

CURRICULUM VITAE

Dr. Anne CS McIntosh (formerly Fiala)

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EDUCATION

Ph.D. Forest Biology and Management (January 2008-December 2012)

University of Alberta, Edmonton, Alberta, Canada

- Thesis title: "Ecology of understory and below-ground communities in lodgepole pine forests under changing disturbance regimes". Advisor: Dr. S. Ellen Macdonald. Spent three months in Umea, Sweden at SLU (October 2010-January 2011)

M.Sc. Forest Science (September 2000-August 2003)

Oregon State University, Corvallis, Oregon, U.S.A.

- Thesis title: "Forest canopy structure in western Oregon: characterization, methods for estimation, prediction, and importance to avian species". Co-advisors: Drs. Steven Garman and Andrew Gray

B.Sc. with Honors Biology and Chemistry (September 1992-May 1996)

University of British Columbia, Vancouver, B.C., Canada.

- Undergraduate Honors Thesis: "Variation in polyphenolic levels in the brown algae *Hedophyllum sessile*". Advisor: Dr. Robert DeWreede

EMPLOYMENT HISTORY

1. **Associate Dean of Teaching**, Faculty of Augustana, University of Alberta, Camrose, AB (July 2022-June 2025).
2. **Associate Professor of Biology**, Department of Science, Faculty of Augustana, University of Alberta, Camrose, AB (July 2020-present). [Research sabbatical July 1 2020 – June 30 2021.]
3. **Adjunct Professor** (July 2014-current – renewed through June 30, 2026), Department of Renewable Resources, University of Alberta, Edmonton, AB (July 2014-current, on leave July-December 2017)
4. **Assistant Professor of Biology**, Department of Science, Faculty of Augustana, University of Alberta, Camrose, AB (July 2014-June 2020, on parental and medical leave July-December 2017).
5. **Ecology Research Associate**, The Alberta Biodiversity Monitoring Institute, University of Alberta, Edmonton, AB (December 2012-June 2014)
6. **Term Lecturer (Co-taught): Community Ecology (BIOL 332)**, Department of Biological Sciences, Faculty of Science, University of Alberta, Edmonton, AB (January-April 2013, September-December 2013)
7. **Term Lecturer: Forest Ecosystems (FOR 322, FOR501)**, Department of Renewable Resources, Faculty of Agricultural, Life, and Environmental Sciences, University of Alberta, Edmonton, AB (September-December 2012)

8. **Lab Teaching Assistant: The Mosses of Alberta: Conservation and Identification (RenR 327)**, Department of Renewable Resources, Faculty of Agricultural, Life, and Environmental Sciences, University of Alberta, Edmonton, AB (January 2012-April 2012)
9. **Term Lecturer (Co-taught): Forest Ecosystems (FOR 322)**, Department of Renewable Resources, Faculty of Agricultural, Life, and Environmental Sciences, University of Alberta, Edmonton, AB (September-December 2011)
10. **Forest Ecology Research Associate-Canopy Database Project**, The Evergreen State College, Olympia, WA. (November 2003-October 2007)
11. **Summer Faculty-Instructor of "Forest Ecology of the Pacific Northwest"** The Evergreen State College, Olympia, WA (July-September 2004, July-August 2005, July-August 2006)
12. **Graduate and Faculty Research Assistant**, Department of Forest Science, Oregon State University, Corvallis, OR (September 2000-October 2003)
13. **Oregon Plan Data Compiler and Habitat Data Technician**, Oregon Department of Fish & Wildlife, Corvallis, OR (January-September 2000)
14. **Spawning Ground Surveyor**, Oregon Department of Fish & Wildlife, Tillamook, OR (October 1999-January 2000)
15. **Natural Resource Specialist I**, Oregon Department of Fish & Wildlife, Starbuck, WA (June-October 1999)
16. **Experimental Biological Aide**, Oregon Department of Fish & Wildlife, Mouth of Grande Ronde River, WA (March-June 1999)
17. **Hatchery technician**, Island Scallops, Qualicum Beach, BC (~1997-98)
18. **Tree Planter**, Summit Reforestation, Smithers, BC (Summers 1994-1996)

RESEARCH PUBLICATIONS

Google scholar researcher profile: <https://scholar.google.ca/citations?user=dDAIvAIAAAAJ>

Peer-reviewed

Published

1. Aubin IA, Deschenes EA, Santala KA, Emilson EJS, Schoonmaker AB, **McIntosh ACS**, Bourgeois BDE, Cardou FF, Dupuch AG, Handa ITH, Lapoint MI, Lavigne JA, Maheu AG, Nadeau SJ, Naeth MAK, Neilson EI, Wiebe PA. *In press*. Restoring forest ecosystem services through trait-based ecology. *Environmental Reviews*.
2. Hvenegaard GT, **McIntosh ACS**, Hood GA, Bourgeois KD, Cook CA. 2023. One landscape, many habitats for supporting bird diversity in a mixed-use landscape in east-central Alberta, Canada. *Wilson Journal of Ornithology*. 135(4): 480-491.
3. Ochoa-Hueso R, Delgado-Baquerizo M, Risch AC, Ashton L, Augustine D, Bélanger N, Bridgham S, Britton AJ, Bruckman VJ; Camarero JJ; Cornelissen G, Crawford JA; Dijkstra FA; Diochon A; Earl S; Edgerley J; Epstein H; Felton A; Fortier J; Gagnon D; Greer K; Griffiths HM; Halde C; Hanslin HM; Harris LI; Hartsock JA; Hendrickson P; Hovstad KA; Hu J; Jani AD; Kent K; Kerdraon-Byrne D; Khalsa SDS; Lai DYF; Lambert F; LaMontagne JM; Lavergne S; Lawrence BA; Littke K; Leeper AC; Licht MA; Liebig MA; Lynn JS; Maclean JE; Martinsen V; McDaniel MD; **McIntosh ACS**; Miesel JR; Miller J; Mulvaney MJ; Moreno G; Newstead L; Pakeman RJ; Pergl J; Pinno BD; Piñeiro J; Quigley K; Radtke TM; Reed P; Rolo V; Rudgers J; Rutherford PM; Sayer EJ; Serrano-Grijalva L; Strack M; Sukdeo N; Taylor AFS; Truax B; Tsuji LJS; van Gestel N; Vaness BM; Van Sundert K; Vítková M; Weigel R; Wilton MJ; Yano Y; Teen E; Bremer E. 2023. Bioavailability of macro and micronutrients across global topsoils: Main drivers and global change impacts. 10.1029/2022GB007680. <https://doi.org/10.1029/2022GB007680>

4. Cardou F, Munson AD, Boisvert-Marsh L, Anand M, Arsenault A, Bell FW, Bergeron Y, Boulangeat I, Delagrangé S, Fenton NJ, Gravel D, Hamel B, Hébert F, Johnstone JF, Kumordzi BB, Macdonald SE, Mallik A, **McIntosh ACS**, McLaren JR, Messier C, Morris D, Shipley B, Sirois L, Thiffault N, Aubin I. 2022. Above- and belowground drivers of intraspecific traits variability across subcontinental gradients for five ubiquitous forest plants in North America. *Journal of Ecology*. 110(7): 1590-1605.
5. Segura-Totten M, Dewsbury B, Lo S, Bailey EG, Beaster-Jones L, Bills RJ, Brownell SE, Caporale N, Dunk R, Eddy SL, García-Ojeda ME, Gardner SM, Green LE, Hartley L, Harrison C, Imad M, Janosik AM, Jeong S, Josek T, Kadandale P, Knight J, Ko ME, Kukday S, Lemons P, Litster M, Lom B, Ludwig P, McDonald KK, **McIntosh ACS**, Menezes S, Nadile EM, Newman SL, Ochoa SSD, Olabisi O, Owens MT, Price RM, Reid JW, Ruggeri N, Sabatier C, Sabel JL, Sato BK, Smith-Keiling BL, Tatapudy SD, Theobald EJ, Tripp B, Pradhan M, Venkatesh MJ, Wilton M, Warfa AM, Wyatt BN, Raut SA. 2021. Chronicling the Journey of the Society for the Advancement in Biology Education Research (SABER) in its Effort to Become Antiracist: From Acknowledgement to Action. *Frontiers in Education*.
6. Hood G, **McIntosh ACS**, Hvenegaard GT. 2021. Ecological compromise: Can alternative beaver management maintain aquatic biodiversity? *Wetlands*. 41:112.
7. Gray AN, **McIntosh ACS**, Garman SL, Shettles M. 2021. Predicting canopy cover of diverse forest types from individual tree measurements. *Forest Ecology and Management*. 501: 119682.
8. Steinke J, **McIntosh ACS**, Schroeder L, Macdonald SE. 2020. Understory vegetation responses to simulated mountain pine beetle attack and salvage logging in grey attack stage lodgepole pine stands. *Forest Ecology and Management*. 474: 118373.
9. Azeria ET, Santala K, **McIntosh ACS**, Aubin I. 2020. Plant traits as indicators of recovery of reclaimed wellsites in forested areas: slow but directional succession trajectory. *Forest Ecology and Management* 468: 118180.
10. Lupardus R, Santala K, Azeria E, Aubin I, **McIntosh ACS**. 2020. Uncovering traits in recovering grasslands: A functional assessment of oil and gas well pad reclamation. *Ecological Engineering: X* 5:100016.
11. **McIntosh ACS**, Drozdowski B, Degenhardt D, Powter CB, Small CC, Begg J, Farr D, Janz A, Lupardus RC, Ryerson D, Schieck J. 2019. Protocols for monitoring ecological recovery of reclaimed well pads on grasslands. *Journal of the American Society of Mining and Reclamation*. 8(3): 91-173.
12. Kumordzi B, Aubin I, Shipley B, Violle C, Johnstone J, Cardou F, Anand M, Arsenault A, Bell W, Bergeron Y, Boulangeat I, Brousseau M, de-grandpre L, Delagrangé S, Fenton N, Gravel D, Macdonald SE, Hamel B, Higelin M, Hebert F, Isabel N, Mallik A, **McIntosh ACS**, McLaren J, Messier C, Morris D, Thiffault N, Tremblay J-P, and Munson A. 2019. Geographic scale and disturbance influence intraspecific trait variability in leaves and roots of North American understory plants. *Functional Ecology*. 33:1771-1784.
13. Lupardus R, **McIntosh ACS**, Janz A, Farr D. 2019. Succession after reclamation: Identifying and assessing ecological indicators of forest recovery on reclaimed oil and natural gas well pads. *Ecological Indicators*. 106, 105515.
14. **McIntosh ACS**, Drozdowski B, Degenhardt D, Powter CG, Small CC, Begg J, Farr D, Janz A, Lupardus RC, Ryerson D, Schieck J. 2019. Monitoring ecological recovery of reclaimed wellsites: protocols for quantifying recovery on forested lands. *MethodsX*, 6:876-909.
15. Taylor-Davis K, Callaway RM, Fajardo A, Pauchard A, Nuñez MA, Brooker RW, Maxwell BD, Dimarco RD, Peltzer DA, Mason B, Ruotsalainen S, **McIntosh ACS**, Pakeman RJ, Smith AL, Gundale MJ. 2018. Biogeographic novelty increases the severity of impacts of an introduced species on native plant communities. *Ecography*, 42:1-11. Developed methods, collected data, provided input on manuscript.

16. Hird JN, Montaghi A, McDermid GJ, Kariyeva J, Moorman B, Nielsen SE, and **McIntosh ACS**. 2017. Use of Unmanned aerial vehicles for monitoring recovery of forest vegetation on petroleum well sites. *Remote Sensing*, 9(5):413 (Open Access). Developed methods, collected data, provided input on manuscript.
17. Quideau S, **McIntosh ACS**, Norris C, Lloret D, Swallow M, Hannam K. 2016. Analysis of phospholipid fatty acid analysis. *Journal of Visualized Experiments*, (114) e54360, doi:10.3791/54360. Participated in video component and provided input on manuscript.
18. **McIntosh ACS**, Macdonald SE, Quideau S. 2016. Diverse understory plant communities are linked to fine-scale above- and below-ground heterogeneity within mature lodgepole pine forests. *PLOS One*, 11(3):e0151436 <http://dx.doi.org/10.1371/journal.pone.0151436>
19. Solymos P, Morrison SF, Kariyeva J, Schieck J, Haughland DL, Azeria E, Cobb T, Hinchliffe R, Kittson J, McIntosh A, Narwani T, Pierossi P, Roy M, Sandybayev T, Boutin S, Bayne E. 2015. Data and information management for the monitoring of biodiversity in Alberta. *Wildlife Society Bulletin*, 39(3):472-479. Contributed to writing of manuscript.
20. **McIntosh ACS**, Macdonald SE, Quideau S. 2013. Linkages between the forest floor microbial community and resource heterogeneity within mature lodgepole pine forests. *Soil Biology & Biochemistry*, 63: 61-72.
21. **McIntosh ACS**, Macdonald SE. 2013. Short-term resistance of ecosystem properties and processes to simulated mountain pine beetle attack in a novel region. *Ecosphere*, 4(6): article 68.
22. **McIntosh ACS**, Macdonald SE. 2013. Potential for lodgepole pine regeneration after mountain pine beetle attack in newly invaded Alberta stands. *Forest Ecology and Management*, 295: 11-19.
23. **McIntosh ACS**, Macdonald SE, Gundale MJ. 2012. Tree species versus regional controls on ecosystem properties and processes: an example using introduced *Pinus contorta* in Swedish boreal forests. *Canadian Journal of Forest Research*, 42: 1228-1238.
24. **McIntosh ACS**, Gray AN, Garman SL. 2012. Estimating canopy cover from standard forest inventory measurements in western Oregon. *Forest Science*, 58(2):154-167.
25. **McIntosh ACS**, Gray AN, Garman SL. 2009. Canopy structure on forest lands in western Oregon: differences among forest types and stand ages. General Technical Report PNW-GTR-794. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 35 p.
26. Nadkarni NM, **McIntosh ACS**, Cushing JB. 2008. A framework to categorize forest structure concepts. *Forest Ecology and Management*, 256:872–882. Developed methods, and co-wrote manuscript.
27. **McIntosh ACS**, Cushing JB, Nadkarni NM, Zeman L. 2007. Database design for ecologists: composing core entities with observations. *Ecological Informatics*, 2:224-236.
28. Cushing JB, Nadkarni NM, Finch M, **Fiala ACS**, Murphy-Hill E, Delcambre L, Maier D. 2007. Component-based end-user database design for ecologists. *Journal of Intelligent Information Systems*, 29(1): 7-24. Provided input on manuscript.
29. **Fiala ACS**, Garman SL, Gray AN. 2006. Comparison of five canopy cover estimation techniques in the western Oregon Cascades. *Forest Ecology and Management*, 232:188-197.

Non-peer-reviewed publications:

1. **McIntosh ACS**, Schut S, Lee S, Bartels S, Macdonald SE. 2023. **Post-harvest biodiversity recovery in boreal forests**. Report for the Alberta Biodiversity Monitoring Institute. March 31, 2023. 33 pp. Developed methods, co-wrote the report.
2. **McIntosh ACS**, Schut S, Lee S, Bartels S, Macdonald SE. 2022. Post-harvest biodiversity recovery in Alberta's boreal forests at Ecosystem Management Emulating Natural Disturbance (EMEND). Final

Report for 2021-22 research grant prepared for the Alberta Biodiversity Monitoring Institute. July 8 2022. 18 pp. Developed methods, wrote main draft of the report.

3. Hood GA, Hvenegaard GT, **McIntosh ACS**. 2018. Natural goods and services in a mixed-use landscape. Final Report for 2017-18 research grant prepared for Beaver County. November 30, 2018. 141 pp. Developed methods, collected data, Co-wrote report.
4. Hood GA, Hvenegaard GT, **McIntosh ACS**. 2017. Ecological sustainability in rural landscapes. (carbon modeling contributions provided by M. Iravani). Final Report for 2016-17 research grant prepared for Beaver County. July 28, 2017. 130 pp. Developed methods, collected data, Co-wrote report.
5. ERMP Project Advisory Group, 2017. Ecological Recovery Monitoring Program for Certified Reclaimed Sites in Alberta: Proposed Implementation Plan. 39 pp. Developed methods, collected data, Co-wrote report.
6. ERMP Project Advisory Group, 2017. Ecological Recovery Monitoring Program for Certified Reclaimed Sites in Alberta: Specialized Monitoring Protocols. 30 pp. Developed methods, collected data, Co-wrote report.
7. ERMP Project Advisory Group, 2017. Ecological Recovery Monitoring Program for Certified Reclaimed Sites in Alberta: Monitoring Protocols for Cultivated Land Wellsites. 39 pp. Developed methods, collected data, Co-wrote report.
8. ERMP Project Advisory Group, 2017. Ecological Recovery Monitoring Program for Certified Reclaimed Sites in Alberta: Field Datasheets for Cultivated Land Wellsites. 8 pp. Developed methods, collected data, Co-wrote report.
9. ERMP Project Advisory Group, 2017. Ecological Recovery Monitoring Program for Certified Reclaimed Sites in Alberta: Monitoring Protocols for Forested Land Wellsites. 81 pp. Developed methods, collected data, Co-wrote report.
10. ERMP Project Advisory Group, 2017. Ecological Recovery Monitoring Program for Certified Reclaimed Sites in Alberta: Field Datasheets for Forested Land Wellsites. 22 pp. Developed methods, collected data, Co-wrote report.
11. ERMP Project Advisory Group, 2017. Ecological Recovery Monitoring Program for Certified Reclaimed Sites in Alberta: Monitoring Protocols for Grassland Wellsites. 47 pp. Developed methods, collected data, Co-wrote report.
12. ERMP Project Advisory Group, 2017. Ecological Recovery Monitoring Program for Certified Reclaimed Sites in Alberta: Field Datasheets for Grassland Wellsites. 14 pp. Developed methods, collected data, Co-wrote report.
13. Small CS, **McIntosh ACS**, Drozdowski B, Underwood A, and Bachmann V. 2016. Ecological recovery monitoring of certified reclaimed wellsites in Alberta: pilot program logistics report. Alberta Innovates – Technology Futures, Alberta, Canada. 29 p. Developed methods, collected data, Co-wrote report.
14. **McIntosh ACS**. 2016. Ecological recovery monitoring of certified reclaimed wellsites in Alberta— Long-term monitoring framework to track ecological recovery – results from the Dry Mixedgrass and Forested lands, Version 2016-02-01. Alberta Biodiversity Monitoring Institute, Alberta, Canada. 40 p.
15. Ryerson D, **McIntosh ACS**. 2015. Ecological Recovery Monitoring of Reclaimed Wellsites: Spring 2015 Newsletter. Alberta Biodiversity Monitoring Institute, Alberta, Canada.
16. **McIntosh ACS**. 2015. Ecological recovery monitoring of reclaimed wellsites in forested lands – results of vegetation and soil indicator analyses, Version 2015-03-31. Alberta Biodiversity Monitoring Institute, Alberta, Canada.

17. Alberta Biodiversity Monitoring Institute. 2014. Ecological recovery monitoring of Dry Mixedgrass wellsites – results of vegetation and soil indicator analyses, Version 2014-04-28. Alberta Biodiversity Monitoring Institute, Alberta, Canada. 34 pp.
18. Alberta Biodiversity Monitoring Institute. 2014. Ecological recovery monitoring of certified wellsites in Alberta: long-term monitoring framework to track ecological recovery – results from the Dry Mixedgrass, Version 2014-04-09. Alberta Biodiversity Monitoring Institute, Alberta, Canada. 35 pp.
19. Alberta Biodiversity Monitoring Institute. 2014. We have a reclamation certificate, but is it good enough? Ecological recovery monitoring of oil and gas wellsites 2013-14 final report for Alberta Petroleum Research Fund, Version 2014-04-07. Alberta Biodiversity Monitoring Institute, Alberta, Canada. 65 pp.
20. **McIntosh ACS**. 2012. PhD Dissertation. Ecology of understory and below-ground communities in lodgepole pine forests under changing disturbance regimes. University of Alberta. 206 pp.
21. Cushing JB, Wilson T, Borning A, Delcambre L, **Fiala A**, Frame M, Fülöp J, Gergely K, Hert C, Hovy E, Jones J, Landis E, Maier D, Roth D, Schweik C, Young S. 2005. Eco-informatics for decision makers: advancing a research agenda. Edited by Judith Cushing and Tyrone Wilson. Report of an NSF- and USGS/NBII-sponsored Workshop on Eco-Informatics for Resource Management Decision Makers held at The Evergreen State College, Olympia, Washington, December 13-15, 2004, and organized by EPA, NASA, NSF, USDA Forest Service, and USGS/NBII.
22. **Fiala ACS**. 2003. Master of Science Thesis. Forest canopy structure in western Oregon: characterization, methods for estimation, prediction, and importance to avian species. Oregon State University. 335 pp.
23. Olson DH, Sheridan CD, Hollen BA, Hagar JC, Rundio DE, Nonaka E, **Fiala AC**, Slauson KM, Wessell SJ, McDade KA, Stoddard MA. 2003. Book Review: Johnson DH, O'Neil TA, managing directors. 2001. Wildlife-habitat relationships in Oregon and Washington. Corvallis, OR: Oregon State University Press. 736 p. + CD-ROM. *Northwestern Naturalist*, 84: 47-50.

Non-academic (popular) – written and oral interviews

1. Interviewed for Narwhal article by Sharon Riley – A tale at a Tim Hortons in Taber. <https://thenarwhal.ca/newsletter-alberta-environment-scientist/> (March 24, 2022).
2. Interviewed for W5 – Inactive oil wells abandoned across Alberta, October 2020, but site visit not completed due to COVID restrictions and short deadlines. (episode can be found here: <https://www.youtube.com/watch?v=UfpejjeuOxs>)
3. Interviewed for Narwhal article by Sharon Riley – Many of Alberta's reclaimed wells aren't actually reclaimed: government presentation. <https://thenarwhal.ca/many-of-albertas-reclaimed-wells-arent-actually-reclaimed-government-presentation/> (December 2018).
4. Brandy Yanchyk – interviewed for a documentary featuring female scientists in Alberta. I did not end up being selected for inclusion in the final documentary (<https://brandyyanchyk.com/ms-scientist>) based on the timing of filming. (December 2017).
5. Allison Dempster, CBC Reporter, -Interviewed for a segment on the CBC Alberta morning edition related to ecological recovery of reclaimed wellsites in Alberta. (May 2017).
6. Ecological Recovery Monitoring Video – It's our nature to know – Alberta Biodiversity Monitoring Institute Blog: <http://blog.abmi.ca/2015/10/13/ecological-recovery-monitoring-video/#.XQsY-qJKiUm>.

RESEARCH PRESENTATIONS

Oral

*Peer-reviewed abstract *=invited, &keynote*

1. ***McIntosh ACS**. Cole H. 2024. Is there succession after reclamation? NAIT Boreal Research Institute Boreal Nature Series. Northern Lakes College, Peace River, AB, April 25, 2024.
2. ***McIntosh ACS**. 2024. Succession after reclamation: identifying and assessing indicators of ecological recovery on reclaimed oil and natural gas well pads in Alberta's native grasslands. Saskatchewan Institute of Agrologists 2024 Convention. Saskatoon, SK (but presented virtually to 300+ attendees). March 20, 2024.
3. Hood GA, **McIntosh ACS**, Hvenegaard GT. 2023. Does alternative beaver management affect aquatic macroinvertebrate biodiversity? The Wildlife Society 30th Annual Conference, Louisville, KY, November 8, 2023.
4. **McIntosh ACS**. 2023. How do we get our students (and us) to find the joy in our classes? Association for College Undergraduate Biology Educators (virtual and in person at Rockhurst University, Kansas City, Missouri, October 27, 2023).
5. **McIntosh ACS**. 2023. How do we get our students to be more engaged in class (in the traditional classroom)? Undergraduate Biology Educators of Alberta Annual Meeting, Lethbridge, AB, May 11, 2023.
6. **McIntosh ACS**, Murray A, Schoepf I, Wang L. 2023. Lessons From Nature: the Benefits of Experiential (re)-Learning in the Rainforest - From our Tiny Turtle Teachers to the Birds in the Tree Canopies. Augustana Conference on Undergraduate Research and Innovation Teaching, University of Alberta (Augustana), Camrose, Alberta, May 5, 2023.
7. Rivard C, Bordeleau G, Paniconi C, Meneses-Vega BJ, Kononovs D, Konstantinovskaya E, Alessi D, Degenhardt D, Leblanc-Rochette P, Lavoie R, Xu B, Crow H, Haeri Ardakani O, Guarin-Martinez LI, **McIntosh ACS**, Aubin I, Smerdon B. 2022. Assessing environmental cumulative effects in a region with a 50-year history of oil and gas activities, Geological Society of America, Connects 2022 - Denver, Colorado, USA & Online, October 9, 2022.
8. Haave N, **McIntosh ACS**, (equal first authors and presenters) Moreira B, Kublik J. 2022. Biology students perceptions of equity, diversity and inclusion are positively influenced by spotlighting a marginalized biologist. Association for College Undergraduate Biology Educators (virtual in place of Portland), October 21, 2022.
9. Hood GA, **McIntosh ACS**, Hvenegaard GT. 2022. Level ponds: alternative beaver management and aquatic macroinvertebrate biodiversity. 9th International Beaver Symposium, Brasov, Romania, September 21, 2022.
10. **McIntosh ACS**. 2022. An Introduction to Plants in the Parks of Camrose presentation and nature walk. City of Camrose Wildlife Stewardship Society Summer Series. July 7th 2022.
11. **McIntosh ACS**, Schut S, Lee S, Macdonald SE, Bartels S, Pinzon J, Wu L, Odsen S, Langor D, Spence J. 2022. Post-harvest biodiversity recovery after variable retention harvesting in boreal forests. Part of special organized session that I co-organized. North American Forest Ecology Workshop. June 2022. Moved to Virtual conference from in person in Sault Ste Marie due to COVID-19.
12. Lee S, Macdonald SE, **McIntosh ACS**, Bartels S, Pinzon J, Wu L, Langor D, Spence J. 2021. Trends in recovery of beetles and spiders after variable retention harvesting in boreal forests: evidence from the Ecosystem Management Emulating Natural Disturbance (EMEND) experiment. Entomological Society of Canada/Entomological Society of Ontario Joint Annual Conference. November 16, 2021. Virtual conference.

13. ***McIntosh ACS**. 2021. Reclamation of wellsites in Alberta: the potential value of monitoring post-certification. August 24, 2021. Virtual Presentation to the University of Alberta Land Reclamation International Graduate School.
14. **McIntosh ACS**, Lupardus RC, Santala K, Azeria E, Aubin I, Janz A, Farr D. 2021. Recovery after reclamation? Quantifying traits of plant communities in Alberta's reclaimed grasslands. June 22, 2021, 9th World Conference on Ecological Restoration. Virtual Conference.
15. *Macdonald SE, **McIntosh ACS**. 2021. * Quantifying Biodiversity Recovery after Harvest” to the Government of Alberta Biodiversity Management Framework Forestry Sub-team on March 2, 2021.
16. *&Kupchenko T, **McIntosh ACS**. 2021. Reclamation of wellsites in Alberta’s grasslands: insights from evolving regulations and the potential value of monitoring post-closure. Joint keynote presentation. 2021 North Dakota Reclamation Conference. Virtual webinar. March 1, 2021. Equal first authors.
17. *Kupchenko T, **McIntosh ACS**. 2021. Reclamation of wellsites in Alberta’s grasslands: insights from evolving regulations and the potential value of monitoring post-closure. Reclamation and restoration symposium. 2021 Society for Range Management Annual Conference (moved from Boise ID to virtual). February 16, 2021. Equal first authors.
18. Hood GA, **McIntosh ACS**, Hvenegaard GT. 2020. Ecological compromise: can alternative beaver management maintain biodiversity? Alberta Chapter of the Wildlife Society, Camrose, AB. This abstract was accepted but not presented due to the conference being cancelled due to COVID-19. However, it was instead presented as a Lunch and Learn webinar by Dr. Hood on August 11, 2020.
19. *Hood GA, **McIntosh ACS**, Hvenegaard GT. 2020. Leveling the waters: Does managing beaver ponds influence aquatic biodiversity? Quebec RE3 Conference Society for Wetland Science, June 2020. Part of an invited symposium, Quebec City, PQ. This abstract was accepted but not presented due to the conference being cancelled due to COVID-19.
20. Lupardus RC, Azeria E, Santala K, Aubin I, **McIntosh ACS**. 2020. A trait-based monitoring approach: Biological and edaphic filters influencing longer-term plant community assembly on reclaimed well pads. Canadian Society for Ecology and Evolution. Edmonton, AB, May 2020. This abstract was accepted but not presented due to the conference being cancelled due to COVID-19.
21. **McIntosh ACS**. 2020. Do you want to read your course syllabus? Teaching demonstration, Undergraduate Biology Educators of Alberta Annual Meeting, Lethbridge, AB, May 8, 2020. This was accepted but not presented due to the conference being cancelled due to COVID-19.
22. *Audet D, McIntosh ACS, Rintoul J (equal first authors). 2020. CSEE teaching presentations as part of invited symposia: *University teaching and learning: Engaging students in ecology and evolution*: These were invited two oral invited presentations but were not presented due to the conference being cancelled due to COVID-19.
23. Silva RDA, **McIntosh ACS**, Macdonald SE, Widenmaier K. Restoration with balsam poplar cuttings and the effects of disturbance on plant community composition in Blue Rapids Provincial Recreational Area, Alberta, Canada. 12th North American Forest Ecology Workshop, Flagstaff, AZ, June 25, 2019. Co-author.
24. Lupardus R, **McIntosh ACS**, Janz A, Farr D. 2018. Assessing wellsite reclamation on Alberta’s forested lands, Ecological Society of American Annual Meeting, New Orleans, LA, August 8, 2018. Co-author.
25. Azeria E, Santala K, **McIntosh A**, Aubin I. 2018. Ecological recovery of reclaimed wellsite: functional approach to measure success of restoration. North American Congress for Conservation Biology, Toronto, ON, July 24, 2018. Co-author.
26. Aubin I, Kumordzi B, Cardou F, Shipley B, Violle C, Johnstone J, Anand M, Arseneault A, Bell W, Bergeron Y, Brousseau M, de Grandpré L, Delagrangé S, Fenton N, Gravel D, Macdonald SE, Hamel B, Higelin M, Hébert F, Isabel N, Mallik A, **McIntosh A**, McLaren J, Messier C, Morris D, Thiffault N, Tremblay J, Boulangeat I, Munson AD. 2017. Collaborative science to investigate above- and

belowground intraspecific trait variability at continental scale. 39th New Phytologist Symposium, Exeter, United Kingdom, June 29, 2017. Co-author.

27. Steinke J, Macdonald SE, **McIntosh ACS**, Schroeder L. 2017. Effects of mountain pine beetle attacks on understory vegetation in lodgepole pine forests in western Alberta. 11th North American Forest Ecology Workshop. Edmonton, AB, June 22, 2017. Co-author.
28. **McIntosh ACS**, Janz A, Farr D. 2017. Life after reclamation: quantifying ecological recovery of wellsites in Alberta's forested lands. North American Forest Ecology Workshop. Edmonton, AB, June 20 2017. Presenter.
29. Steinke J, Macdonald SE, **McIntosh ACS**, Schroeder L. 2017. How do mountain pine beetle attacks impact understory vegetation in lodgepole pine forests in a novel area in west-central Alberta? Oral presentation at Canadian Society for Ecology and Evolution Annual Meeting, Victoria, BC, May 9, 2017. Co-author.
30. **McIntosh ACS**, Janz A, Farr D. 2016. Life after reclamation: quantifying ecological recovery of wellsites in Alberta's native grasslands and forested lands. 101st Annual Ecological Society of North America Meeting, Ft. Lauderdale, FL, August 9, 2016. Presenter.
31. **McIntosh ACS**. 2015. Monitoring the past to inform the future: recovery of vegetation and soil indicators on Alberta's reclaimed wellsites. 2015 Canadian Land Reclamation Association Annual Meeting/Manitoba Soil Science Society Meeting, Winnipeg, MB, June 16, 2015. Presenter.
32. **McIntosh ACS**, and Drozdowski, B. 2014. Evaluating the past to inform the future: monitoring ecological recovery of soil and vegetation parameters on reclaimed wellsites. Canadian Land Reclamation Association Alberta Chapter 2014 Conference, Red Deer, AB, February 27, 2014. Presenter.
33. **McIntosh ACS**, Macdonald SE. 2013. Potential for lodgepole pine regeneration after mountain pine beetle attack in novel habitat. 16th International Boreal Forest Research Conference, Edmonton, AB, October 9, 2013. Presenter.
34. **McIntosh ACS**, Gundale MJ. 2012. From native to non-native: the influence of species identity and regional factors on ecosystem processes and properties following the introduction of lodgepole pine to northern Sweden. Ecological Society of America 97th Annual Meeting, Portland, OR, August 7, 2012. Presenter.
35. **McIntosh ACS**, Macdonald SE. 2011. Mountain pine beetle moves East: short-term resistance of vegetation and below-ground attributes to simulated red attack in a novel landscape. Conforwest 3rd Annual Conference, Canmore, AB, February 3, 2012. Presenter.
36. **McIntosh ACS**, Macdonald SE. 2011. Mountain pine beetle moves East: responses of vegetation and below-ground dynamics to simulated mountain pine beetle red attack in a novel landscape. 8th International North American Forest Ecology Workshop, Roanoke, Virginia, June 21, 2011. Presenter.
37. **McIntosh ACS**, Macdonald SE. 2011. Mountain pine beetle moves East: responses of vegetation and below-ground dynamics to simulated mountain pine beetle red attack in a novel landscape. 7th International Conference on Disturbance Dynamics in Boreal Forests, Chicoutimi, Quebec, May 31, 2011. Presenter.
38. **McIntosh ACS**, Macdonald SE, Gundale MJ. 2011. From native to non-native: a comparison of below-ground dynamics of Alberta lodgepole pine stands with introduced lodgepole pine and native Scots pine and spruce-birch forests in northern Sweden. 7th International Conference on Disturbance Dynamics in Boreal Forests, Chicoutimi, Quebec, May 30, 2011. Presenter.
39. ***McIntosh ACS**, Macdonald SE, Silins U, Pina P. 2011. Effects of simulated mountain pine beetle on hydrology and post-attack vegetation and below-ground dynamics. Mountain Pine Beetle Ecology Workshop, University of Alberta, April 28, 2011. Presenter.

40. **McIntosh ACS**, Macdonald SE, Silins U, Pina P. 2010. Effects of simulated mountain pine beetle on hydrology and post-attack vegetation and below-ground dynamics. Mountain Pine Beetle Ecology Workshop, University of Alberta, March 26, 2010. Presenter.
41. **McIntosh ACS**. 2010. Effects of simulated mountain pine beetle attack on vegetation and below-ground dynamics in lodgepole pine forests of western Alberta. 1st annual ConforWest Conference, Harrison Hot Springs, BC, January 23, 2010. Presenter.
42. Gray AN, **McIntosh ACS**, Garman SL. 2009. Canopy cover prediction from stand density attributes: stocking, crown width, and overlap functions. 7th North American Forest Ecology Workshop, Logan, UT, June 23, 2009. Co-author. Presenter.
43. **Fiala ACS**. Cushing JB, Nadkarni NM. 2006. Conceptual structures, database design, and visualization for forest canopy ecologists. Fifth International Ecoinformatics Conference, Santa Barbara, CA, December 5, 2006. Presenter.
44. ***Fiala ACS**. 2006. Comparisons among four canopy-cover estimating methods in five Douglas-fir/western hemlock structure types in the western Oregon Cascades-on the ground & utility in the canopy. International Canopy Network Canopy Access Workshop. Society for Northwestern Vertebrate Biologists and The Washington Chapter of the Wildlife Society Annual Meeting, March 27, 2006. Presenter.
45. **Fiala ACS**, Garman SL, Gray A. 2003. Comparisons among four canopy-cover estimating methods in five Douglas-fir/western hemlock structure types in the western Oregon Cascades. Annual meeting of the Northwest Scientific Association, Forks, WA, March 27, 2003. Presenter.
46. **Fiala ACS**, Gray A, Garman SL. 2002. Characterization and prediction of forest canopy structure in western Oregon. 3rd International Canopy Conference, Cairns, Australia, June 27, 2002. Presenter.

*Other *=invited*

1. ***Macdonald SE, McIntosh ACS**, Schut S, Lee S-I, Bartels S. 2023. **Does forest biodiversity recover following harvesting? Lessons from the boreal forest**. Presentation to the Government of Alberta Chief Office of the Scientist. Presented by Ellen Macdonald. February 28, 2023.
2. ***Macdonald SE, McIntosh ACS**, Schut S. 2023. How does biodiversity recover in boreal forests after harvest? Presentation to the Government of Alberta Biodiversity Framework Science Technical Committee and Forestry Subteam. January 23, 2023.
3. ***Lee S, McIntosh ACS**, Macdonald SE. 2022. Post-harvest biodiversity recovery curves for boreal forests. Presentation to the Government of Alberta Biodiversity Framework Science Technical Committee during their monthly meeting. January 13, 2022.
4. ***Aubin I, Cardou F, Santala K, Azeria ET, Lupardus RC, McIntosh ACS**, Yemshanov D & collaborators. 2020. Assessment of forest functional recovery in industrial landscape. Natural Resources Canada – Canadian Forest Service Energy Innovation Program Restoration of Working Landscapes (ReWoL) Annual Meeting, Edmonton, AB, February 11, 2020.
5. ***Lupardus R, McIntosh ACS**, Janz A, Farr D. 2019. Monitoring ecological recovery of reclaimed well pads. Alberta Environment and Parks Environmental Monitoring and Science Division Seminar. November 6, 2019.
6. ***Lupardus R, McIntosh ACS**, Janz A, Farr D. 2019. Mind the gap: forest well pad reclamation expectations versus reality. Association of Alberta Forest Management Professionals Fall Education Session, Edmonton, AB, October 24, 2019. Co-author.
7. ***Lupardus R, McIntosh ACS**, Janz A, Farr D. 2019. Mind the gap: forest well pad reclamation expectations versus reality. Association of Alberta Forest Management Professionals Fall Education Session, Peace River, AB, October 22, 2019. Co-author.

8. Lupardus R, **McIntosh ACS**, Janz A, Farr D. 2019. Succession after reclamation: identifying and assessing ecological indicators of forest recovery on reclaimed oil and natural gas well pads. Guild of Rocky Mountain ecologists and evolutionary biologists annual meeting, Gothic, CO, September 8 2019. Co-author.
9. ***McIntosh ACS**. 2018. Life after certification: quantifying ecological recovery of reclaimed wellsites in Alberta's grasslands and forested lands. University of Alberta Department of Renewable Resources Seminar Series, Edmonton, AB, January 18, 2018. Presenter.
10. *Macdonald SE, **McIntosh ACS**, Steinke J. 2017. Possible ecological responses following mountain pine beetle. Foothills Research Institute Mountain Pine Beetle Ecology Program Breaking News Workshop, Edmonton, AB, October 26, 2017. Co-author.
11. ***McIntosh ACS**, and Hoveland, S. Sustainability in rural landscapes. Presentation to Beaver County Councillors. Ryley, AB. December 12, 2016. Presenter.
12. ***McIntosh ACS**. 2016. An introduction to plants in the parks of Camrose. City of Camrose Wildlife Stewardship Society Summer Program Series and University of Alberta The Office of Sustainability, Learning, Advising & Beyond Environment Week Sponsored Activity. Camrose, AB, June 9, 2016.
13. *Macdonald SE, Steinke J, Schroeder L, **McIntosh ACS**. 2016. Effects of mountain pine beetle attack on understory vegetation of lodgepole pine stands. Foothills Research Institute Mountain Pine Beetle Forum, Grande Prairie, AB, May 11, 2016. Co-author.
14. ***McIntosh ACS**. 2016. Where are they now? Monitoring the recovery of reclaimed wellsites in Alberta. IDEA Talks. Camrose, AB, January 21, 2016. Presenter.
15. ***McIntosh ACS**. 2015. Monitoring the past to inform the future: are reclaimed wellsites on a trajectory towards recovery? Land reclamation framework working group. Edmonton, AB, November 17, 2015. Presenter.
16. ***McIntosh ACS**, Ryerson, D. 2015. Monitoring the Recovery of Reclaimed Well Sites in Alberta. Alberta Association of Conservation Offsets Quarterly Meeting. Leduc, AB, September 23, 2015. Presenter.
17. **McIntosh ACS**. 2015. How are plant communities on wellsites in Alberta's native grasslands and forests recovering after they are reclaimed? Botany 2015 International World Botany Congress. Edmonton, AB, July 28, 2015. Presenter.
18. ***McIntosh ACS**. 2015. Exploring native plant diversity in the parks of Camrose. City of Camrose Wildlife Stewardship Society Summer Program Series. Camrose, AB, July 9, 2015.
19. *Ryerson D, **McIntosh ACS**. 2015. Monitoring ecological recovery of reclaimed wellsites in Alberta. 2nd Alberta Biodiversity Monitoring Institute Forum Speaker Series, Edmonton, AB, February 17, 2015. Presenter.
20. ***McIntosh ACS**. 2015. Monitoring the past to inform the future: ecological recovery on reclaimed wellsites. Calgary Environment Network-Alberta Institute of Agrologists Lunch and Learn Series, Calgary, AB, January 12, 2015. Presenter.
21. ***McIntosh ACS**, Ryerson D. 2014. Monitoring ecological recovery of reclaimed wellsites. Petroleum Technology Alliance Council Alberta Upstream Petroleum Research Fund 2014 Resource Access and Ecological Issues Forum, Calgary, AB, November 27, 2014. Presenter.
22. ***McIntosh ACS** 2013. We have a reclamation certificate, but is it good enough? Long-term reclamation monitoring of oil and gas footprints. Petroleum Technology Alliance Council Alberta Upstream Petroleum Research Fund 2013 Resource Access and Ecological Issues Forum, Calgary, AB, November 28, 2013. Presenter.
23. ***McIntosh ACS** 2013. Monitoring ecological recovery of reclaimed wellsites in Alberta. 1st Annual Alberta Biodiversity Monitoring Institute Speaker Series "Better Management Through Monitoring", Royal Alberta Museum, Edmonton, AB, October 23, 2013. Presenter.

24. ***McIntosh ACS** 2013. Mountain pine beetle moves east: short-term resistance of above- and below-ground dynamics to simulated mountain pine beetle attack in western Alberta. Forest Ecology Research Seminar, Department of Wildland Resources, Utah State University, Logan, Utah, March 21, 2013. Presenter.
25. ***McIntosh ACS**, Macdonald SE. 2013. Mountain pine beetle moves east: short-term resistance of above- and below-ground dynamics to simulated mountain pine beetle attack in western Alberta. Department of Biological Sciences Ecology and Evolution Seminar Series Talk, University of Alberta, February 1, 2013. Presenter.
26. **McIntosh ACS**. 2012. Ecology of understory and below-ground communities in lodgepole pine forests under changing disturbance regimes. PhD Dissertation, University of Alberta, December 12, 2012. Presenter.
27. ***McIntosh ACS**, Macdonald SE. 2012. Mountain pine beetles expanding range: effects of simulated early red attack on post-attack vegetation, fuels, and below-ground dynamics. Mountain Pine Beetle in Alberta – Assessing and Managing Impacts. Joint Workshop: The Mountain Pine Beetle EcoHydrology Project and The TRIA Project (Mountain Pine Beetle System Genomics), University of Alberta, April 30, 2012. Presenter.
28. ***McIntosh ACS**, Macdonald SE, Silins U, Pina P. 2012. Effects of simulated mountain pine beetle attack on hydrology, vegetation, fuels, and below-ground dynamics in lodgepole pine forests of Alberta. Foothills Research Institute Mountain Pine Beetle Ecology Workshop, University of Alberta, April 26, 2012. Presenter.
29. ***McIntosh ACS**. 2011. Effects of simulated mountain pine beetle on post-attack vegetation and below-ground dynamics in lodgepole pine forests of Alberta. Department of Forest Ecology and Management Seminar Series, Swedish Agricultural University, Umea, Sweden, January 14, 2011. Presenter.
30. ***McIntosh ACS**, Macdonald SE. 2010. Understory vegetation of foothills lodgepole pine forests before mountain pine beetle. Alberta Native Plant Council Annual Meeting. Rocky Mountain House, AB, May 1, 2010. Presenter.
31. ***McIntosh ACS**, Pina P, Silins U. 2009. Effects of mountain pine beetle on post-attack vegetation dynamics. Brown bag lunch series, Foothills Research Institute, Hinton, AB, November 20, 2009. Presenter.
32. **McIntosh ACS**. 2009. Effects of simulated mountain pine beetle attack on vegetation and below-ground dynamics in lodgepole pine forests. Boreal Forest PhD Course, SLU University, Arvidsjaur, Sweden, June 7, 2009. Presenter.
33. ***McIntosh ACS**. 2007. Plato Lecture Series, All-day field seminar to Ohanapecosh, Mount Rainier National Park, The Evergreen State College, Olympia, WA, August 17, 2007. Presenter.
34. ***Fiala ACS**. 2006. Seeing the forest and the trees. Nisqually National Wildlife Refuge, WA, public seminar as part of the 2006 Summer Lecture Series titled, "In and Around the Delta," August 2, 2006. Presenter.
35. ***Fiala ACS**. 2003. Forest canopy structure in western Oregon: characterization, methods for estimation, prediction, and importance to avian species. USDA Forest Service Forestry Sciences Laboratory, Portland, OR, October 15, 2003. Presenter.
36. **Fiala ACS**. 2003. Forest canopy structure in western Oregon: characterization, methods for estimation, prediction, and importance to avian species. MS Thesis Defense. Oregon State University, August 26 2003. Presenter.

Poster

*Peer-reviewed abstract *=invited*

1. **McIntosh ACS**, Schoepf I, Axten L, Cui J, Eliuk D, Kublik J, Miller J, Murray A, Nawrot B, Nawrot S, Robinson M, Siegle S, Storch B, Wang L. 2023. Unposterizing the scientific poster: demonstrating an alternative format "Poster 2.0" for communicating student project findings. Undergraduate Biology Educators of Alberta Annual Meeting, Lethbridge, AB, May 10, 2023.
2. **McIntosh ACS**, Lupardus RC, Janz A, Azeria E, Santala K, Aubin I. 2021. Arrested succession? Quantifying ecological recovery on reclaimed well pads in Alberta's boreal forests. 2021 International Boreal Forest Research Association Conference. originally planned to be presented in Alaska, but moved online and presented virtually. August 17, 2021.
3. **McIntosh ACS**, Rintoul J. 2021. *Special place* assignments: connecting ecological concepts to each student's unique locale through scaffolded portfolio assignments. Virtual Association for Biology Lab Education (viable). Poster recording and in person Q&A. June 25, 2021. Equal first authors.
4. **McIntosh ACS**, Stacey P, Bartley KI, Berg ML, Bordey N, Cook CA, Godziuk GW, Kruger MT, Larsen GE, Lynch MJ, Paulgaard SD, Sweder JD. 2020. Unposterizing the scientific poster: demonstrating an alternative format "Poster 2.0" for communicating research findings. Undergraduate Biology Educators of Alberta Annual Meeting, Virtual presentation of poster (and accompanying slide), May 13, 2021.
5. **McIntosh ACS**, Rintoul J. 2020. *Special place* assignments: connecting ecological concepts to each student's unique locale through scaffolded portfolio assignments. 64th Annual Association of College and University Biology Educators, Moved to Remote from in person planned for Kansas City, MO. October 25, 2020. Equal first authors.
6. **McIntosh ACS**, Lupardus RC, Janz A, Farr D, Azeria E, Santala K, Aubin I. 2020. Arrested succession? Quantifying plant community and functional recovery (or lack thereof) on reclaimed oil and natural gas well pads in Alberta's boreal forests. Ecological Society of America Annual Meeting, originally planned to be presented in Salt Lake City, UT, but moved online and presented virtually. August 3-6, 2020.
7. Lupardus RC, Azeria E, Santala K, Aubin I, **McIntosh ACS**. 2020. A trait-based monitoring approach: Biological and edaphic filters influencing longer-term plant community assembly on reclaimed well pads. Ecological Society of America Annual Meeting, originally planned to be presented in Salt Lake City, UT, but moved online and presented virtually. August 3-6, 2020.
8. **McIntosh ACS**, Lupardus RC, Santala K, Azeria E, Aubin I, Janz A, Farr D. 2020 – rescheduled for June 2021. Recovery after reclamation? Quantifying traits of plant communities in Alberta's reclaimed grasslands. Quebec RE³ conference - joint conference of Canadian Land Reclamation Association, Society for Wetland Scientists, and Society for Ecological Restoration. June 9, 2020, Quebec QC. This was accepted but not presented due to the conference being cancelled due to COVID-19.
9. **McIntosh ACS**, Stacey P, Bartley KI, Berg ML, Bordey N, Cook CA, Godziuk GW, Kruger MT, Larsen GE, Lynch MJ, Paulgaard SD, Sweder JD. 2020. Unposterizing the scientific poster: demonstrating an alternative format "Poster 2.0" for communicating research findings. Undergraduate Biology Educators of Alberta Annual Meeting, Lethbridge, AB, May 8, 2020. This was accepted but not presented due to the conference being cancelled due to COVID-19.
10. Lupardus RC, Azeria ET, Santala K, Aubin I, **McIntosh ACS**. Uncovering traits and recovering grasslands: a functional assessment of oil and gas well pads, Society for Range Management Annual Meeting. Denver, CO, February 18, 2020. Co-author.
11. Lupardus R, **McIntosh ACS**, Janz A, Farr D. 2019. Succession after reclamation: identifying and assessing ecological indicators of forest recovery on reclaimed oil and natural gas well pads. 12th North American Forest Ecology Workshop, Flagstaff, AZ, USA, June 25, 2019. Presenter.

12. Lupardus R, **McIntosh ACS**, Janz A, Farr D. 2019. Succession after reclamation: identifying and assessing ecological indicators of forest recovery on reclaimed oil and natural gas well pads. American Society of Mining and Reclamation Annual Meeting, Big Sky, MT, June 5, 2019. Co-author.
13. Nakonechny JJ, Hood GA, Hvenegaard GT, **McIntosh ACS**. 2019. Living in the country: the importance of wildlife habitat patches in mixed-use landscapes. Alberta Chapter of the Wildlife Society Annual Meeting, Canmore, AB, March 23, 2019. Co-author.
14. Silva RDA, **McIntosh ACS** Macdonald SE, Widenmaier K. 2018. How effective are planting strategies for restoring vegetation of riparian trail crossings degraded by off-highway vehicles? Ecological Society of American Annual Meeting, New Orleans, LA, August 10, 2018. Co-author.
15. Silva RDA, **McIntosh ACS**, Macdonald SE, Widenmaier K. 2018. Restoration and enhancement of degraded trail crossings of wet and riparian areas in Blue Rapids Provincial Recreation Area, Alberta. Alberta Recreation & Parks Association Parks Forum 2018. Canmore, AB, March 16, 2018. **Winner of the first place prize for best student poster.** Co-author.
16. Tollitt M, **McIntosh ACS**, Gendreau-Berthiaume B, Macdonald SE. 2017. Using dendrochronology to explore tree growth in Alberta's Rocky Mountains under a changing climate. 11th North American Forest Ecology Workshop. Edmonton, AB, June 19, 2017. Presenter.
17. **McIntosh ACS**, Janz, A., Farr, D. 2017. Are plant communities recovering after wellsite reclamation in Alberta's grassland and forested sites? Canadian Society for Ecology and Evolution Annual Meeting, Victoria, BC, May 8-9, 2017. Presenter.
18. Myers JD, Cushing JB, Lynn P, Weiner N, Ovchinnikova A, Nadkarni N, **McIntosh A**. 2015. Curating and preserving the Big Canopy Database system: an active curation approach using SEAD. American Geophysical Union Fall Meeting 2015 Poster IN13A-1827, San Francisco, CA, December 14, 2015. Co-author.
19. Gray AN, **McIntosh ACS**, Garman SL. 2014. Stand canopy cover prediction from individual tree measurements: stocking, crown width, and overlap functions. IUFRO World Congress, Salt Lake City, UT, October 11, 2014. Co-author.
20. **McIntosh ACS**, Macdonald SE. 2013. The dynamics of understory and below-ground communities in lodgepole pine forests after simulated mountain pine beetle red attack in a novel landscape. 98th Annual Ecological Society of America Meeting, Minneapolis, MN, August 9, 2013. Presenter.
21. **McIntosh ACS**, Macdonald SE. 2011. Responses of vegetation and below-ground dynamics to simulated mountain pine beetle red attack. Conforwest 2nd Annual Conference, Jasper, AB, February 4, 2011. Presenter.
22. **McIntosh ACS**, Macdonald SE. 2010. Effects of simulated mountain pine beetle attack on vegetation and below-ground attributes in western Alberta lodgepole pine forests. Society for Conservation Biology Annual Meeting, Edmonton, AB, July 5, 2010. Presenter.
23. Cushing JB, **McIntosh ACS**, Nadkarni NM, Zeman L, Delcambre L, Maier D, Martin F, Crosland A. 2007. From measurement to management: evidence-based practice in natural resource management. Digital Government 2007 Conference, Philadelphia, PA, May 21, 2007. Co-author.
24. Sloan EJ, **Fiala ACS**, Cotton KL, Burke SM, Craig MH, Nadkarni NM, Auman AJ. 2007. Microbial community analysis by examination of carbon source utilization patterns by Gifford Pinchot National Forest tree canopy soils. 107th General Meeting of the American Society of Microbiologists, Toronto, ON, May 21-24, 2007. Co-author.
25. Sloan EJ, Cotton KL, Burke SM, Craig MH, **Fiala ACS**, Nadkarni NM, Auman AJ. 2007. Molecular analysis of microbes from tree canopy and ground soils in Gifford Pinchot National Forest, Washington. 107th General Meeting of the American Society of Microbiologists, Toronto, ON, May 21-24, 2007. Co-author.

26. Zeman L, Cushing JB, **Fiala ACS**, Nadkarni NM. 2006. The CanopyView visualization project – key variable-driven ecology visualization-in Java over Visualization Toolkit (VTK). Poster and demonstration presented at the IEEE Visualization 2006, Baltimore, MD, October 29-November 2nd, 2006. Co-author. Presenter.
27. Cushing JB, Nadkarni NM, **Fiala ACS**, Zeman, L. 2006. The Canopy Database Project – determining fundamental structures of the forest canopy yield component-driven database design and visualization for ecologists, and subsequent research efficiency gains and better metadata. 2006 LTER All Scientist's Meeting, Memphis, TN, August 22, 2006. Co-author. Presenter.
28. Cushing JB, **Fiala ACS**, Finch M, Kaplan N, Melendez-Colom E, Nadkarni NM, Ramsey K, Vanderbilt K, Walsh J. 2004. Database tools for ecological data integration and synthesis. Ecological Society of America 89th Annual Meeting, Portland, OR, August 1-6 2004. Presenter.
29. **Fiala ACS**, Gray A, Garman SL. 2004. Patterns of canopy structure across a successional gradient for the dominant forest types of western Oregon. Ecological Society of America 89th Annual Meeting, Portland, OR, August 1-6 2004. Presenter. **Fiala ACS**, Garman SL, Gray A. 2003. The diversity of canopy structure across a successional gradient for three forest types in western Oregon. North American Forest Ecology Workshop, Corvallis, OR, June 17, 2003. Presenter.
31. **Fiala ACS**, Garman SL, Gray A. 2002. Characterization and prediction of forest canopy structure in western Oregon. Annual meeting of the Northwest Scientific Association, Boise, ID, March 29, 2002. Presenter.

*Other *=invited*

1. Lupardus R, **McIntosh ACS**, Janz A, Farr D. 2018. Succession after reclamation? Ecological indicators of forest recovery on reclaimed oil and natural gas wellsites. 2018 Post-doctoral Fellow/ Graduate Student Association Research Day, University of Alberta, Edmonton, AB, October 24, 2018. **3rd place in the PDF poster competition.** Co-author.
2. Silva RDA, **McIntosh ACS**, Macdonald SE, Widenmaier K. 2018. How effective are planting strategies for restoring vegetation of riparian trail crossings degraded by off-highway vehicles? The Canadian Institute of Forestry Annual meeting. Grande Prairie AB, Sept. 18-20. 2018. **4th place in the poster symposium competition.** Co-author.
3. Steinke J, Lieffers V, Macdonald E, **McIntosh A**, Schroeder L. 2018. What is happening in Alberta's grey attack stage lodgepole pine forests? 2018 Foothills Research Forest Annual Forest Forum, Edmonton, AB, April 24-25, 2018. Co-author.
4. Steinke J, **McIntosh ACS**, Schroeder, L., Macdonald, S.E. 2017. How do mountain pine beetle attacks impact understory vegetation in lodgepole pine forests in a novel area in west-central Alberta? Mountain Pine Beetle Ecology Research Forum, April 25-26, 2017, Edmonton, AB. Co-author.
5. **McIntosh ACS**, Macdonald SE. 2014. Dynamics of understory and below-ground communities in lodgepole pine forests after simulated mountain pine beetle red attack in a novel landscape. Foothills Research Institute Mountain Pine Beetle Ecology Workshop, University of Alberta, Edmonton, AB, April 23, 2014. Presenter.
6. **McIntosh ACS**, Macdonald SE. 2013. Potential for change after MPB attack: ecosystem dynamics during the early red attack phase. Foothills Research Institute Mountain Pine Beetle Ecology Workshop, University of Alberta, Edmonton, AB, April 25, 2013. Presenter.

Technology transfer

Peer-reviewed abstract

1. **Fiala ACS**, Cushing JB, Nadkarni NM. 2007. Ecoinformatics workshop: Part I. DataBank-Database design tools for forest ecologists, and Part II. Data Visualization, Statistical, and Archival Tools for Forest Ecologists, at the [North American Forest Ecology Workshop](#), Vancouver, BC, June 19, 2007. Presenter.
2. **Fiala ACS**, Cushing JB, Nadkarni NM. 2006. Half-day workshop on ecoinformatics tools. 91st Annual Ecological Society of America meeting, Memphis, TN, August 5th, 2006. Participants at the workshop extended beyond canopy researchers, to include forest, nutritional, and stream ecologists. Presenter.
3. **Fiala ACS**, Cushing JB, Nadkarni NM. 2005. Presented a half-day workshop on ecoinformatics as part of the 4th International Canopy Conference, Leipzig, Germany, July 16, 2005. Presenter.

Not peer-reviewed

1. ***McIntosh ACS**. 2020. How to Excel in MS Excel. Presented a 1 hour workshop to undergraduate students; the event was hosted by the Augustana Science Club. Camrose, AB, February 21, 2020. Presenter.

Undergraduate student presentations on research projects I supervised/co-supervised

1. Anya, Silva RDA, **McIntosh ACS** 2018. Effects of unsanctioned off-highway vehicle use on restoration strategies in recreational areas. University of Alberta North Campus Undergraduate research assistant symposium, Edmonton, AB, August 22, 2018.
2. Cheng R, Dubrule T, Hoveland S, Tollitt M. 2016. Ecological sustainability in rural landscapes. University of Alberta Augustana Faculty Undergraduate research assistant symposium, Camrose, AB, August 16, 2016.
3. Cheng R, Dubrule T, Hoveland S, Tollitt M. 2016. Ecological sustainability in rural landscapes. University of Alberta North Campus Undergraduate research assistant symposium, Edmonton, AB, August 17, 2016.
4. Silva RDA, **McIntosh ACS**. 2015. Exploring the establishment of a forest garden at the University of Alberta – Augustana Campus. Undergraduate research assistant symposium. Camrose, AB, August 18, 2015.

RESEARCH GRANTS

Successful funding for grants is provided in Table 5. I have not included grants that I applied for that were unsuccessful, but did apply, for example, for NSERC Discovery Grant unsuccessfully three times.

Table 5. List of grant funding that I have received (unsuccessful grant applications not included) separated out into external and internal funding sources. Funding that was provided directly to students is listed in Student supervision section above.

Title/description	Source/agency	Grant/contract period	Amount (CAD)	Role in grant (e.g., PI, co-PI, etc.)
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External

Title/description	Source/agency	Grant/contract period	Amount (CAD)	Role in grant (e.g., PI, co-PI, etc.)
Study on vegetation recovery and plant community traits in the Fox Creek area (Alberta)	Geological Survey of Canada	July 2022-March 2023	7,000	PI
Discovery Grant: Recovery Across a Gradient of Disturbance Novelties: Patterns and Drivers of Understory Plant Community Dynamics in Northern Lodgepole Pine Forests	Natural Sciences and Engineering Research Council	May 1, 2021-April 30, 2027	165,000	PI
Discovery Launch Supplement for Early Career: Recovery Across a Gradient of Disturbance Novelties: Patterns and Drivers of Understory Plant Community Dynamics in Northern Lodgepole Pine Forests	Natural Sciences and Engineering Research Council	May 1, 2021-April 30, 2027	12,500	PI
Evaluating plant traits on well pads in Fox Creek, Alberta.	Geological Survey of Canada	Feb 1, 2023-December 31, 2023	8,232	PI
Study on vegetation recovery and plant community traits in the Fox Creek area (Alberta).	Geological Survey of Canada	July 18 2022 – March 31, 2023	7,000	PI
Ecological recovery of forest biodiversity in response to varying degrees of forest harvest intensities	The Alberta Biodiversity Monitoring Institute – Collaborator grant	April 1, 2021-May 31, 2022	7,520.40	PI
Post-harvesting biodiversity recovery curves for the boreal forest	Alberta Conservation Association – Research Grant	April 1, 2021 – March 31, 2022	21,600	PI
Post-harvesting biodiversity recovery curves for the boreal forest	Mitacs – Accelerate	April 1, 2021-November 1, 2021	30,000	PI
Environment and Parks grant to develop system to integrate ground-based ecological recovery data with satellite imagery and human footprint change	Government of Alberta	January 2018-December 2021	100,000	PI
Environment and Parks Grant to support a Post-doctoral fellow to monitor, evaluate, and report on the ecological recovery of reclaimed industrial footprints in Alberta	Government of Alberta	January 2018-December 2019	57,000	PI

Title/description	Source/agency	Grant/contract period	Amount (CAD)	Role in grant (e.g., PI, co-PI, etc.)
Watershed Resiliency Program Funding awarded to Eagle Point Blue Rapids Council	Government of Alberta	July 2016-May 2020	70,000	Collaborator
National Wetland Restoration Funding awarded to Eagle Point Blue Rapids Council	Government of Canada	July 2016-May 2020	275,395	Collaborator
Wetland enhancement project – research stipend honorarium Grant	Eagle Point Blue Rapids Council	July 1 2018-March 31 2019	10,000	PI
Wetland enhancement project – research stipend honorarium grant	Eagle Point Blue Rapids Council	June 1 2017-May 31 2018	12,900	PI
Ecological sustainability in rural landscapes research grant	Beaver County	May 2017-April 2018	63,336	CI; PI G Hood, Other co-investigator G Hvenegaard
Wetland enhancement project – research stipend honorarium grant	Eagle Point Blue Rapids Council	January-May 2017	4,050	PI
Biodiversity Grant awarded to my MSc student Raiany Andrade Dias de Andrade Silva	Alberta Conservation Association	March 2017-December 2018	17,830	Supervisor and co-applicant for the grant as Silva's MSc supervisor.
Ecological sustainability in rural landscapes research grant	Beaver County	May 2016-April 2017	63,336	CI; PI G. Hood, Other co-investigator G. Hvenegaard
Understanding and characterizing the influence of clay pads on toluene biogenesis in peatlands awarded to Solstice Canada	Petroleum Technology Alliance Council Alberta Upstream Petroleum Research Fund:	July 2016-June 2017	51,735	Collaborator
Collaborator grant-- ecological recovery monitoring of certified reclaimed sites in Alberta	The Alberta Biodiversity Monitoring Institute	December 2015-March 2017	20,000	PI

Title/description	Source/agency	Grant/contract period	Amount (CAD)	Role in grant (e.g., PI, co-PI, etc.)
Collaborator grant-- ecological recovery monitoring of certified reclaimed sites in Alberta	The Alberta Biodiversity Monitoring Institute	July 2014-August 2015	10,000	PI
Ecological Recovery Monitoring of Certified Reclaimed Sites in Alberta awarded to Alberta Biodiversity Monitoring Institute	Alberta Environmental Monitoring, Evaluation and Reporting Agency	May 2015-March 2016	500,000	Collaborator (Lead ecologist on project)
Ecological recovery monitoring of certified reclaimed sites in Alberta awarded to Alberta Biodiversity Monitoring Institute	Government of Alberta: Environment and Sustainable Resource Development	Awarded May 2014	375,000	Lead ecologist (co-wrote application)
Ecological recovery monitoring of certified reclaimed sites in Alberta awarded to Alberta Biodiversity Monitoring Institute	Government of Alberta: Environment and Sustainable Resource Development	Awarded April 2013	310,000	Lead ecologist (co-wrote application)
BDEI Grant: The canopy database project at The Evergreen State College	US National Science Foundation	2003-2006	~900,000 (USD)	Pre-doctoral research fellow; Co-wrote & managed budget for grant
<i>Internal</i>				
Faculty research grant: Teaching release – AUBIO 253: Ecological interactions	University of Alberta, Augustana Faculty	January-April 2020	~8,000	PI
Startup Funds award – Ecological Recovery of Disturbed Ecosystems	University of Alberta	July 2014-June 2017	7,333	PI

SCHOLARSHIPS AND AWARDS

Received

1. Betty Ostenrud Award 2021-22, Augustana Student Life Awards. Awarded April 6, 2022. Recognizes both a member of the faculty and of the staff who have given of themselves tirelessly to the benefit of students and the institution as a whole.
2. Augustana Early Achievement of Excellence in Teaching Award (2017 -2018 Academic year: Awarded October 27, 2017, Presented February 2, 2018)
3. Government of Alberta Graduate Citizenship Award (November 2012) – Value: \$2,000

4. William H McCardell Memorial Scholarship in Forest Science (October 2012) – Value: \$2,200
5. Profiling Alberta's Graduate Students Award (August 2012) – Value: \$1,250
6. MacAllister Scholarship in Agriculture (October 2011) – Value: \$1,200
7. William H McCardell Memorial Scholarship in Forest Science (September 2011) – Value: \$2,200
8. University of Alberta Graduate Student Association Professional Development Grants. Value: \$1,000
9. 8th North American Forest Ecology Workshop Scholarship – Value: \$400
10. Izaak Walton Killam Memorial Scholarship (January 2011-December 2012) – Value: \$70,000
11. Michael Smith Foreign Study Supplement Scholarship, Natural Sciences and Engineering Research Council of Canada – traveled to SLU, Umea, Sweden (October 2010-January 2011) – Value: \$6,000
12. Canada Graduate Scholarship, Natural Sciences and Engineering Research Council of Canada (January 2008-December 2010) – Value: \$105,000
13. Walter H Johns Graduate Fellowship (January 2009-December 2010) – Value: ~\$10,000
14. Walter H Johns Graduate Fellowship (Honorary) (January 2008-December 2008)
15. Outstanding Forest Science Masters Student Award, College of Forestry, OSU (June 2003) – Value: \$250
16. Jack & Bobbie Saubert Scholarship, College of Forestry, OSU (2002-2003) – Value: \$3,300
17. OSU Forest Science Department Travel Grant (June 2002) – Value: \$500
18. Rutherford Scholarship Recipient (1992) – Value: \$1,500
19. U.B.C. Entrance Scholarship Recipient (1992) – Value: \$2,200

Nominated

1. Provost's Award for Early Achievement of Excellence in Undergraduate Teaching (nominated but unsuccessful in February 2018 and 2019)

TEACHING EXPERIENCE

Courses taught

The courses I have taught/teach are listed in Table 1.

Table 1. Courses I have taught as Primary Instructor (PI), Co-instructor (CI), or Teaching Assistant (TA) ordered alphabetically within each institution/campus where I taught in reverse chronological order (lec=lecture, lab = lab-based course). Course descriptions provided in Appendix I.

Course Title	Role
<i>University of Alberta- Augustana Campus/Faculty</i>	
AUBIO 110: Evolution of Biological Diversity (Lec, Lab)	PI
AUBIO 222: Plant Diversity (Lec, Lab)	PI
AUBIO 253: Ecological Interactions (Lec, Lab)	PI
AUBIO 315: Advanced Biological Analysis (Block F2018, now during 11 week semester)	PI
AUBIO 323: Plant Biology (Lec, Lab)	PI
AUBIO/ENV 350: Conservation Theory and Biodiversity of Tropical Systems	CI
AUBIO 355: Ecological Dynamics (Lec)	PI
AUBIO 411: History and Theory of Biology(Lec)	PI*
AUBIO/ENV 459: Field Studies in Tropical Ecology and Conservation (Lec)	CI
AUSTA 215: Statistical Methods for the Natural Sciences (Lec)	PI
<i>University of Alberta- North (Main) Campus (prior to 2014)</i>	
BIOL 332: Community Ecology (Lec)	CI
FOR322: Forest Ecosystems (Lec)	CI & PI
FOR501: Topics in Forest Studies (Lec)	PI

Course Title	Role
RENR 327: The Mosses of Alberta: Conservation and Identification (Lab) <i>The Evergreen State College</i>	TA
Forest Ecology of the Pacific Northwest (Lec, Lab)	PI

*Covered in W22 while N. Haave was on sabbatical, not part of regular teaching rotation

Student supervision

Academic supervision

Post-doctoral fellow (PDF) and graduate students whom I have supervised are listed in Table 2, and undergraduate students whom I have supervised are listed in Table 3.

Table 2. List and description of graduate students and post-doctoral fellows that I have supervised in reverse chronological order. Specific dates not provided for supervision prior to in my current position as Assistant Professor at University of Alberta.

Name	Degree	Title (and awards if appropriate)	My role	Dates
<i>University of Alberta</i>				
Larissa Gómez Villaseñor	PhD	Ecological recovery of boreal forests across a gradient of disturbance intensities	Primary Supervisor	9/2024-9/2028
Raiany Dias de Andrade Silva	PDF	Evaluation of long-term atmospheric deposition on boreal forests	Supervisor	2/2024-present
Hailey Cole	MSc	Plant functional trait recovery in reclaimed well pads	Primary Supervisor	9/2022-8/2024
Seung-Il Lee	PDF	Ecological recovery of forest biodiversity in response to varying degrees of forest harvest intensities	Primary Supervisor	4/2021-5/2022
Laureen Echivarri	PhD	The effects of seismic line fragmentation on understory vegetation in Alberta's boreal forest	Supervisory Committee member	3/2018-8/2021
Randi Lupardus	PDF	Ecological indicators of recovery on reclaimed oil and natural gas wellsites.	Supervisor	1/2018-12/2019
Raiany Dias de Andrade Silva	MSc	Restoration and enhancement of riparian vegetation in wetlands degraded by all-terrain-vehicles in Blue Rapids Recreation Area, Alberta	Primary supervisor	1/2017-1/2019
Julie Steinke	MSc	Effects of mountain pine beetle attacks on regeneration and understory vegetation in lodgepole pine forests in western Alberta	Supervisory Committee member	5/2016-9/2018
Scott Wilson	MSc	Use of acoustic monitoring technology to monitor avian communities on certified reclaimed wellsites	Supervisory Committee member	10/2014-9/2017
<i>The Evergreen State College</i>				
Adrian Wolf	MES	Bird use of epiphytes in an old-growth coniferous forest	Member of examining committee	Defended September 2009
Scott Hollis	MES	Patterns of mineral element retranslocation in four species of tropical montane forest trees in Monteverde, Costa Rica	Member of Supervisory Committee	Defended Feb 2009

Table 3. List and description of directed reading/study/contract students I have supervised in reverse chronological order.

Student name	Project	Type & time period
<i>University of Alberta – Augustana Campus/Faculty – all undergraduates</i>		

Student name	Project	Type & time period
Kyle Bergquist	Comparing soil pH on wellsets and in adjacent reference boreal forests	Directed reading; 3 credits, W2024
Berenda Helmus	Comparing soil pH on wellsets and in adjacent reference boreal forests	Directed reading; 3 credits, W2024
Lucille Wang	Exploring specific leaf area on wellsites and in adjacent reference forests – awarded the Outstanding Undergraduate Research Award	Directed reading; 3 credits, F2023
Emily Mahon	Play Clean Go: Tracking seeds from boot brushes in Elk Island National Park	Directed study; 3 credits, W2023
Nathanael Tabert	Dendrochronology to evaluate climate-growth relationships for lodgepole pine forests in northern BC	Directed study; 3 credits, W2022
Jordan Vanden Berg	Dendrochronology to evaluate climate-growth relationships for lodgepole pine forests in northern BC	Directed study; 6 credits, F2021-W2022
Chantal Ricard	Changes in plant community composition from the red to grey attack stages in mountain pine beetle attacked lodgepole pine forests	Directed reading; 3 credits, F2019
Michelle Rude	Advanced ecoinformatics and multivariate statistical analysis of community ecological data	Directed reading; 3 credits, W2018
Melissa Tollitt	Dendrochronology to evaluate climate-growth relationships for three Alberta tree species regenerating in the understory	Directed reading and study; 6 credits, F2016-W2017
Michael Watchorn	Wetland restoration of areas degraded by off-highway vehicles	Directed reading, 3 credits, W2017
Samuel Lowe	Bryophytes: an Exploration of their Biological and Ecological Factors in the Context of Oil Sands Reclamation Practices	Directed reading, 3 credits, F2016
Shane Hoveland	Riparian restoration in west-central Alberta	Directed reading, 3 credits, W2016
Chelsey Mowat	Climate change and grazing effects on plant community composition in northern temperate grasslands	Directed study, 3 credits, F2015
Samuel Lowe	Climate change and grazing effects on root biomass in northern temperate grasslands	Directed study, 3 credits, F2015
Haleigh Mines	The impacts of well pads on toluene development	Faculty supervisor for CSL project, F2015
<i>The Evergreen State College</i>		
Deane Rimerman (MPA candidate)	21 st Century forestry	Independent learning contract, 4 credits, Su2006
Hilary Davis (MIT candidate)	Forest ecology of the Pacific Northwest	Independent learning contract, 2 credits, Su2006
Terra Evans (UG)	Forest ecology of the Pacific Northwest	Independent learning contract, 4 credits, Su2006
Jay Carmony (UG)	Forest ecology independent seminar	Independent learning contract, 2 credits, Su2006
Chelsie Papiez (UG)	Native prairie plant ecology garden design	Faculty internship sponsor (16 credits, Sp2006)

Non-academic research assistant supervision

Information about students for whom I have acted as primary supervisor when they worked as a research assistant at the University of Alberta, Augustana Campus are listed in Table 4. Prior to my current position, I also provided supervision to undergraduate students. I acted as a field supervisor for one-two summer students each year during my PhD. While working at the Alberta Biodiversity Monitoring Institute (12/2012-6/2014) I co-supervised several summer field assistants each year. I was a field supervisor for

one field assistant during my MSc and I was the supervisor for two-four student interns each semester and summer in the canopy lab at The Evergreen State College.

Table 4. List and description of undergraduate student research assistants I have supervised at the University of Alberta Augustana Campus in reverse chronological order.

Name	Period worked	Funding to support their assistantship (for those not covered by my grant funding)	Brief description of intern/research assistant role
Yifei Li	July-September 2024	Mitacs Globalink Internship	Intern from China working on plant community recovery after disturbance in northern forest ecosystems
David Valderrama Carmona	June-September 2024	Mitacs Globalink Internship	Intern from Colombia working on Plant community recovery after disturbance in northern forest ecosystems
Reeve Kobbero	May-August 2024	NSERC USRA	Advancing multivariate analysis beyond community and forest ecology
Abril Medina Landeros	June-September 2023	Mitacs Globalink Internship	Intern from Mexico working on plant functional trait and community recovery after reclamation
Anjola Fadoyami	May-August 2023	Augustana Summer Research Assistantship	Data handling and exploration of data – co-supervised with Paula Marentette
Leah Peters	May-August 2023	Augustana Summer Research Assistantship	Data handling and exploration of data – co-supervised with Paula Marentette
Lucille Wang	May-August 2023	NSERC, Government of Canada	Plant functional trait and community recovery after reclamation
Selena Schut	January 2022-April 2023	ACA, ABMI, NSERC	Ecological recovery of forest biodiversity in response to varying degrees of forest harvest intensities
Beatriz Moreira	June – September 2022	Mitacs Globalink Internship	Intern from Brazil who worked on projects related to ecological recovery after disturbance of plant communities and marginalized biologists
Jocelyn Kublik	May-August 2022	NSERC USRA, including a Canadian Forest Sector Workforce Diversity Undergraduate Supplement	Worked on projects related to ecological recovery after disturbance of plant communities and marginalized biologists
Michelle Rude	November 2020 – May 2021	GOA Grant	Worked on cataloguing and extracting articles related to ecological recovery
Lara Canovai	June-September 2019	Mitacs Globalink Internship	Intern from Germany working on exploring endophytes in lodgepole pine forests in their native and introduced habitats.
Chantal Ricard	May-August 2019	Augustana faculty student research assistantship-7500	Research ssistantship to continue work initiated during semester-long directed study on developing dataset for multivariate community analysis and a new project exploring endophytes in lodgepole pine forests in their native and introduced habitats.
Michelle Rude	May-August 2018	Augustana faculty student research assistantship-7500	Research assistantship to continue work initiated during semester-long directed study on advanced ecoinformatics and multivariate

Name	Period worked	Funding to support their assistantship (for those not covered by my grant funding)	Brief description of intern/research assistant role
Anya	June-August 2018	University of Alberta Research Experience-4000	statistical analysis of community ecological dataset development related to AUBIO 315 new course development. Intern from Singapore working with my MSc student on enhancement of wetland areas degraded by off-highway vehicles.
Melissa Tollitt	June 2017-Fall 2017	Augustana faculty student research assistantship-7500	Augustana Faculty Research Grant Recipient–Research Assistantship to continue work initiated during year-long directed study on dendrochronology with me.
Benedict Oxenham	June-July 2017	University of Alberta Research Experience-4000	Intern from UK who worked primarily with my MSc student on enhancement of wetland areas degraded by off-highway vehicles.
Wyatt Beach ¹	May-July 2017	Beaver County grant	Research assistant for Beaver County Sustainability Project – including camera traps, acoustic recording units, and soil and vegetation sampling.
Emily Grose ¹	May-July 2017	Beaver County grant	Research assistant for Beaver County Sustainability Project – including camera traps, acoustic recording units, and soil and vegetation sampling.
Jordan Nakonechny ¹	May-July 2017	Beaver County grant	Research assistant for Beaver County Sustainability Project – including camera traps, acoustic recording units, and soil and vegetation sampling.
Ruijing Cheng	July-Sept 2016	MITACS provided stipend-~7500	MITACS intern from China. Conducted a variety of projects under my supervision including processing and identifying wellsite bryophyte samples, sampling at MPB research sites, and working on the Beaver County Sustainability Project.
Tye Dubrule ¹	May-August 2016	Beaver County grant	Research assistant for Beaver County Sustainability Project – including camera traps, acoustic recording units, and soil and vegetation sampling.
Shane Hoveland ¹	May-Sept 2016	Beaver County grant	Research assistant for Beaver County Sustainability Project – including camera traps, acoustic recording units, and soil and vegetation sampling.
Melissa Tollitt ¹	May-August 2016	Beaver County grant	Research assistant for Beaver County Sustainability Project – including camera traps, acoustic recording units, and soil and vegetation sampling.
Raiany Dias de Andrade Silva	May-August 2015	Mitacs Globalink Internship	MITACS intern from Brazil. Conducted a variety of projects including processing climate change grassland root samples, exploring establishment of a forest garden on the Augustana Campus.

Name	Period worked	Funding to support their assistantship (for those not covered by my grant funding)	Brief description of intern/research assistant role
Carissa Wasyliv	Sept-Dec 2014	Start-up funding	Research assistant who input field data collected on the Ecological Recovery Monitoring Project from the Summer of 2014.

¹Co-supervised along with Drs. G. Hood and G. Hvenegaard.

Invited guest classroom/field lectures

1. **McIntosh ACS**. 2023. So you're presenting a SAC poster – now what? Guest presentation for Andrea Korda's AIDS 301 class. November 22, 2023.
2. **McIntosh ACS**. 2023. Animal Behavior Proximate Causation: hormones. Guest presentation for Ivy Schoepf's Animal Behavior Class AUBIO 390. September 29, 2023.
3. **McIntosh ACS**. 2021. Reclamation and soil sampling demonstration. Guest field lecture for Field Studies in Environmental Science and Ecology AUENV 334 at Miquelon Lake Field Research Station. August 28, 2021.
4. **McIntosh ACS**. 2020. Analytical Chemistry: My Applications as an ecologist (who likes stats ☺). Guest remote lecture (zoom) for Analytical Chemistry (AUCHE 220). November 25, 2020.
5. **McIntosh ACS**. 2020. Conservation and Reclamation. Guest podcast with Dr. Greg King for Soil Science and Soil Resources (AUENV 233). April 14, 2020.
6. **McIntosh ACS**. 2020. Moments for good: experiential learning in Costa Rica with Osa Conservation. Guest lecture to Resource and Environmental Management (AUENV 324). Camrose, AB, February 13, 2020.
7. **McIntosh ACS**. 2018. Landscape through the lens of an ecologist. Guest lecture to Landscapes First Year Seminar (AUIDS 101). Camrose, AB, September 10, 2018
8. **McIntosh ACS**. 2018. The Immune System. Guest lecture to Introduction to Human Physiology Class (AUPED 215), Camrose, AB, (Covering classes for a faculty member who was away at a conference – provided with some materials to help support presentation) April 13 & 16, 2018
9. **McIntosh ACS**. 2018. Confidence intervals and hypothesis testing. Guest lecture to Statistical analysis for the natural sciences (AUSTA 215), Camrose, AB, March 5, 2018
10. **McIntosh ACS**. Experimental Management. Wildlife Ecology and Management (AUENV 335), Camrose, AB, March 10, 2017 (Covering class for a faculty member who was away – provided with some materials to help support presentation)
11. **McIntosh ACS**. 2015. Field sampling of plant diversity. Guest lecture to Field Course in Environmental Science and Ecology (AUBIO/AUENV/AUGEO 334), Miquelon Lake, AB, August 19, 2015
12. **McIntosh ACS**. 2015. Fluid and blood pressure regulation. Guest lecture to Introduction to Human Physiology Class (AUPED 215), Camrose, AB, December 1, 2015. (Covering for a faculty member who was away at a conference – was provided with some materials to help support presentation)
13. **McIntosh ACS** and J Gould. 2014. Vegetation Assessment. Environmental Assessment Course, Department of Renewable Resources, University of Alberta, Edmonton, AB, March 19, 2014
14. **McIntosh ACS**. 2013. Biodiversity and conservation. Introduction to Ecology (Biol 208), Dept of Biological Sciences, University of Alberta, December 4, 2013
15. ***Fiala ACS**. 2006. All-day field seminar for the Evergreen State College program titled "Data and Information – Quantitative Ecology", Carbon River, Mount Rainier National Park, WA, October 4, 2006

16. **Fiala ACS** 2005. Forest Structure. Temperate Rainforests Program, The Evergreen State College, Olympia, WA, November 2, 2005
17. **Fiala ACS** 2004. Structured Query Language (SQL) Guest Lecture. Database Applications in Business Class (BUSA 377), Pacific Lutheran University, Tacoma, WA, October 26, 2004
18. **Fiala ACS** 2003. Riparian dynamics. Forest Biology, Oregon State University, Corvallis, OR, May 30, 2003

Teaching-related publications

1. Rude M, Ricard C, Lupardus R, **McIntosh ACS**. June 2022, posting date. Arrested succession? Assessing plant community recovery on reclaimed oil and natural gas well pads in Alberta's boreal forests using multivariate analyses. Teaching Issues and Experiments in Ecology, Vol. 18: Practice #1 [online]. https://tiee.esa.org/vol/v18/issues/data_sets/mcintosh/abstract.html
2. **McIntosh A** and Rintoul J. 2022. Special Place Assignments: Connecting Ecological Concepts to Each Student's Unique Locale Through Scaffolded Portfolio Assignments. Article 65 In: Boone E and Thuecks S, eds. Advances in biology laboratory education. Volume 42. Publication of the 42nd Conference of the Association for Biology Laboratory Education (ABLE). <https://doi.org/10.37590/able.v42.abs65>

Teaching-related conference/seminar presentations (*=invited, &=student authors)

1. Alakas B, Harde R, McGinitie E, **McIntosh ACS**, Wilton S. 2023. Designing your 3 week course to be enjoyable. Augustana Teaching Seminar. November 24, 2023.
2. **McIntosh ACS**, Haave N. 2022. A capstone assignment to increase student's awareness of marginalization in the history of biology. Oral presentation at Undergraduate Biology Educators of Alberta Annual Meeting (virtual – changed from U of Lethbridge), May 12, 2022. Equal first authors.
3. **McIntosh ACS**. 2022. Exploring Ways to Incorporate Universal Design Learning in Our Classrooms. Cracker barrel presentation. ACURIT [ACURIT: Augustana Conference on Undergraduate Research and Innovative Teaching: An international conference for students and professors], University of Alberta (Augustana), Camrose, Canada. May 5, 2022.
4. ***McIntosh ACS**. 2021. Equity grading policy for universal design and re-envisioning the (scientific) poster. Augustana Teaching Seminar. November 26, 2021.
5. **McIntosh ACS**, Rintoul J. 2021. Special place assignments: connecting ecological concepts to each students unique locale through scaffolded portfolio assignments. Virtual Association for Biology Lab Education (viable). Poster recording and in person Q&A. June 25, 2021. Equal first authors.
6. **McIntosh ACS**, Stacey P, &Bartley KI, &Berg ML, &Bordey N, &Cook CA, &Godziuk GW, &Kruger MT, &Larsen GE, &Lynch MJ, &Paulgaard SD, &Sweder JD. 2021. Unposterizing the scientific poster: demonstrating an alternative format Poster 2.0 for communicating research findings. Undergraduate Biology Educators of Alberta Annual Meeting, Virtual presentation of poster (and accompanying slide), May 13, 2021.
7. **McIntosh ACS**, Rintoul J. 2020. Special place assignments: connecting ecological concepts to each students unique locale through scaffolded portfolio assignments. Poster Presentation. 64th Annual Association of College and University Biology Educators, Moved to Remote from in person planned for Kansas City, MO. October 25, 2020. Equal first authors.
8. **McIntosh ACS**, Rempel B, Hvenegaard G. 2019. Thinking outside the assignment box: expanding beyond traditional assessment. Roundtable at the International Augustana Conference on Undergraduate Research and Innovative Teaching, Camrose, AB, May 15, 2019

9. **McIntosh ACS**, Rempel B, Hvenegaard G. 2018. Thinking outside the assignment box: expanding beyond traditional assessment. Augustana Teaching Seminar Series, Camrose, AB, November 23 2018
10. **McIntosh ACS**, Rude M. 2018. First class from first to last class: tools for creating an engaging environment. Alberta Introductory Biology Association/Undergraduate Biology Educators of Alberta Annual Meeting, Calgary, AB, May 4, 2018
11. Tollitt M, **McIntosh ACS**. 2017. Running in circles: a student's perspective on undergraduate research opportunities in dendrochronology, Joint conference of ACURIT and AIBA: From Concepts to Skills: Integrating Undergraduate Research and Student Engagement into our Learning and Teaching [ACURIT: Augustana Conference on Undergraduate Research and Innovative Teaching: An international conference for students and professors], Camrose, AB, May 5, 2017
12. Audet D, Gares S, Haave N, **McIntosh ACS**. 2016. From active learning to engaging syllabi: new ideas from The Teaching Professor conference, University of Alberta Augustana Campus Teaching Seminar Series, Camrose, AB, November 28, 2016
13. ***McIntosh ACS**. 2016. Strategies to boost your learning. Residence Life Academic Programming Series: Critical Thinking, University of Alberta Augustana Campus, Camrose, AB, September 15, 2016
14. **McIntosh ACS**, Audet D. 2016. Reaching for the treetops – faculty perspectives on experiential undergraduate learning in the rain forests of Costa Rica. ACURIT: Augustana Conference on Undergraduate Research and Innovative Teaching: An international conference for students and professors, Camrose, AB, April 26, 2016

Course-related student research presented at undergraduate research conferences beyond Augustana

1. Grose E, Stewart S, Audet D, **McIntosh ACS**. 2016. The first inventory of katydid in the Osa Peninsula, Costa Rica. Undergraduate research in science conference of Alberta, Edmonton, AB, April 1-2 2016
2. Heck C, Maru J, Audet D, **McIntosh ACS**. 2016. Investigating the relationship between abiotic factors, canopy openness and understory plant diversity in three forest types of the Osa Peninsula, Costa Rica. Undergraduate research in science conference of Alberta, Edmonton, AB, April 1-2 2016
3. Houlder K, Naslund J, Audet D, **McIntosh ACS**. 2016. Local abundance of leaf-nosed bats on the Osa Peninsula, Costa Rica. Undergraduate research in science conference of Alberta, Edmonton, AB, April 1-2 2016

Teaching-related grants

1. Teaching and Learning Enhancement Fund – Professional Development Award for participation in the “2018 Society for the Advancement of Biology Education Research” in Minneapolis, MN. Award notification June 2018, Attended July 27-29, 2018. Value: \$2,578
2. Teaching and Learning Enhancement Fund – Professional Development Award for participation in the “2016 Teaching Professor Conference” in Washington, DC. Award notification March 2016, Attended June 3-5 2016. Value: \$3,130
3. Teaching and Learning Enhancement Fund – Professional Development Award for participation in the “2015 US Conference on Teaching Statistics” in State College, PA. Award notification December 2014, Attended May 28-30 2015. Value: \$1,830

Student international learning educational grants

1. 2019-20 Campus Alberta grant for international learning (CAGFIL) for AUBIO 459 Costa Rica field studies course – 750.00 per student – funding provided for 12 students for 2019-20 course offering

2. 2017-18 Campus Alberta grant for international learning (CAGFIL) for AUBIO 459 Costa Rica field studies course – 750.00 per student – funding provided for 12 students for 2017-18 course offering

Professional development (teaching)

I am a lifelong learner who is continually enhancing my professional development related to teaching. While I also regularly attend campus-wide teaching seminars and seminars hosted by our University Centre for Teaching and Learning, here I have listed activities that have occurred during my position as Assistant Professor that are broader in scope/duration than individual seminars.

1. Scholarship of Teaching and Learning Journal Club – Winter 2019, Fall 2018, Summer 2018, Winter 2018
2. Teaching square [engaging in reciprocal classroom visits and discuss teaching practices with 3-5 colleagues within a semester] – Winter 2019, Fall 2018, Fall 2016, Fall 2015, Winter 2015, Fall 2014
3. International Augustana Conference on Undergraduate Research and Innovative Teaching Annual Two-day Conference, Camrose, AB – May 2019, 2018, 2016
4. Undergraduate Biology Educators of Alberta (formerly Alberta Introductory Biology Association) Annual one-day meeting – Edmonton, AB-May 2019, Calgary, AB-May 2018, Red Deer, AB – May 2016, Edmonton, AB-May 2015
5. Society for the Advancement of Biology Education Research Annual Meeting, Minneapolis, MN, July 27-29, 2018
6. Joint Alberta Introductory Biology Association and Augustana Conference on Undergraduate Research and Innovative Teaching Conference, Camrose, AB, -May 3-5, 2017
7. Three teaching workshops/events at the Ecological Society of America Conference, Ft. Lauderdale FL, August 2016
8. The Teaching Professor Three Day Conference, Washington, DC, June 3-5, 2016
9. United States Conference on Teaching Statistics, State College, PA, May 28-30, 2015
10. Levels One and Two, Graduate Teaching and Learning Program, University of Alberta. This program provides participants with skills to gain perspective of student learning and add depth to their teaching experiences. Participants are required to complete four program components: 40 hours of pedagogy sessions, practical teaching experience, provide and solicit teaching feedback from peers and a teaching mentor, and complete a teaching dossier. (completed December 2012)

SERVICE ACTIVITIES

Campus/Faculty

Augustana Faculty (July 2014-present)

- Chair of the Writing Committee (July 2022-present)
- Chair of the Committee on the Learning Environment (July 2022-present)
- Member of the Faculty Evaluation Committee (July 2021-present)
- Biology Club Advisor (September 2021-present)
- Second Thought Editorial Committee (July 2021 – present)
- Member of Library Committee. Became Chair of committee in January 2019. (September 2014-June 2020, aside from leave Fall 2017)
- Undergraduate Science Club advisor (August 2015-June 2020, aside from parental leave Fall 2017).
- Faculty Follies Organizing Committee (December 2018-March 2019, November 2016-March 2017)
- Elected member of the University of Alberta Augustana Dean and Chief Executive Officer Search Committee (June 2018-December 2018).

- Biology representative for preview day(s) each year.
- Annual volunteer at Community Awards Banquet (February 2017-19).
- Augustana Volunteer at Martha's Table soup lunch (2017, 2019).
- Member of Adjudication Committee for the Student Award for Library Research (June 2017, 2018).
- Member of First Year Seminar Coordinating Committee (May 2016-June 2017).
- Co-organizer (with B Alakas) of the After U Session – Graduate School Information Night for prospective undergraduate students (Fall: 2015, 16)
- Member of hiring committees (e.g., Chaired Biology Faculty Search in F2021/W22, Art History Faculty Candidate in 2016, Biology Lab Coordinator in 2015)
- Faculty cohort leader for first-year orientation, University of Alberta, Augustana Campus (start of Fall Semester 2015, 2016)

Faculty of Agricultural, Life & Environmental Sciences (PhD 2008-12)

- Dept. of Renewable Resources field school for vegetation monitoring and plant identification component for several days in Lac La Biche, AB (May 2009, 2012)
- Renewable Resources Student Seminar Series. Established and organized a bi-weekly seminar series for graduate students and post-doctoral researchers. (June 2012-December 2012)
- Graduate Student Representative on Faculty Council, Faculty of Agricultural, Life, and Environmental Sciences. (September 2011-December 2012)
- Graduate Student Representative on Department Council, Department of Renewable Resources, University of Alberta. (June 2011-December 2012)

University-wide:

- Adjunct Professor in the Department of Renewable Resources, University of Alberta, Edmonton, AB (July 2015-present)
- Research collaborator in the University of Alberta Land Reclamation International Graduate School (2014-present)
- Augustana Faculty Ambassador for University of Alberta Undergraduate Research Initiative (October 2016-June 2020)
- Member of adjudication committee for Undergraduate Research Initiative Summer 2018 Scholarships (April 2018)
- University of Alberta General Faculties Council Committee on the Learning Environment, Graduate at-Large. I also served on two subcommittees. (May 2010-May 2012)

Professional (including National/International):

- Member of the Executive, President (effective June 2021) Alberta Introductory Biology Association/Undergraduate Biology Educators of Alberta (May 2018-present – formerly secretary and still webmaster)
- Society of Advancement for Biology Education Research (SABER) - organizer of the mentorship groups for their special interest group for persons excluded based on ethnicity or race (PEERs) (December 2020-Present)
- Associate Editor, Forest Science Journal, Society of American Foresters, Bethesda, MD (April 2015-present)
- Association for College Undergraduate Biology Educators annual meeting, Program planning co-chair, Anne McIntosh, University of Alberta - Augustana Campus (Fall 2023)

- Chair of Annual Organizing Committee, Augustana Conference on Undergraduate Research and Innovative Teaching (ACURIT), Camrose, AB, May, 2020 (June 2019-present (no conference in 2020, 21 because of COVID)
- Member of Annual Organizing Committee, Augustana Conference on Undergraduate Research and Innovative Teaching, Camrose, AB, May, 2018, 2019 (June 2017-May 2019)
- Secretary, Member of Organizing Committee, 11th Annual North American Forest Ecology Workshop, Edmonton, AB, June 19-22, 2017 (June 2015-July 2017)
- Secretary, Organizing Committee, Joint ACURIT/AIBA (now UBEA) meeting Camrose, AB, May, 2017 (5/2016-5/17)
- Member of the Board of Directors, International Canopy Network (ICAN), (2005-present – but is no longer very active network so limited interactions in last few years)
- 2nd Annual Conforwest Graduate Student National Conference 2011, Secretary, Webmaster, Communications organizing committee member, Jasper, AB. (2011)
- Oregon Chapter-American Fisheries Society Webmaster. (2000-2003)

Public service:

- Chair of Camrose Terry Fox Run (September 2018-present)
- Member of Board of Directors, President (effective December 2020) – Camrose Children's Centre (January 2019-December 2023)
- Regular volunteer at the Camrose Animal Shelter (Fall 2017-early 2020 when COVID hit)
- Purple Martin Landlord. Looked after purple martin bird house and checked regularly for presence of purple martin nest and chicks (May/June 2016-2017)
- Membership Coordinator, Member of the Executive Committee, Edmonton Potters Guild. Coordinated membership of the 84 member pottery guild, which was established in 1954. (June 2011-December 2014)
- Little Bits Therapeutic Riding. Assisted weekly during seasonal class sessions with disabled children who learn to ride horses at the Whitemud Equine Center (hippotherapy). (2010-2014)
- Undergraduate/graduate student job list-serve. Sent out a bi-weekly email to 50+ subscribers, advertising jobs of interest to new graduates in ecology. (2004-2013)
- Stream Team Salmon Steward. Participated in seasonal outreach to the public at sites where Chinook and chum salmon were returning to spawn. (seasonally 2004-2006)
- Equitopia. Therapeutic horseback riding program, Oregon State University. Worked weekly with an 8-yr-old girl with cerebral palsy. (2001-2003)

Other

- Provide feedback on statistical design and manuscripts to other faculty members, undergraduate and graduate students and research assistants on a regular basis
- Regularly complete anonymous peer reviews for journals and grants (e.g., Annales Botanici Fennici, Canadian Journal of Forest Research, Collected Essays on Learning and Teaching, Ecological Informatics, Ecological Indicators, Environmental Monitoring and Assessment, Forest Ecology and Management, Forest Ecosystems, Forest Science, Forests, iForest, New Phytologist, Plant and Soil, Plant Ecology, and Scandinavian Journal of Forest Research, Alberta Conservation Association biodiversity grants)
- Written reference letters for many current and former Augustana students (>60)
- Student service prior to being a faculty member: I was a judge for the Undergraduate Research Symposium (11/13, 11/14). I was a judge for the Edmonton regional science fair (4/11, 4/12, 4/13, 4/14). Expert Day, Oliver School providing input on junior high school student science fair projects

(11/22/11). I participated in Women in Scholarship, Engineering, Science & Technology (WISEST) mentoring sessions (7/11, 7/12). I gave a presentation to high school students interested in pursuing higher education in science (12/09). I gave an invited talk at a Women in Science symposium to undergraduate students on the role of women in science and served as mentor for undergraduate and graduate students while working at The Evergreen State College; Forest Science Graduate Student Representative (2001-2002).

PROFESSIONAL MEMBERSHIPS

- Alberta Introductory Biology Association/Undergraduate Biology Educators of Alberta (2014-present)
- Association of College & University Biology Educators (2014-present)
- Society for Advancement of Biology Education Research (2018-present)
- Ecological Society of America (2003-present)
- Society of American Foresters (2013-2016)
- Canadian Institute of Forestry (2012-2015)
- Society for Conservation Biology (2010-2012)
- American Fisheries Society (2001-2003)
- Northwest Science (2003-2007)
- Xi Sigma Pi Honors Society – Zeta chapter member in 2003