Alia J. Lesnek

alia.lesnek@unh.edu
(603) 862-0144

Research website: www.alialesnek.com

University of New Hampshire
Department of Earth Sciences
Durham, NH 03824

Twitter: @alialesnek

EDUCATION

2014-2019 **University at Buffalo, Buffalo, NY**
Ph.D. in Geology

2010-2013 **University of Florida, Gainesville, FL**
B.Sc. in Geological Sciences

PROFESSIONAL APPOINTMENTS

2019-present **University of New Hampshire, Durham, NH**
Postdoctoral Scholar

2014-2019 **University at Buffalo, Buffalo, NY**
Graduate Research Assistant

2011-2013 **University of Florida, Gainesville, FL**
Undergraduate Research Assistant

RESEARCH INTERESTS

Quaternary paleoclimatology and glacial geology

- Glacier and ice sheet response to abrupt climate change
- Using remote sensing to map Quaternary surficial deposits
- Multi-proxy environmental reconstructions (e.g., lake sediments, animal fossils)
- Impacts of glaciation and climate change on ancient human populations

Geochronology

- Applications of *in situ* cosmogenic nuclides to glacial geology and geohazards
- Improving cosmogenic nuclide production rate calibrations

PUBLICATIONS

These publications are available on my research website and Google Scholar profile.

Published

(7) **Lesnek A.J.**, Briner, J.P., Baichtal, J.F., Lyles, A.S., New constraints on the last deglaciation of the Cordilleran Ice Sheet in coastal Southeast Alaska: *Quaternary Research*, v. 96, p. 140-160.

(6) Downs, J.Z., Johnson, J.V., Briner, J.P., Young N.E., **Lesnek, A.J.**, Cuzzone, J.K., (2020). West Greenland Ice Sheet retreat history reveals elevated precipitation during the Holocene thermal maximum: *The Cryosphere*, v. 14, p. 1121-1137.

(5) **Lesnek, A.J.**, Briner, J.P., Young, N.E., Cuzzone, J.K. (2020). Maximum Southwest Greenland Ice Sheet recession in the Early Holocene: *Geophysical Research Letters*, v. 47, no. 1, e2019GL083164.

(4) Young, N.E., Briner, J.P., Miller, G.H., **Lesnek, A.J.**, Crump, S.E., Thomas, E.K., Pendleton, S.L., Cuzzone, J.K., Lamp, J., Zimmerman, S., Caffee, M., Schaefer, J.M. (2020). Deglaciation of the Greenland and Laurentide ice sheets interrupted by glacier advance during abrupt coolings: *Quaternary Science Reviews*, v. 229, 106091.

(3) **Lesnek, A.J.**, Briner, J.P., Lindqvist, C., Baichtal, J.F., Heaton, T.H. (2018). Deglaciation of the Pacific coastal corridor directly preceded the human colonization of the Americas: *Science Advances*, v. 4, no. 5, eaar5040.

(2) **Lesnek, A.J.**, Briner, J.P. (2018). Response of a land-terminating sector of the western Greenland Ice Sheet to early Holocene climate change: Evidence from ^{10}Be dating in the Søndre Isortoq region: *Quaternary Science Reviews*, v. 180, p. 145-156.

(1) Briner, J.P., Tulenko J.P., Kaufman, D.S., Young N.E., Baichtal, J.F., **Lesnek, A.** (2017). The Last Deglaciation of Alaska: *Cuadernos de Investigación Geográfica*, v. 43, p. 429-448.

Submitted

Briner, J.P., Cuzzone, J.K., Badgeley, J.A., Young, N.E., Steig, E.J., Morlighem, M., Schlegel, N.J., Hakim, G.J., Schaefer, J., Johnson, J.V., **Lesnek, A.J.**, Thomas, E.K., Allan, E., Bennike, O., Cluett, A.A., Csatho, B., de Vernal, A., Downs, J., Larour, E., Nowicki, S., Greenland Ice Sheet mass loss rates will exceed Holocene values this century. In revision for *Nature*.

FUNDING

Total awarded to date: $33,874

2020	Quantifying rates of Quaternary landscape evolution in Grand Teton National Park using *in situ* cosmogenic ^{10}Be, ^{14}C, and ^{36}Cl dating, University of Wyoming-National Park Service Research Station Small Grants Program ($5,000)
2018	College of Arts and Sciences Dissertation Fellowship, University at Buffalo ($6,000)
2017	Doctoral Dissertation Research: Late Pleistocene Glaciation in Southeastern Alaska: Assessing the Sensitivity of a Marine-terminating Ice Sheet to Changing Environmental Conditions (BCS-1657065), National Science Foundation ($15,999)
2017	Visiting Graduate Student Travel Grant, National Lacustrine Core Facility ($1,000)
2016	Pegrum Professional Development Award, University at Buffalo ($500)
2016	Graduate Student Conference Travel Grant, University at Buffalo ($500)
2015	Graduate Student Research Grant, Geological Society of America ($1,875)

2012 University Scholar Award, University of Florida ($2,000)

HONORS AND AWARDS

2019 College of Arts and Sciences Research Poster Winner, University at Buffalo

2018 Solène Pouget Prize for Scientific Contributions to Society, University at Buffalo

SELECTED PRESENTATIONS

** indicates invited talk*

2019 **Lesnek, A.J.**, Briner, J.P., Young, N.E., Cuzzone J.K., Maximum Greenland Ice Sheet recession in the Early Holocene. Poster session presented at: 2019 AGU Fall Meeting, December 10, San Francisco, CA.

2018 **Lesnek, A.J.**, Briner, J.P., Baichtal, J.F., Rapid Cordilleran Ice Sheet retreat during Heinrich Stadial 1. Oral session presented at: 2018 AGU Fall Meeting, December 10, Washington, D.C.

2018 ***Lesnek, A.J.**, Deglaciation of the North Pacific coast and the peopling of the Americas. Oral presentation for the University New Hampshire Department of Earth Sciences, November 30, Durham, NH.

2018 ***Lesnek, A.J.**, The last deglaciation of the Greenland and Cordilleran ice sheets: Reconstructions from Southwest Greenland and Southeast Alaska. Oral presentation for the University of Maine Climate Change Institute seminar, October 25, Orono, ME.

2018 ***Lesnek, A.J.**, Deglaciation of the Pacific coastal corridor: Causes, consequences, and remaining questions. Oral presentation for the International Quaternary Webinar (hosted by University of Massachusetts at Amherst), September 19.

2018 **Lesnek, A.J.**, Briner, J.P., Young N.E., Synthesizing Holocene Greenland Ice Sheet chronology for data-model comparison. Poster session presented at: Joint CANQUA/AMQUA Biennial Meeting, August 10, Ottawa, ON.

2018 **Lesnek, A.J.,** Briner, J.P., Young, N.E., Cuzzone, J.K., Downs, J.Z., Johnson, J.V., Holocene Greenland Ice Sheet extent for data-model comparison. Oral session presented at: 48th Annual International Arctic Workshop, April 5, Boulder, CO.

2017 **Lesnek, A.J.**, Briner, J.P., Baichtal, J.F., Sbarra, C., Latest Pleistocene deglaciation of the Cordilleran Ice Sheet in southeastern Alaska. Poster session presented at: 2017 GSA Annual Meeting, October 23, Seattle, WA.

2017 ***Lesnek, A.J.**, Briner, J.P., Young, N.E., Thomas, E.K., Cluett, A.A. Holocene fluctuations of the western Greenland Ice Sheet. Oral presentation at National Lacustrine Core Facility (LacCore), October 10, Minneapolis, MN.

2017 **Lesnek, A.J.**, Briner, J.P., Roop, H.A., Cluett, A.A., Thomas, E.K., Young, N.E. Constraints on western Greenland Ice Sheet extent during the middle Holocene from proglacial threshold lakes. Poster session presented at: 47th Annual International Arctic Workshop, March 23, Buffalo, NY.

2016 **Lesnek, A.J.**, Briner, J.P., It takes two: New constraints on Cordilleran Ice Sheet extent and retreat from ^{10}Be and radiocarbon dating. Oral session presented at: 2016 AGU Fall Meeting, December 11, San Francisco, CA.

2016 **Lesnek, A.J.**, Briner, J.P., It takes two: Using ^{10}Be and radiocarbon dating to decipher the glacial history of southeastern Alaska. Oral session presented at: 46th Annual International Arctic Workshop, April 2, Boulder, CO.

2015 **Lesnek, A.J.**, Briner, J.P., Schweinsberg, A.D., Lifton, N.A., Toward a master chronology for western Greenland's Fjord Stade Moraines: New ^{10}Be ages from the Søndre Isortoq region. Oral session presented at: 2015 AGU Fall Meeting, December 17, San Francisco, CA.

2015 **Lesnek, A.J.**, Briner, J.P., Schweinsberg, A.D., Lifton, N.A., A preliminary ^{10}Be chronology of the Fjord Stade Moraines in the Søndre Isortoq region, western Greenland. Poster session presented at: 2015 Northeastern Section GSA Meeting, March 23, Bretton Woods, NH.

2013 **Lesnek, A.**, Martin, J.B., Deuerling, K., Hydrochemical Evidence for Differential Weathering in Proglacial and Deglaciated Streams in Western Greenland. Poster session presented at: University of Florida Undergraduate Research Symposium, March 23, Gainesville, FL.

TEACHING AND MENTORING

2020 Instructor, Earth History, University of New Hampshire

2019 Teaching assistant for Environmental Remote Sensing lab

2018-2019 Undergraduate research supervisor for Serena Nichols, University at Buffalo

2018 Teaching assistant for Natural Hazards and Climate Change labs

2018 Teaching assistant for UB Geology Summer Field Camp

2018 Guest lecturer in Quaternary Dating and Paleoclimate, University at Buffalo

2017 Primary instructor for Glacial Geology, University at Buffalo

2017-2018 Undergraduate research supervisor for Christopher Sbarra, University at Buffalo

2014-2016 Teaching assistant for Natural Hazards and Climate Change labs

SERVICE AND OUTREACH

Reviewer for *Boreas*, *The Holocene*, *Oceanography*, *Quaternary Research*, *Quaternary Science Reviews*

2019 Primary convener for oral session at AGU Fall meeting: "Catching cosmic rays: Advances in using cosmogenic nuclides to quantify earth surface processes"

2019 Co-convener for technical session at GSA Annual meeting: "Cordilleran Ice Sheet through the Quaternary: Chronology, paleoenvironments, and implications"

2019 Speaker, Buffalo "Pint of Science"

2018-2019 Riverside Middle School Science ArtReach, Buffalo, NY

2017-2019	Faculty Liaison, Department of Geology, University at Buffalo
2017	Local organizing committee, NSF-sponsored workshop on Greenland Ice Sheet Stability
2017	K-12 Education and Outreach Committee, Buffalo March for Science
2015-2017	University at Buffalo Science Exploration Day
2014-2017	Graduate Student Association Senator, University at Buffalo
2011-2013	"Can You Dig It?" presenter, Florida Museum of Natural History
2011-2013	Museum Docent, Florida Museum of Natural History

FIELD CAMPAIGNS

2019	**Teton Range, Wyoming** Collecting rock samples for ^{10}Be, ^{14}C, and ^{36}Cl dating
2019	**Southeastern Alaska** Collecting rock samples for ^{10}Be, ^{36}Cl, and Ar-Ar dating, lake sediment coring
2018	**Collegiate Peaks, Colorado** Collecting rock samples for ^{10}Be dating
2017	**Southeastern Alaska** Collecting rock samples for ^{10}Be dating (self-directed; included UB undergraduate student Christopher Sbarra as a field assistant)
2017	**Nuuk region, southwestern Greenland** Collecting rock samples for ^{10}Be dating, lake sediment coring
2016	**Kangerlussuaq region, southwestern Greenland** Collecting rock samples for ^{10}Be dating, lake sediment coring, GPS mapping of moraines
2015	**Southeastern Alaska** Collecting rock samples for ^{10}Be dating
2014	**Sukkertoppen region, southwestern Greenland** Collecting rock samples for ^{10}Be dating, lake sediment coring, GPS mapping of moraines, collecting *in situ* fossilized moss emerging from ice caps

MEDIA

2019	First Americans arrived at least 16,000 years ago, and probably by boat *PBS NOVA*
2019	2,000-Year-Old Tattoo Tool Found in Washington Storage Closet *Gizmodo*
2018	Humans May Have Reached North America by More Than One Route *Gizmodo*

2018	Boulder-sized Clues to How Humans Settled the Americas *The New York Times*
2018	The First Americans 'island hopped' down the west coast past the glaciers *Quirks & Quarks (CBC podcast)*
2018	How Did Ancient Humans Travel to America from Asia? New Research Looks at Pacific Coast *Newsweek*
2018	New map of Alaska's ancient coast supports theory that America's first people arrived by boat *Science Magazine*

PROFESSIONAL DEVELOPMENT

2020	"Introduction to Inclusive Teaching" course, University of New Hampshire
2018	NAVIGATE Project participant, an NSF-funded initiative to increase the retention of women in STEM fields
2018	"Science Communication for Any Audience" workshop, CIRTL Network
2017	Associate level certification, CIRTL

AFFILIATIONS

American Geophysical Union (AGU)

Geological Society of America (GSA)

Women in Science and Engineering (WiSE)

Center for the Integration of Research, Teaching and Learning (CIRTL)

Out in Science, Technology, Engineering, and Mathematics (oSTEM)

REFERENCES

Dr. Jason Briner *(Primary Ph.D. advisor)*
Professor
Department of Geology
University at Buffalo
jbriner@buffalo.edu

Dr. Beata Csatho *(Ph.D. committee member)*
Professor
Department of Geology
University at Buffalo
bcsatho@buffalo.edu

Dr. Joseph Licciardi *(Primary postdoc advisor)*
Professor
Department of Earth Sciences
University of New Hampshire
joe.licciardi@unh.edu

Dr. Tracy Gregg *(Teaching reference)*
Associate Professor
Department of Geology
University at Buffalo
tgregg@buffalo.edu