A.D. 2002. Historical changes in the distribution and functions of large wood in Puget Lowland rivers. Canadian Journal of Fisheries & Aquatic Sciences 59: 66-76. <https://doi.org/10.1139/f01-199>.

Collins B.D., Montgomery, D.R. 2001. Importance of archival and process studies to characterizing pre-settlement riverine geomorphic processes and habitat in the Puget Lowland. In: Dorava, J.M., Palcsak, B., Fitzpatrick, F., Montgomery, D.R., eds. Geomorphic Processes and Riverine Habitat. American Geophysical Union, Wash., D. C., p. 227-243. <https://doi.org/10.1029/WS004p0227>.

Beechie, T., **Collins, B.D.**, Pess, G. 2001. Holocene and recent changes to fish habitats in two Puget Sound basins. In: Dorava, J.M., Palcsak, B., Fitzpatrick, F., Montgomery, D.R., eds.

Geomorphic Processes and Riverine Habitat. American Geophysical Union, Wash., D. C., 37-54. <https://doi.org/10.1029/WS004p0037>.

Collins, B.D., Pess, G.R. 1997. Evaluation of forest practices prescriptions from Washington's watershed analysis program. Journal of the American Water Resources Association 33: 969-996. <https://doi.org/10.1111/j.1752-1688.1997.tb04118.x>.

Collins, B.D., Pess, G.R. 1997. Critique of Washington's watershed analysis program. Journal of the American Water Resources Association 33: 997-1010. <https://doi.org/10.1111/j.1752-1688.1997.tb04119.x>.

Collins, B.D., Dunne, T. 1989. Gravel transport, gravel harvesting, and channel-bed degradation in rivers draining the southern Olympic Mountains, Washington. Environmental Geology and Water Sciences 13: 213-224. <https://doi.org/10.1007/BF01665371>.

Collins, B.D., Dunne, T. 1988. Effects of forest land management on erosion and revegetation following the 1980 eruption of Mount St. Helens. Earth Surface Processes and Landforms 13: 193-205. <https://doi.org/10.1002/esp.3290130302>.

Collins, B.D., Dunne, T. 1986. Erosion of tephra from the 1980 eruption of Mount St. Helens. Geological Society of America Bulletin 97: 896-905. [https://doi.org/10.1130/0016-7606\(1986\)97<896:EOTFTE>2.0.CO;2](https://doi.org/10.1130/0016-7606(1986)97<896:EOTFTE>2.0.CO;2).

Collins, B.D., Dunne, T., Lehre, A.K. 1983. Erosion of tephra-covered hillslopes north of Mount St. Helens, Washington, May 1980-May 1981. Zeitschrift fur Geomorphologie 46: 103-121.

Lehre, A.K., **Collins, B.D.**, Dunne, T. 1983. Post-eruption sediment budget for the North Fork Toutle River drainage, June 1980-June 1981, Zeitschrift fur Geomorphologie 46: 143-163.

Government Publications

Legg, N.T., Heimbürg, C., **Collins, B.D.**, Olson, P.L. 2014. The channel migration toolbox: ArcGIS tools for measuring stream channel migration. Washington State Department of Ecology Publication No. 14-06-032.

Collins, B.D., Dunne, T. 1990. Fluvial geomorphology and river-gravel mining: A guide for planners, with case studies, California Division of Mines and Geology Special Publication 98, 31 p.

Symposium Proceedings

Beechie, T., Beamer, E., **Collins, B.**, Benda, L. 1996. Restoration of habitat-forming processes in Pacific Northwest watersheds: a locally adaptable approach to aquatic ecosystem restoration. In: Peterson, D.L., Klimas, C.V., eds. The Role of Restoration in Ecosystem Management. Society for Ecological Restoration. Madison, WI., pp. 48-67.

Swanson, F.J., **Collins, B.**, Dunne, T., Wicherski, B.P. 1983. Erosion of tephra from hillslopes near Mt. St. Helens and other volcanoes. In: Proc. of the Symposium on Erosion Control in Volcanic Areas, Seattle and Vancouver, Wash., July 1982, Public Works Research Inst., Ibaraki, Japan, pp. 183-221.

Collins, B., Dunne, T., Lehre, A.K. 1982. Sediment influx to the Toutle River from erosion of tephra, May 1980-May 1981. In: Proc. of the Conference on Mt. St. Helens: Effects on Water Resources, Wash. State Univ. Press, Pullman, Wash., pp. 82-97.

Lehre, A.K., **Collins, B.**, Dunne, T. 1982. Preliminary post-eruption sediment budget for the North Fork Toutle River drainage, June 1980-June 1981. In Proc. of the Conference on Mt. St. Helens: Effects on Water Resources, Wash. State Univ. Press, Pullman, Wash., pp. 215-234.

Abstracts

Scott, D., **Collins, B.D.** 2020. Multi-year monitoring of Stage 0 restoration using a geomorphic complexity approach. 19th Annual Stream Restoration Symposium, River Restoration Northwest, Feb. 4 – 6, 2020, Stevenson, WA.

Pfeiffer, A., Anderson, S.A., **Collins, B.D.**, Montgomery, D., Istanbuluoglu, E. 2019. Glaciogenic sediment implicated in river bed elevation instability across the uplands of Washington State, USA. Eos, Trans. of the American Geophysical Union.

Ahrendt, S., Horner-Devine, A., Kumar, N., Morgan, J.A., **Collins, B.D.**, Istanbuluoglu, E., Bandaragoda C., Pfeiffer, A.M. How is flood risk connected to channel capacity in high sediment supply mountain basins? Eos, Trans. of the American Geophysical Union.

Pfeiffer, A., Anderson, S.A., **Collins, B.D.**, Montgomery, D., Istanbuluoglu, E. 2018. The unstable rivers and the stable ones: using historical records of channel geometry to understand the processes driving changes in flood hazards in the Pacific Northwest, USA. Eos, Trans. of the American Geophysical Union.

Scott, D., **Collins, B.D.**, Yochum, S.E., Wohl, E., Flitcroft, R.L. 2018. Wood jam dynamics and resulting geomorphic effects in natural and engineered valley bottoms. Eos, Trans. of the American Geophysical Union.

Istanbuluoglu, E., Horner-Devine, A.R., Bandaragoda, C., Pfeiffer, A., Morgan, J.A., Keck, J., Mauger, G.S., **Collins, B.D.**, Shean, D.E., Kumar, N., Lundquist, J., Anderson, S.W., Jaeger, K.L., Grossman, E., Whorton, E., Montgomery, D., Riedel, J.L. 2018. Integrated modeling of hydro-geomorphic hazards: floods, landslides, and sediment. Eos, Trans. of the American Geophysical Union.

Schanz, S.A., Montgomery, D.R., **Collins, B.D.**, Duvall, A. 2018. Glaciation through the lens of strath terraces. Geological Society of America Abstracts with Programs 50, doi: 10.1130/abs/2018AM-319251.

Schanz, S.A., Montgomery, D.R., **Collins, B.D.**, Duvall, A. 2017. River incision and terrace formation caused by reduced sediment retention and deforestation in the Pacific Northwest, USA. Eos, Trans. of the American Geophysical Union

McGuire, C., Schmidt, A., Keen-Zebert, A., D'Alpoim Guedes, J., **Collins, B.D.**, Tang Y., 2017. Timing and provenance of loess in Jiuzhaigou, China. Geological Society of America Abstracts with Programs 49, doi: 10.1130/abs/2017AM-307967.

- Schmidt, A.H., Bierman, P.R., **Collins, B.D.**, Harrell, S., Hinckley, T., Tang, Y., Rood, D.H. 2017. The geomorphic history of human activity in southwestern China. Geological Society of America Abstracts with Programs 49 doi: 10.1130/abs/2017AM-303455.
- Schanz, S.A., Montgomery, D.R., **Collins, B.D.**, Duvall, A. 2017. Multiple paths to climatic straths: How local conditions and dating methods obscure terrace correlation with climate cycles. Geological Society of America Abstracts with Programs 49 doi: 10.1130/abs/2017AM-299637.
- Schanz, S.A., Montgomery, D.R., **Collins, B.D.**, Duvall, A. 2016. Examining alternate hypotheses for Holocene strath terrace formation: the role of sediment retention and woody debris. Geological Society of America Abstracts with Programs 48.
- Curiel, M., Doak, S., Hill, M., Schmidt, A., **Collins, B.D.** 2016. Quantifying land use and erosion in southwest China. Geological Society of America Abstracts with Programs 48.
- Schanz, S.A., Montgomery, D.R., **Collins, B.D.**, Duvall, A. River incision and strath terrace formation as a result of shifts in sediment retention. Geological Society of America Abstracts with Programs 47: 791.
- Schmidt, A.H., **Collins, B.D.**, Simonson, B.M., Goh, K.X., Alkikaya, Z., Tang, Y., Deng, G. 2012. Why does the loess have stones in it? An investigation of loess deposits in Jiuzhaigou National Park, Sichuan, China. Geological Society of America Abstracts with Programs 44: 186.
- Bartz, K.K., Beechie, T., Imaki, H., Davies, J.R., **Collins, B.**, Sanderson, B. L., and Ruckelshaus, M. Estimating changes in juvenile Chinook habitat and rearing capacity throughout the Puget Sound region. American Fisheries Society 141st Annual Meeting, Seattle, WA, Sept. 4-8-, 2011.
- Schmidt, A.H., **Collins, B.D.**, Goh, K.X., Schmidt, J.P., Tang, Y., Li, Y., and Deng, G. 2011. Landslides, habitable land, and hazards for Tibetan villages in Jiuzhaigou National Park, Sichuan, China. Geological Society of America Abstracts with Programs 43: 446.
- Collins, B.D.** Schmidt, A.H., Harrell, S. 2011. Soil erosion, fluvial processes, and land use history in a mountainous catchment in southwest Sichuan Province, China. Association of American Geographers, 2011 Annual Meeting, Seattle, U.S.A., Apr. 12-16, 2011.
- Collins, B.D.**, Montgomery, D.R. 2011. Linking historical geomorphology and historical ecology to guide river restoration in the Puget Sound region. US International Association of Landscape Ecologists Symposium, Portland, U. S. A., Apr. 3-7, 2011.
- Zalles, D.R., **Collins, B.D.**, Updegrave, C. Montgomery, D.R., Colonnese, T.G., Sheikh A.J., Haynie K., Johnson, V.. 2010. Using place-based curricula to teach about restoring river systems: American Geophysical Union 2010 Fall Meeting, San Francisco, CA, 13-17 Dec.
- Collins, B.D.**, Montgomery, D.R. 2009. A multi-scale approach to developing a "reference condition" for guiding the restoration of extensively human-modified lowland rivers in the Puget Sound basin. Association of American Geographers, 2009 Annual Meeting, Las Vegas, U.S.A., Mar. 22-27, 2009.

Collins, B.D., Fetherston, K.L., Montgomery, D.R., Abbe, T.B. 2007. The role of foundational tree species in the self-organization of forested alluvial valleys. Geological Society of America Abstracts with Programs, Vol. 39, No. 6, p. 181.

Collins, B.D., Montgomery, D.R. 2007. Landscape evolution, historical eco-geomorphology and riverine process domains: defining a “reference condition” for river restoration and management in the Puget Sound basin. Geological Society of America Abstracts with Programs, Vol. 39, No. 6, p. 106.

Collins, B.D., Montgomery, D.R. 2006. Reconstructing the late Holocene geo-ecology of Puget Sound’s riverine landscapes to guide their restoration and management. International Conference on Rivers and Civilization: Multidisciplinary Perspectives on Major River Basins. June 25-28, 2006, La Crosse, U.S.A., p. 66.

Collins, B.D. 2003. The biophysical character of Puget Sound’s large delta-estuaries at the time of early Euro-American settlement. Estuaries on the Edge, Convergence of Ocean, Land and Culture, 17th Biennial Research Conference of the Estuarine Research Federation, Sept. 14-18, 2003, Seattle, U.S.A, p. 30.

Collins, B.D., Montgomery, D.R. 2001. Importance of archival and process studies to characterizing pre-settlement riverine geomorphic processes and habitat in the Puget Lowland. Transactions, Japanese Geomorphological Union 22(4), p. C-43.

Beechie, T.J., **Collins, B.D.**, Pess, G. 2001. Holocene and recent changes to fish habitats in two Puget Sound basins. Transactions, Japanese Geomorphological Union 22(4), p. C-18.

Collins, B.D., Montgomery, D.R., Sheikh, A.J. 2001. How can history guide restoration of Puget Lowland rivers?: Insights from reconstructing geomorphic processes and habitats of the historic riverine landscape. Annual Mtg., Society for Ecological Restoration NW Chapter, Apr. 2-6, 2001, Bellevue, U.S.A.

Collins, B.D., Sheikh, A.J., Montgomery, D.R. 2001. Mapping the historic river landscape in the Puget Sound basin. Center for Streamside Studies 11th Annual Review, Feb. 1, 2001, Seattle, U.S.A.

Collins, B.D., Montgomery, D.R.. 2000. Forest development, log jams and restoration of floodplain rivers in the Puget Lowland. International Conference on Wood in World Rivers. Oct. 23-27, 2000. Oregon State University, Corvallis, U.S.A.

Montgomery, D.R., **Collins B.D.**, Abbe, T.B., Buffington, J.M. 2000. Geomorphological effects of wood in rivers. International Conference on Wood in World Rivers. Oct. 23-27, 2000. Oregon State University, Corvallis, U.S.A.

Collins, B.D., Montgomery, D.R. Haas, A.D. 2000. Historic changes in the distribution and functions of large woody debris in Puget Lowland rivers. International Conference on Wood in World Rivers. Oct. 23-27, 2000. Oregon State University, Corvallis, U.S.A.

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