

bcp-related pubs from Hughes and / or Salzer [citation count¹]

1. **Hughes, M.K.** and Graumlich, L.J. Multimillennial dendroclimatic records from western North America. In *' Climatic variations and forcing mechanisms of the last 2000 years'* editors, R.S.Bradley, P.D.Jones and J.Jouzel. Springer Verlag, Berlin. 109-124 (1996)[96]²
2. **Hughes, M.K.** and Funkhouser, G., Extremes of moisture availability reconstructed from tree rings for recent millennia in the Great Basin of Western North America. In *The Impacts of Climate Variability on Forests*, M. Beniston and J. Innes (Editors). Berlin: Springer-Verlag. Pp.99-107 (1998) [65]
3. Mann, M.E., Bradley, R.S. and **Hughes, M.K.**, Northern Hemisphere Temperatures During the Past Millennium: Inferences, Uncertainties, and Limitations. *Geophysical Research Letters*, 26, 759-762 (1999) [1963]
4. **Hughes, M. K.** and L. J. Graumlich, 2000, Multi-Millennial Nevada Precipitation Reconstruction. International Tree-Ring Data Bank. *IGBP PAGES/World Data Center-A for Paleoclimatology Data Contribution Series #2000-049*. NOAA/NGDC Paleoclimatology Program, Boulder CO, USA. (2000) [n/a]
5. **Salzer MW.** Temperature variability and the northern Anasazi: Possible Implications for Regional Abandonment. *Kiva: Journal of Southwestern Anthropology and History*, 65:295-318. (2000)[35]
6. Betancourt JL, Grissino-Mayer HD, **Salzer MW**, Swetnam TW. A test of 'annual resolution' in stalagmites using tree rings. *Quaternary Research* 58, 197-199. (2002)[30]
7. Betancourt JL, Grissino-Mayer HD, **Salzer MW**, Swetnam TW. Reply to Baker and Genty's comments on: A test of annual resolution in stalagmite using tree rings. *Quaternary Research* 59, 479. (2003)[4]
8. Fenbiao Ni, Tereza Cavazos, **Malcolm K. Hughes**, Andrew C. Comrie, and Gary Funkhouser. Cool Season Precipitation in the Southwestern United States since AD 1000: Comparison of Linear and Nonlinear Techniques for Reconstruction. *International Journal of Climatology* 22, 1645-1662 (2002)[86]³
9. **Hughes, M.K.** and G. Funkhouser. Frequency-dependent climate signal in upper and lower forest border trees in the mountains of the Great Basin. *Climatic Change*.59, 233-244 (2003) [52]
10. **Salzer, M.W.**, Kipfmueller, K.F. Reconstructed temperature and precipitation on a millennial timescale from tree-rings in the Southern Colorado Plateau, USA. *Climatic Change* 70(3): 465-487. (2005).[162]
11. Meko DM, Woodhouse CA, Baisan CA, Knight T, Lukas JJ, **Hughes MK, Salzer MW.** Medieval drought in the Upper Colorado Basin. *Geophysical Research Letters* 34, L10705, doi:10.1029/2007GL029988. (2007)[237]

¹ From Google Scholar, 1/31/17

² See online presentation at

https://www.ncdc.noaa.gov/paleo/drought/drght_graumlich.html

³ See online presentation at

<https://www.ncdc.noaa.gov/paleo/pubs/ni2002/ni2002.html>

12. Graham, N. and **Hughes, M.K.** Reconstructing the Medieval Mono Lake low stands. *The Holocene* 17: 1197–1210 (2007) [35]
13. Graham, N., **Hughes, M.K.**, Ammann, C.A., Cobb, K., Hoerling, M.P., Kennett, D., Kennett J., Rein, B., Wigand, P.E., Stott L. and Taiyi Xu Increasing Tropical Pacific-midlatitude teleconnections in mediaeval times. *Climatic Change* DOI 10.1007/s10584-007-9239-2 (2007) [185]
14. **Salzer, M.W.** and **Hughes, M.K.** Bristlecone Pine Tree Rings and Volcanic Eruptions over the Last 5000 Years. *Quaternary Research* 67: 57-68 (2007)[104]
15. Pearson, C.L., Dale, D.S., Brewer, P.W., **Salzer, M.W.**, Lipton, J., Manning, S.W. Dendrochemistry of White Mountain bristlecone pines: An investigation via Synchrotron Radiation Scanning X-Ray Fluorescence Microscopy. *Journal of Geophysical Research-Biogeosciences* 114, Art. G01023, doi:10.1029/2008JG000830. (2009)[4]
16. **Salzer, M.W.**, **Hughes, M.K.**, Bunn, A. and Kipfmueller, K. F. Recent Unprecedented Tree-ring Growth in Bristlecone Pine at the Highest Elevations and Possible Causes. *Proceedings of the National Academy of Science*. doi: 10.1073/pnas.0903029106 (2009) [171]
17. Kipfmueller, K.F. and **Salzer, M.W.** Linear trend and climate response of five-needle pines in the western United States related to treeline proximity. *Canadian Journal of Forest Research* 40: 134-142 (2010)[23]
18. **Salzer MW, Hughes MK.** Volcanic eruptions over the last 5,000 years from bristlecone pine tree-ring widths and frost rings. In Stoffel M, Bollschweiler M, Butler DR, Luckman BH eds. *Tree Rings and Natural Hazards: A State-of-the-Art. Advances in Global Change Research*, 41, Springer, Heidelberg, London, New York, ISBN 978-90-481-8735-5; e-ISBN 978-90-481-8736-2; doi:10.1007/978-90-481-8736-2. (2010)[3]
19. Tolwinski-Ward, S., Evans, M.N., **Hughes, M.K.** and Anchukaitis, K.J. An Efficient Forward Model of the Climate Controls on Interannual Variation in Tree-Ring Width. *Climate Dynamics*. DOI 10.1007/s00382-010-0945-5. (2011) [60]
20. Roderick J. Bale, Iain Robertson, **Matthew W. Salzer**, Neil J. Loader, Steven W. Leavitt, Mary Gagen, Thomas P. Harlan, Danny McCarroll. An annually resolved bristlecone pine carbon isotope chronology for the last millennium. *Quaternary Research* 76: 22–29 (2011) [21]
21. Bunn, A.G., **Hughes, M.K.** and **Salzer, M.W.** Topographically Modified Tree-Ring Chronologies as a Potential Means to Improve Paleoclimate Inference. *Climatic Change* 105: 627-634. (2011) [27]
22. Anchukaitis, K.J. Breitenmoser, P., Briffa, K.R., Buchwal, A., Büntgen, U., Cook, E.R., D'Arrigo, R., Esper, J., Evans, M.N., Frank, D., Grudd, H., Gunnarson, B.E., **Hughes, M.K.**, Kirilyanov, A.V., Körner, C., Krusic, P.J., Luckman, B., Melvin, T.M., **Salzer, M.W.**, Shashkin, A.V., Timmermann, C., Vaganov E.A. & Wilson, R.J.S.. Tree rings and volcanic cooling. *Nature Geoscience* 5: 836-837. (2012)[77]
23. **Salzer, M.W.**, Bunn, A.G., Graham, N.E., and **Hughes, M.K.** Five millennia of paleotemperature from tree-rings in the Great Basin, USA. *Climate Dynamics* DOI 10.1007/s00382-013-1911-9 (2013)[29]
24. **Salzer, M.W.**, Larson, E.R. Bunn, A.G. and **Hughes, M.K.** Changing climate response in near-treeline bristlecone pine with elevation and aspect.

Environmental Research Letters DOI:10.1088/1748-9326/9/11/114007 (2014)[14]

25. Jull, A. J. T., I. P. Panyushkina, T. E. Lange, V. V. Kukarskih, V. S. Myglan, K. J. Clark, **M. W. Salzer**, G. S. Burr, and S. W. Leavitt, Excursions in the 14C record at A.D. 774–775 in tree rings from Russia and America, *Geophys. Res. Lett.*, 41, 3004–3010, doi:10.1002/2014GL059874. (2014)[26]
26. Tolwinski-Ward, S.E., Tingley, M.P., Evans, M.N., **Hughes, M.K.**, Nychka, D.W. Probabilistic reconstructions of local temperature and soil moisture from tree-ring data with potentially time-varying climatic response. *Climate Dynamics* DOI 10.1007/s00382-014-2139-z (2015)[16]
27. Sigl M, Winstrup M, McConnell1 JR, Welten KC, Plunkett G, Ludlow F, Büntgen U, Caffee M, Chellman N, Dahl-Jensen D, Fischer H, Kipfstuhl S, Kostick C, Maselli1 OJ, Mekhaldi F, Mulvaney R, Muscheler R, Pasteris DR, Pilcher JR, **Salzer MW**, Schüpbach S, Steffensen JP, Vinther B, Woodruff TE. Timing and climate forcing of volcanic eruptions for the past 2,500 years. *Nature*, 523: 543-549 doi:10.1038/nature14565. (2015)[88]
28. Fusa Miyake, Kimiaki Masuda, Toshio Nakamura, Katsuhiko Kimura, Masataka Hakozaiki, J. Timothy Jull, Todd E. Lange, Richard Cruz, Irina P. Panyushkina, Chris Baisan, and **Matthew W. Salzer**. Search for annual carbon-14 excursions in the past. *Radiocarbon*. 1-6. DOI:10.1017/RDC.2016. (2016)[2]
29. Fusa Miyake, A. J. Timothy Jull, Irina P. Panyushkina, Lukas Wacker, **Matthew Salzer**, Christopher H. Baisan, Todd Lange, Richard Cruz, Kimiaki Masuda, and Toshio Nakamura Large 14C excursion in 5480 BC indicates an abnormal sun in the mid-Holocene *PNAS* doi:10.1073/pnas.1613144114 (2017) [0]
30. Bruening J M, Tran T J, Bunn A G, **Salzer M W**, Weiss S B Fine-scale modeling of bristlecone pine treeline position in the Great Basin, USA. *Environmental Research Letters*, doi:10.1088/1748-9326/aa5432 (2017)[1]
31. Tran T J, Bruening J M, Bunn A G, **Salzer M W**, Weiss S B Cluster analysis and topoclimate modeling to examine bristlecone pine tree-ring growth signals in the Great Basin, USA. *Environmental Research Letters*, doi:10.1088/1748-9326/aa5388 (2017)[1]

January 31, 2017

Hughes and Salzer BCP-related funding

	Funding Agency	Title	Start Date	Lead PI	Amount \$\$	Co-Pis
1	NOAA	Climate Variability in Western North America on decadal time scales	5/1/95	Malcolm Hughes	50,000	David Meko
2	NOAA	Late Holocene climate variability from long tree-ring chronologies	6/1/96	Malcolm Hughes	127,187	
3	NOAA	Decade-to-century hydroclimatic variability in Western North America	8/1/98	David Meko	39,986	Malcolm Hughes
4	NOAA	Variability, social vulnerability, and public policy in the Southwestern United States: a proposal for regional assessment activities	6/1/01	Roger Bales	167,723	7 including Hughes; Total funding \$3,354,456
5	NSF	Natural spatiotemporal variability of climate over the Western US in the late Holocene	7/1/02	Malcolm Hughes	412,541	
6	NOAA	Collaborative: Reconstruction and analysis of patterns of climate variability over one to two millenia	9/1/02	Malcolm Hughes	111,319	
7	Institute for Aegean Prehistory	Volcanic eruptions 3400-3700 years ago recorded in <i>Pinus longaeva</i> tree-rings: expanded collections and analyses	6/1/05	Malcolm Hughes	8,972	
8	NSF	Collaborative research: A geospatial approach to dendroclimatology of multi-millennial bristlecone pine	3/17/06	Malcolm Hughes	456,157	
9	NOAA	Interpreting and Refining the Climate Signal in Millennial-Length 5-Needle Pine Chronologies	8/1/06	Malcolm Hughes	29,322	Matthew W Salzer
10	NSF	Late Holocene Hydroclimate variability in the Great Basin, and its causes.	8/19/09	Malcolm Hughes	484,192	Matthew W Salzer
11	NSF	Collaborative research: Quantifying climate thresholds for high elevation pines using landscape heterogeneity to improve climate reconstructions from tree rings.	9/21/12	Matthew W Salzer	300,029	Malcolm Hughes
12	ICCP	Interdisciplinary Chronology of Civilizations Project	1/1/16	Charlotte Pearson	see CP	Matt Salzer et al.
					2,187,428	total bcp-related funding,

Partial list of Hughes and/or Salzer bcp-related talks and posters. February 6, 2017.

2017

Nicholas Graham, Matthew **Salzer**, Malcolm **Hughes**, Dirk Verschuren
Dust-lake-climate interactions and the "4.2 kyr event".
European Geoscience Union, Vienna, Austria

2016

Bunn AG, Tyler J Tran, Jamis M Bruening, Matthew W **Salzer**, Stuart B Weiss and Malcolm K **Hughes**
Identifying Threshold Temperatures Associated with Bristlecone Pine Growth Signals in the Great Basin, USA.
American Geophysical Union, San Francisco, California.

Bunn A G, Tran T, Bruening J, **Salzer** M W, Weiss S B, **Hughes** M K
Niche spaces in the growth of high elevation Bristlecone Pine in the Great Basin, U.S.A.
Ameridendro, Mendoza, Argentina;

Bunn A G, Tran T, Bruening J, **Salzer** M W, Weiss S B, **Hughes** M K
Niche spaces in the growth of high elevation Bristlecone Pine in the Great Basin, U.S.A.
MtnClim, Leavenworth, WA

Hughes MK, Piermattei A, **Salzer** MW and Gaertner H
Incomplete lignification in tracheids of bristlecone pine from near upper tree limit in California and Nevada, USA.
Ameridendro, Mendoza, Argentina

2015

Bruening J, Tran T, Bunn AG, **Salzer** MW, Weiss SB.
Modeling potential climatic treeline of Great Basin Bristlecone Pine in the Snake Mountain Range, Nevada, USA.
American Geophysical Union, San Francisco, California.

Tran T, Bruening J, Bunn AG, **Salzer** MW, Weiss SB.
Cluster analyses of 20th century growth patterns in high elevation Great Basin bristlecone pine in the Snake Mountain Range, Nevada, USA.
American Geophysical Union, San Francisco, California.

Larson ER, **Salzer** MW.
Climate Response and Chronology Characteristics of Foxtail Pine Vary Over Short Distances from Tree Line.
Association of American Geographers. Chicago.

2014

Salzer MW, Kipfmueller KF.
Southwestern USA drought over multiple millennia.
American Geophysical Union, San Francisco, California.

Bunn AG, **Salzer** MW, Larson ER, Weiss SB, **Hughes** MK.
The role of topoclimate in explaining abrupt growth thresholds of bristlecone pine in the White Mountains of California.
American Geophysical Union, San Francisco, California.

Bunn AG, **Salzer** MW, Larson ER, Weiss SB, **Hughes** MK.
Thresholds in growth of Bristlecone Pine with small changes in elevation in the White Mountains of California, USA.
MtnClim, Midway, UT.

Hughes MK, **Salzer** MW. Talk
Current status of the Methuselah Walk bristlecone pine chronology for radiocarbon calibration.
International Conference on Dendrochronology, Melbourne, Australia.

Hughes MK, **Salzer** MW, Larson ER, Bunn AG. Talk.
Spatiotemporal variations in tree-ring/climate links in millennia-long Bristlecone pine chronologies.
International Conference on Dendrochronology, Melbourne, Australia.

2013

Hughes MK Talk
Life at the limit-high elevation tree-ring growth and climate in the Great basin, USA.
Departmental seminar, Biology Department, University of Quebec at Chicoutimi. October 4.

Hughes MK Talk
Life at the limit-high elevation tree-ring growth and climate in the Great basin, USA.
Seminar: Climate Change IGERT, University of Washington, Seattle, October 22.

Salzer MW.
Linking bristlecone pine chronologies and global-scale climate events.
Invited talk at The Center for Mediterranean Archaeology and the Environment symposium, Tucson, AZ.

Salzer MW, Bunn AG, Graham NE, **Hughes** MK.
Late Holocene paleotemperatures from bristlecone pine tree rings and treeline elevation change.
Ameridendro, Tucson, AZ.

Salzer MW, Baisan C
Dendrochronology of the "Currey Tree".
Ameridendro, Tucson, AZ.

Hughes MK, **Salzer** MW, Bunn AG. Talk.
Mixed signals, mixed messages and lessons from bristlecone pine.
Ameridendro, Tucson, AZ.

Wilding T, Larson ER, **Salzer** MW.
Refining Climatic Interpretations of Lower Forest Border Bristlecone Pine Tree-Ring Chronologies over Recent Millennia.
Ameridendro, Tucson, AZ.

Anchukaitis KJ, et al. (including **Hughes** and **Salzer**)
Forward modeling the dendroclimatology of Common Era volcanic eruptions.
Ameridendro, Tucson, AZ.

2012

Hughes MK. Talk.
Life at the limit-high elevation tree-ring growth and climate in the Great basin, USA.
Physical Geography Institute Colloquium, Friedrich-Alexander University Erlangen-Nuremberg,
Germany, May 9, 2012.

Salzer MW, Bunn AG, Graham NE, **Hughes MK.** Poster.
*Paleotemperature from high elevation tree-ring width and treeline change over 4,500 years in the
Great Basin, USA.*
American Geophysical Union, San Francisco, California.

Bunn AG, **Salzer MW**, **Hughes MK.** Talk
*Quantifying climate thresholds for Bristlecone pine using landscape heterogeneity to improve
climate reconstructions from tree rings.*
American Geophysical Union, San Francisco, California.

Larson ER, Wilding T, **Salzer MW.**
*Refining climatic interpretations of lower forest border bristlecone pine tree-ring chronologies
over recent millennia.*
American Geophysical Union, San Francisco, California.

Anchukaitis KJ, et al. (including **Hughes** and **Salzer**) Talk
The dendroclimatology of Common Era volcanic eruptions.
American Geophysical Union, San Francisco, California.

2010

Salzer MW, **Hughes MK**, Bunn AG, Kipfmueller KF.
Potential of treeline bristlecone pine as a late Holocene climate record.
American Geophysical Union, San Francisco, California.

Kipfmueller KF, **Salzer MW.**
Divergence of Climate-Growth Relationships in Five-Needle Pines in the Western United States.
Association of American Geographers, Washington, DC.

Hughes MK Talk
Tree-line bristlecone pine growing faster than for millennia. Why?
Universitat d'Alacant, Spain. September 27. Department of Ecology, Seminar

2009

Hughes MK, **Salzer MW**, Ammann C, Franklin R. Talk.
*A process-based modeling approach to the interpretation of high-elevation tree-ring records in the
western U.S.*
European Geophysical Union, Vienna Austria.

2008

Hughes MK Talk

Natural Archives and Unnatural Climates? The Case of Ancient Pines. Malcolm K. Hughes
Botany Department, University of Wyoming, Laramie, WY, February 8, 2008. Seminar:

Hughes MK Talk

Why are high mountain pines growing faster than for 3500 years?
Institute on Environment seminar, University of Minnesota, Minneapolis-St. Paul, MN, March 11.

Hughes MK Talk

A confounded mystery in the mountains: the case of ancient pines.
Institute of Arctic and Alpine Research seminar, University of Colorado, Boulder, March 17.

Hughes MK Talk

Colorado State University, Ft. Collins, CO. April 8, 2008. Seminar.
A confounded mystery in the mountains: the case of ancient pines.

Malcolm K. **Hughes**, Matthew W. **Salzer**, Caspar Ammann and Rebecca Franklin. Talk.
Solicited long presentation *A process-based modeling approach to the interpretation of high-elevation tree-ring records in the western US.*
European Geosciences Union, Vienna, Austria, April 17, 2008.

Malcolm K. **Hughes**, Matthew W. **Salzer**, Caspar Ammann, Rebecca Franklin and Fenbiao Ni.
Poster.
A process-based modeling approach to the interpretation of high-elevation tree-ring records in the western US.
MTNCLIM workshop, Silverton, CO, June 10, 2008.

Malcolm K. **Hughes**. Talk.

Plenary lecture: *Climate change effects on high mountain forest ecosystems in eastern California.*
CEREC (Climate, Ecosystems, and Resources of Eastern California) workshop, Bishop, CA,
November 6-8, 2008.

Malcolm K. **Hughes**, Matthew W. **Salzer**, Rebecca Franklin, Caspar Ammann, Andrew G. Bunn
and Kurt F. Kipfmüller. Talk.
A process-based modeling approach to the interpretation of high-elevation tree-ring records in the western US.
CEREC (Climate, Ecosystems, and Resources of Eastern California) workshop, Bishop, CA,
November 6-8, 2008.

2007

Hughes MK, Salzer MW, Franklin R.
Twentieth century tree rings wider than in recent millennia.
American Geophysical Union, San Francisco, California.

Salzer MW, Hughes MK

Bristlecone pine in western North America: Building and interpreting long chronologies.
75th anniversary of the Laboratory of Tree-Ring Research, Tucson, Arizona.

Kipfmüller KF, **Salzer MW.**
Considering the utility of 5-needle pines as climate proxies.

Association of American Geographers, San Francisco, California.

2006

Hughes MK, Salzer MW. Talk.

Distant fire: tree rings, ice cores and volcanoes.

Tree-Rings, Kings, and Old World Archaeology and Environment; Cornell Dendrochronology-Archaeology Conference in Honor of Peter Ian Kuniholm, Ithaca, NY.

2004

Salzer MW, Hughes MK.

Inferences on past temperature from millennial-length upper forest border tree-ring chronologies in the western USA.

Tree Rings and Climate: Sharpening the Focus, Tucson, Arizona.

2003

Hughes MK, Funkhouser G, Salzer MW, Ni F. Talk.

Changing climate response of high-elevation tree rings in semi-arid mountains and implications for paleoclimate reconstruction.

EGS/AGU Joint Assembly, Nice, France.

2001

Swetnam TW, **Salzer MW.**

Extreme late 20th century climatic responses of high elevation forest ecosystems in the American Southwest.

HIGHEST II: Climatic Change at High Elevation Sites, Davos, Switzerland.

Salzer MW, Dean JS.

Paleoenvironmental variability during the Anasazi occupation of north-central Arizona ca. AD 500-1300.

Pecos Conference, Flagstaff, Arizona.

Salzer MW.

Fifteen centuries of reconstructed temperature and precipitation from northern Arizona tree-rings.

PACLIM, Climate Variability of the Eastern North Pacific and Western North America, Pacific Grove, California.

1999

Salzer MW.

Temperature and precipitation reconstructions from ecologically contrasting tree-ring sites in the American Southwest.

Santa Fe Institute, Climate and Society on the Colorado Plateau, AD 500-1600, Santa Fe, New Mexico.